10 The theory of monetary integration

ALI EL-AGRAA

10.1 Introduction

Chapter 6 was devoted mainly to a theoretical analysis of the economic consequences of tariff removal, the establishment of the common external tariff (CET) and factor mobility – that is, the common market (CM) aspects of regional integration (see Chapter 1). However, economic and monetary union (EMU) is by far the most challenging commitment for any scheme of economic integration. Therefore this and the two subsequent chapters deal in turn with: the theoretical analysis of EMU (this chapter); the current and planned development of the EU's European monetary union (Chapter 11); and an appraisal of the operation of the EU's EMU (Chapter 12). Between them, these chapters explain the reasons for the challenge, as well as tracing EU endeavours in this respect.

This chapter begins by explaining the differences between the 'monetary' and 'economic' parts of EMU. Concentrating on the economic, it then provides the proper definition of EMU, permanent fixity of member nations' (hereafter, 'member' stands for 'member nation') exchange rates and the complete mobility of capital between them, and what requirements are needed to satisfy it. Then the economic aspect of monetary union is discussed, and the role of fiscal policy analysed. Two sections follow dealing respectively with the expected benefits and costs of EMU. A clarification of elements identified in the costs follows. The chapter finishes with conclusions. It should be stressed, however, that a *proper* understanding of what is in this chapter requires prior knowledge of international monetary economics, hence of monetary economics, as well as of public economics.

10.2 Disentangling the concepts

The acronym EMU is often misinterpreted as European monetary union. This is understandable because the largest element of EMU (economic and monetary union) has been the setting up of the EU's monetary union, with the establishment of a single currency, the euro, and the new central banking system to run it. The provisions of the treaty setting up EU EMU are heavily dominated by the monetary aspect and it is this which forms the heart of the present chapter.

However, in a unitary country, or even a fairly weakly federal one, economic *and* monetary integration would involve having a countrywide fiscal policy as well as a single monetary policy. Arrangements vary as to how much of fiscal policy is handled at the country/federal level and how much at lower state/regional levels. But the norm is that the largest proportion of government expenditure and revenue is at the federal level, which also imposes some limitations on what the states/regions can do, even in very loose federations. The EU, however, has not attempted this level of integration. The centralized budget amounts to only around 1 per cent of EU GDP (see Chapter 19) and at this level cannot constitute a real macroeconomic policy instrument. It is a structural budget whose form is largely set for periods of around five years. It is thus both too small and too inflexible to be used in any sense to manage the path of the EU economy in either real or nominal terms.

The EU adopts a different approach, which is to constrain the ability of the members to run independent fiscal policies. There are three types of constraints. The first are laid down in the treaty, as part of the conditions for EMU membership – the so-called Maastricht criteria. These are considered in detail in the next chapter, but in the present context they can be regarded as constraints designed to impose prudence on fiscal policy so that no one country's debt can start to raise

the interest rates/lower the credit ratings of the other EMU countries. The constraints relate to the ratio of debt to GDP as a measure of long-run sustainability, and to the ratio of the government deficit to GDP in the short term.

The second set of constraints operationalizes the membership requirements for the continuing behaviour of the members inside EMU. These constraints are known as the Stability and Growth Pact (SGP) and are also dealt with in Chapters 11 and 12. The coordination among the members takes place through the framework of ECOFIN (European Council of Ministers for Financial Affairs), assisted by the Commission (see Chapter 2), and includes the ability to impose financial penalties on members that do not adhere to the prudent limits.

However, even though the SGP has the effect of coordinating fiscal policy to some extent through its constraints, the third aspect of policy among the members is a more positive form of cooperation. This occurs through the annual setting of Broad Economic Policy Guidelines (BEPGs). Here, there is not only discussion among the members to try to set a framework for policy consistent with EU longer-term objectives, but also an informal dialogue between the fiscal and monetary authorities.

The ability to levy taxation is normally one of the key elements of economic independence, and EU countries have only agreed fairly limited constraints on their individual behaviour. These relate to the nature of indirect taxation (VAT and specific duties; see Chapter 15), which is largely a facet of the treatment of trade and the internal market discussed in Chapter 7. It is proving very difficult to get agreements on the nature of the taxation of income from capital and of company profits. Discussion of agreements on the levels of taxation of personal incomes is even further from practical realization, as the range between the highest and lowest is very large (Chapter 15). It has, however, been possible to get agreement that reductions in the level of non-wage taxes on labour would assist the overall EU economic strategy.

Taken together, these measures represent rather soft and limited coordination, which affects the nature of the theoretical discussion on monetary integration. Fiscal policy in the EU is neither a single coordinated policy nor a set of uncoordinated national policies run for the individual benefit of each member. Indeed the degree of automatic or discretionary coordination is difficult to estimate before the event. This makes the assessment of the impact of monetary integration a somewhat uncertain exercise.

10.3 What is monetary integration?

Monetary integration has two essential components: an exchange rate union and capital (K) market integration. An exchange rate union is established when members have what is in effect one currency. The actual existence of one currency is not necessary, however, because if members have *permanently* and *irrevocably* fixed exchange rates among themselves, with currencies *costlessly* exchangeable at par, the result is effectively the same. But having a single currency makes the permanence and irrevocability more plausible, as there would be severe repercussions from exit, not least the need to produce new coins and notes. Giving the impression of permanence is a crucial ingredient for a monetary union. Hence, quasi monetary unions like currency boards, which permit the continuation of the domestic currency, but backed by another currency, tend to be less stable. This is because a currency board offers the abandonment of the backing currency as a way out of a crisis. In the same way, exchange rate unions between more equal partners have tended to back the two currencies by a common medium, such as silver or gold. Again, this offers a more rather than less unifying way forward.

Exchange rate integration requires convertibility: the *permanent* absence of all exchange controls for both current and K transactions, including interest and dividend payments (and the harmonization of relevant taxes and measures affecting the K market) within the union. It is, of course, absolutely necessary to have complete convertibility for trade transactions, otherwise an important requirement of customs union (CU) formation is threatened, namely the promotion of free trade among members, which is an integral part of an economic union (see Chapter 1). That is why this aspect of monetary integration does not need any discussion; it applies even in the case of a free trade area (FTA). Convertibility for K transactions is related to free factor mobility (see Chapters 7 and 8) and is therefore an important aspect of K market integration, which is necessary in CMs, but not in simple CUs or FTAs.

Nevertheless, the pattern of both trade and production will be affected if there are controls on K transactions.

In practice, monetary integration should specifically include three elements if it is to qualify under this definition:

1. a common monetary policy
2. a common pool of foreign exchange reserves and a common exchange rate policy
3. a single central bank or monetary authority (MA) to operate these policies.

There are important reasons for including these elements. A country entering a fixed exchange rate system gives up monetary policy autonomy because monetary policy must be used to maintain the exchange rate. In a fixed peg system, the MA is usually a single country, the USA in the Bretton Woods system and Germany in the European Monetary System (EMS; see Chapter 11). This country has monetary autonomy, but the other countries have to adjust their monetary policy to maintain the fixed exchange rate. This monetary policy may not suit the economic circumstances of the other countries in the system. Thus one of the reasons that countries such as France supported EMU was that a common monetary policy would be more suitable for their economy than a German monetary policy. Monetary policy conventionally targets inflation and controls interest rates to adjust economic activity to achieve the inflation target. To control interest rates the MA must also control the money supply, which also implies control of foreign exchange reserves, because of the interaction between foreign exchange operations and the money supply. The exchange rate is not specifically targeted, but it becomes the MA's responsibility. So in a monetary union the single MA must take responsibility for four elements of monetary policy: interest rates, money supply, foreign exchange reserves and exchange rate.

In short, monetary integration, as defined, requires the unification and joint management of monetary policy as well as of the union's external exchange rate policy. This has two further consequences. First, the rate of increase of the money supply must be decided jointly. Beyond an agreed amount of credit expansion, allocated to the central bank of each member, a member would have to finance any budget deficit in the union's K market at the ruling interest rate. A unified monetary policy would eliminate one of the main reasons for disparate price level movements in the members, and a major factor for the prevalence of intra-union payment imbalances prior to monetary union. Second, the balance of payments of the entire union with the outside world must be regulated at the union level. For this purpose, MA must dispose of a common pool of exchange reserves, and the union exchange rates with other currencies must be regulated at the union level.

Monetary integration which explicitly included these three requirements would therefore enable the partners to do away with all these problems right from the start. Incidentally, this also suggests the advantages of having a single currency: with a single currency the members can all have a say in the setting of policy. With a reference currency, the tendency will always be for the country whose currency it is to dominate the decision-making, as the others will have to follow or leave the arrangement. A tighter arrangement is likely to give them explicit rights in decision-making, perhaps even including a veto.

10.4 The gains and losses

10.4.1 Gains from EMU

The gains from EMU membership could be purely economic, non-economic (e.g. political) or both. Some of the non-economic benefits are obvious – for example, it is difficult to imagine that a complete political union could become a reality without the establishment of a monetary union. However, because political, security and other issues lie beyond the scope of this chapter, the discussion will be confined to the economic benefits, which can be briefly summarized as follows:

1. A common pool of foreign exchange reserves economizes their use, since it is unlikely that members will go into deficit *simultaneously*, so one country's surplus can offset another's deficit. Intra-union trade transactions will no longer be financed by foreign exchange, so the need for foreign exchange is reduced for any given trade pattern. Frankel and Rose (2002) argue that having EMU will in itself lead to an increase in intra-trade at the expense of trade with non-members. In the EU context, this will reduce the role of the US dollar or reduce EU dependence on the dollar.

2. In the case of the EU, the adoption of the common currency (the euro) has transformed the currency into a major world medium which competes with the US dollar and the Japanese yen. The advantages of such a currency from seignorage[1] are well established, but not huge. How long it would take the euro, if it were even possible, to supplant much of the role of the US dollar as an international vehicle currency is of course a moot point (see Chapter 11). One facet of having a second major currency to compete with the US dollar is that international market conditions can become more or less stable, depending on whether the two authorities decide to cooperate or permit major swings. Since, for a large currency bloc, foreign trade forms a small proportion of total transactions, wide swings in exchange rates can be accommodated with limited impact on the overall economy. These swings can have more striking effects on smaller countries, so large currency areas normally feel an obligation to consider the wider implications. Indeed, the group of seven (G7; which became G8, and now we have G20) was created in 1986 to establish a system of international coordination between the most advanced nations in the world for precisely such a reason.
3. Transaction costs incurred when one currency is exchanged for another are avoided within a monetary union, leading to a saving in the use of resources. The high costs that individuals incur when making foreign exchange transactions would seem to suggest these costs are large. These gains, however, are thought to be small (the Commission estimated them in 1990 at 0.2–0.5 per cent of EU GDP).
4. Competition in the SEM will be enhanced by a single currency because of the greater transparency and certainty it provides. Prices can be more easily compared across national borders, so competition will intensify. Since exchange rate movements have been eliminated, differences in prices and costs between locations become more apparent, so production can be shifted to where costs are lowest.
5. There is normally a clear interest rate gain for the smaller and previously high-inflation countries, if the area as a whole has credible institutions and policies. These countries will be able to borrow at lower interest rates because inflation expectations are reduced and because of the greater efficiency of larger and deeper capital markets in monetary unions.
6. There are also the classical advantages of having permanently fixed exchange rates (or one currency) among EMU members for free trade and factor movements. Stability of exchange rates enhances trade, through reduced price uncertainty, encourages K to move to where it is most productively rewarded, and encourages labour (L) to move to where the highest rewards prevail. Of course, hedging can tackle the problem of exchange rate fluctuations, but at a cost. Here again, however, the evidence suggests that hedging costs and penalties from uncertainty are relatively minor, except for smaller companies that tend not to hedge. The much greater advantage is that it seems to cement integration, encouraging greater trade and foreign direct investment (FDI) than would be expected; this is shown very clearly in the gravity model literature (see Mélitz 2001).
7. The integration of the K market has a further advantage. If an EMU member is in deficit, it can borrow directly on the union market using the K inflow to finance the deficit, while adjustment takes place. However, as mentioned above, the integration of economic policies within the monetary union may ensure that this help will occur automatically under the auspices of the common central bank.
8. When a monetary union establishes a central fiscal authority with its own budget, then, as already mentioned, the larger the size of this budget, the higher the scope for fiscal harmonization (CEU 1977a; Chapters 15 and 19). This has some advantages: regional deviations from internal balance can be financed from the centre, and the centralization of social security payments, financed by contributions or taxes on a progressive basis, would have some stabilizing and compensating effects, modifying the harmful effects of EMU (see Chapter 19).

Specific to the EU, there are also negative advantages in that EMU is helpful for maintaining the EU as it exists. For example, realizing SEM – that is, making prices transparent (see page 000) – would become more difficult to achieve, and the common agricultural prices enshrined in the Common Agricultural Policy (CAP; see Chapter 20) would become more complicated when members' exchange rates were flexible. These

EMU benefits are clear and there are few economists who would question them; the only disagreement is about their extent (see point 6 opposite and Chapter 7), and most of those who minimize them tend to give little weight to the psychological benefits of dealing with a single currency. However, there is no consensus with regard to the costs.

10.4.2 Losses from EMU

The losses from EMU have been elaborated in terms of the theory of optimum currency areas (OCAs), pioneered by Mundell (1961), with immediate contributions coming from McKinnon (1963) and Kenen (1969), and followed by, inter alia, Mundell (1973a, b) himself and, within the context of the UK and the euro, Buiter (2000) and Barrell (2002). Given the broad nature of this issue, this section is confined to a presentation of its main message; those interested in a more comprehensive coverage should consult de Grauwe (2009).

Before presenting the bare OCA essentials, it may prove helpful to begin with later contributions by Fleming (1971) and Corden (1972a). Assume that the world consists of three countries: the home country (H), the potential partner country (P) and the rest of the world (W). Also assume that, in order to maintain both internal and external equilibrium (as defined in standard open-economy macroeconomics), H needs to devalue its currency relative to W, while P needs to revalue vis-à-vis W. Moreover, assume that H and P use fiscal and monetary policies for achieving internal equilibrium. If H and P were partners in EMU, they would devalue together (which is consistent with H's policy requirements in isolation) or revalue together (which is consistent with P's requirements in isolation), but they would not be able to alter the rate of exchange in a way that was consistent with both. Under such circumstances, the alteration in the exchange rate could leave H with an external deficit, forcing it to deflate its economy, increasing or creating unemployment, or it could leave it with a surplus, forcing it into accumulating foreign reserves or allowing its prices and wages to rise. If countries deprive themselves of rates of exchange (or trade impediments) as policy instruments, they impose on themselves losses that are essentially the losses emanating from *enforced departure from internal balance* (Corden 1972a).

In short, the rationale for retaining exchange rate flexibility rests on the assumption that governments aim to achieve both internal and external balance, and, as Tinbergen (1952) has shown, to achieve these *simultaneously* at least an equal number of targets and instruments is needed. This can be explained in the following manner. Internal equilibrium is tackled via financial instruments, which have their greatest impact on the level of aggregate demand, and the exchange rate is used to achieve external equilibrium. Of course, financial instruments can be activated via both monetary and fiscal policies, and may have a varied impact on both internal and external equilibrium. Given this understanding, the case for maintaining flexibility in exchange rates depends entirely on the presumption that the loss of one of the two policy instruments will conflict with the achievement of both internal and external equilibrium.

With this in mind, it is vital to follow the Corden–Fleming explanation of the enforced departure from internal equilibrium. Suppose a country is initially in internal equilibrium but has a deficit in its external account. If the country were free to vary its rate of exchange, the appropriate policy for achieving overall balance would be a combination of devaluation and expenditure reduction. When the rate of exchange is not available as a policy instrument, it is necessary to reduce expenditure by more than is required in the optimal situation, which results in extra unemployment. This *excess* unemployment, which can be valued in terms of output or some more direct measure of welfare, is the cost to that country of depriving itself of the exchange rate as a policy instrument. The extent of this loss is determined by the potential size of balance of payments deficits, and the effectiveness as an instrument of adjustment of the exchange rate and of the alternatives still available in a monetary union.

This analysis is based on the assumption that there exists a trade-off between rates of change in costs/inflation and in levels of unemployment – the Phillips curve. Assuming that there is a Phillips (1958) curve relationship (a negative response of rates of change in money wages – W^* – and the level of unemployment – U), the Fleming–Corden analysis can be explained by using a simple diagram, adapting one devised by de Grauwe (1975). Hence, in Figure 10.1, the top half depicts the position of H, while the lower half that of P. The upper and lower right-hand corners represent the two countries' Phillips curves, while the remaining quadrants

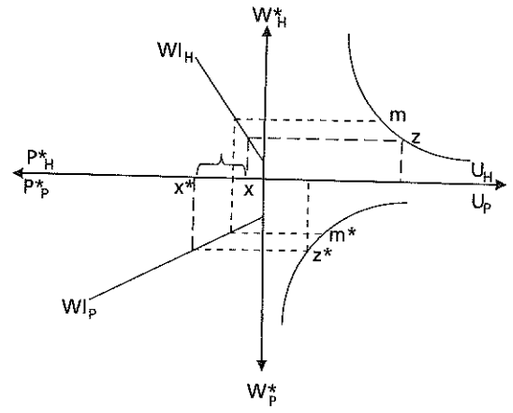

Figure 10.1 The Fleming–Corden analysis of monetary integration

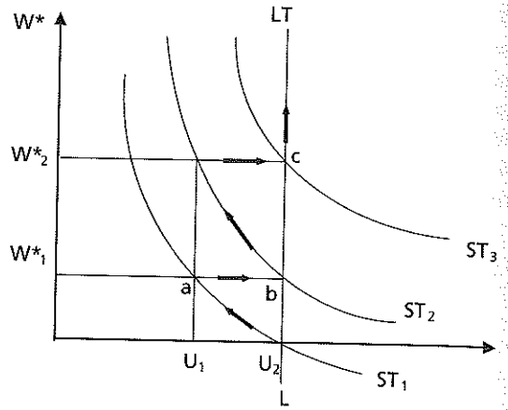

Figure 10.2 The expectations-augmented Phillips curve

show their inflation rates corresponding to the rates of change in wages – P^*. *WI* (which stands for *wage rate change* and corresponding *inflation*) is determined by the share of L in total GNP, the rate of change in the productivity of L, and the degree of competition in both the factor and the commodity markets, with perfect competition resulting in *WI*s being straight lines. Note that the intersection of *WI*s with the vertical axes will be determined by rates of change of L's share in GNP and its rate of productivity change. The diagram has been drawn on the presumption that the L productivity changes are positive.

The diagram is drawn in such a way that countries H and P differ in all respects: the positions of their Phillips curves, their preferred trade-offs between W^* and P^*, and their rates of productivity growth. H has a lower rate of inflation (x), than P (x^*), equilibrium change in wages and unemployment level being at z and z^*. Hence, without EMU, P's currency should depreciate relative to H's.[2] Altering the exchange rates would then enable each country to maintain its preferred internal equilibrium: z and z^* for countries H and P, respectively.

When H and P enter EMU, their inflation rates cannot differ from each other, given a model without non-traded goods. Each country will therefore have to settle for a combination of U and P^*, which is different from what it would have liked (m and m^*). The Fleming–Corden conclusion is thus vindicated.

However, this analysis rests entirely on the acceptance of the Phillips curve, but the consensus today is that there is no long-term trade-off between unemployment and inflation. If there is any relationship, it must be a short-term one, such that the rate of unemployment is in the long term independent of the rate of inflation: there is a natural rate of unemployment (NRU), generally defined as the non-accelerating inflation rate of unemployment (NAIRU) – that is, the rate of unemployment consistent with an unchanging inflation rate (see Stiglitz 1997), which is determined by rigidities in the L market. Thus the simple version of the Phillips curve has been replaced by an expectations-augmented one along the lines suggested by Phelps (1968) and Friedman (1975) – that is, the Phillips curves become vertical in the long run. This is shown in Figure 10.2, which depicts three Phillips curves for one of the two countries. Assume that unemployment is initially at point U_2 – that is, the rate of inflation is equal to zero – given the short-term Phillips curve indicated by ST_1. The expectations-augmented Phillips curve suggests that, if the government tries to lower unemployment by the use of monetary policy, the short-term effect will be to move to point a, with positive inflation and lower unemployment. However, in the long term, people will adjust their expectations, causing an upward shift of the Phillips curve to ST_2, which leads to equilibrium at point b. The initial level of unemployment is thus restored, but with a higher rate of inflation. A repetition of this process gives the vertical long-term curve labelled LT.

If both H and P have vertical LT curves, Figure 10.1 will have to be adjusted to give Figure 10.3. The implications of this are:

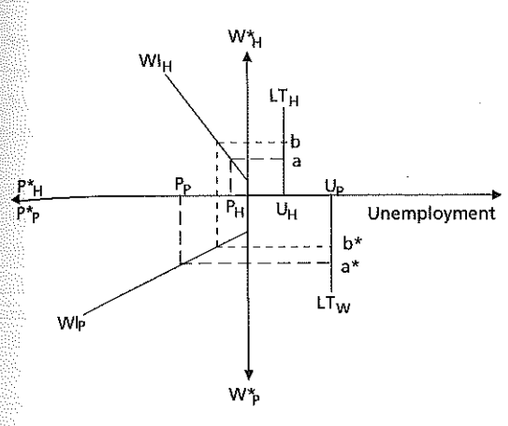

Figure 10.3 Monetary integration with expectations-augmented Phillips curves

1. EMU will have no long-term effects on either partner's rate of unemployment, since this will be fixed at the appropriate NAIRU for each country – U_H, U_P.
2. If EMU is adopted to bring about balanced growth and NRU, this can be achieved only if, inter alia, other policy instruments are introduced to bring about uniformity in the two L markets. This is, however, only a necessary condition; other aspects of similarity in tastes and production structures would be necessary to make it a sufficient condition.

Therefore, this alternative interpretation of the Phillips curve invalidates the Fleming–Corden conclusion.

It should be noted that Allen and Kenen (1980) and Allen (1983) have demonstrated, using a sophisticated and elaborate model with financial assets, that, although monetary policy has severe drawbacks as an instrument for adjusting cyclical imbalances within EMU, it may be able to influence the demand for the goods produced by members in a differential manner within the short term, provided members' markets are not too closely integrated. Their model indicates that EMU, in this sense, can come about as a consequence of the substitutability between nations' commodities, especially their financial assets, and of country biases in the purchase of commodities and financial assets. The moral is that the EMU central bank can operate monetary policies in such a manner as to have differing impacts on the various partner countries, and thus achieve real effects without compromising their internal and external equilibria. Moreover, once non-traded goods are incorporated into the model and/or K and L mobility is allowed for, it follows that the losses due to deviating from internal equilibrium vanish, a point which Corden (1972a, 1977) readily acknowledged. Finally, this model does not allow for the fact that EMU involves at least three countries – that is, W has to be explicitly included in the model. Allen and Kenen (1980) tried to develop a model along these lines, but their model is not a straightforward extension of that depicted in Figure 10.1.

To recap, it may be helpful to clarify some misconceptions and highlight others:

1. The fixity of exchange rate parities within EMU does not mean that the different member currencies cannot vary in unison relative to extra-union currencies; the adoption of one currency by the union would clearly show that.
2. In a 'proper' EMU – that is, one which satisfies all the elements specified in the definition given above (see Section 1.3, page 148) – an extra deficit for one region (country) can come about only as a result of a revaluation of the union currency: the union as a whole has an external surplus vis-à-vis the outside world. Such an act would increase the foreign exchange earnings of the surplus region, and therefore of the union as a whole, provided that the conditions for a successful revaluation existed. The integration of monetary policies through the common central bank will ensure that the extra burden on the first region is alleviated: the overall extra earnings will be used to help the region with the extra deficit. Such a situation may lead to surplus regions financing those in deficit indefinitely, but that is not likely.
3. One can perhaps think of the reservations in terms of Tinbergen's (1952) criterion of an equal number of policy instruments and objectives (see page 151). Although a country may lose an instrument individually, it is gaining other instruments from other aspects of EMU. The union as a whole does not lose the exchange rate route of adjustment (point (1) above). A voluntary EMU of depth is likely to offer a sufficient degree of 'political' union for unacceptably adverse effects on a particular country or part of it to be recognized and acted on (witness the agreed deal in 2010 between the EU and the IMF for the rescue of Greece; see Chapters 11 and 12). When countries are in a voluntary union they will be prepared, within limits, to act in favour of

other members, even when it is not in their immediate economic interest. Next time it may be they who would benefit from the voluntary assistance of others. Taking either a legalistic view of what actions union agreements lay down or a relatively short-run perspective of economic gains can be misleading. Ultimately, the alternative would be that the member would leave the union, which could also harm the other members and threaten the credibility of the union thereafter. Relevance to reality therefore requires taking a somewhat broader view of the policy problem.

4. Devaluation can work effectively only when there is 'money illusion'; but are today's trade unionists so deluded?
5. In practice there would never be a separation between the exchange rate union and *K* market integration. Once convertibility for *K* transactions is allowed for, *K* will always come to the rescue. Of course, this raises the spectre of a permanently depressed member, but, again, how likely is that?
6. More fundamentally, but arguably, a very crucial element is missing. The analysis relates to a country in internal equilibrium and external deficit. If such a country were outside EMU, it could devalue its currency. Assuming that the necessary conditions for effective devaluation prevailed, then devaluation would increase the national income of the country, increase its price level or result in some combination of the two. Hence a deflationary policy would be required to restore the internal balance. However, if the country were to lose its freedom to alter its exchange rate, it would have to deflate in order to depress its imports and restore external balance. According to the above analysis, this alternative would entail unemployment in excess of that prevailing in the initial situation. The missing element in this argument can be found by specifying how devaluation actually works. Devaluation of a country's currency results in changes in relative price levels and is price inflationary for both exportables and importables, at least. These relative price changes, given the necessary stability conditions, will depress imports and (perhaps) increase exports. The deflationary policy that is required (to accompany devaluation) in order to restore internal balance should therefore eliminate the *newly injected* inflation as well as the *extra* national income. Only if the inflationary implications of devaluation are completely disregarded can one reach the a priori conclusion that membership of EMU would necessitate extra sacrifice of employment in order to achieve the same target.
7. Even within a purely economic context, there will be a limit to how far the argument will go for the costs for a country from forgoing the ability to have its own exchange rate and monetary policy. The whole net benefit of the increased integration has to be taken into account. Hence, even if the rates of inflation and unemployment differed from those that would be preferred without EMU, they may dwindle to nothing when combined with other benefits to real incomes and wealth. Similar agreements with parts of *W* may not be politically superior, even if they might be economically so. Similarly, monetary integration may reinforce the barriers to reversion to less desired examples of economic dominance (a point emphasized by some of the countries involved in the 2004 EU accession).

Against the above, one should add that monetary independence offers an element of contingency planning. Sweden explicitly and Denmark implicitly have argued that even though they may wish to shadow EMU very closely, maintaining a separate currency gives them the opportunity to respond rather better to a very large adverse shock. Thus, with care, they can manage to secure most of the gains from EMU and yet retain an element of flexibility.

10.4.3 Back to OCAs

OCA is generally presented in terms of national incomes and prices, relegating wages to the background. This is useful, since it provides a complementary picture to the above analysis, ensuring a better understanding, but, of course, inevitably leading to overlaps. Mundell (1961) attributed the loss to a shift in demand, due, say, to a change in consumer preferences, away from *P*, in favour of *H*. This is depicted (not by Mundell) in Figure 10.4, where the vertical axis measures prices (P_H, P_P), the horizontal the level of national economic activity (Y_H, Y_P), and *S* and *D*, respectively, are the aggregate national supply and demand curves. The two countries are initially in the equilibrium situations depicted by the solid *S* and *D*

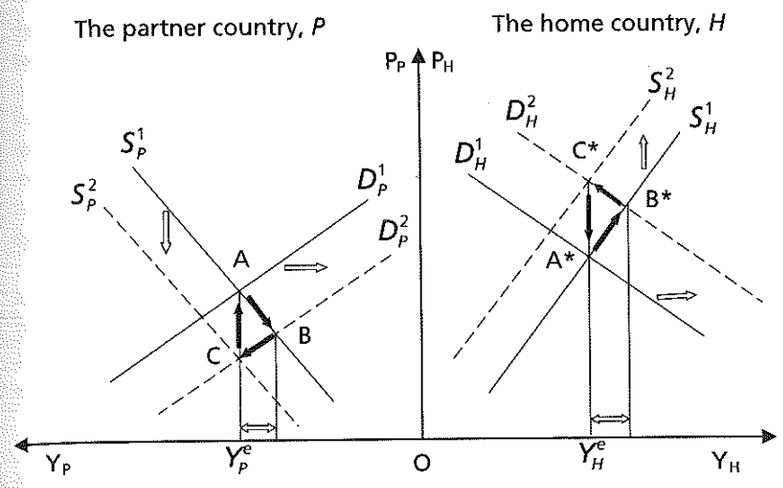

Figure 10.4 Shifts in EMU partners' aggregate supply and demand

curves (D^1_H, S^1_H for *H* and D^1_P, S^1_P for *P*), with *H* at A* (i.e. income Y^e_H) and *P* at A (income Y^e_P). The indicated shifts in demand (the dotted lines D^2_H and D^2_P; follow the blank arrows) mean that *H* moves to the right while *P* moves to the left. Thus the equilibrium points move to B* and B respectively – that is, *H* experiences an increase in *Y*, hence in employment – while *P* experiences the opposite – that is, an increase in unemployment. As mentioned above, it is the extent of these deviations from equilibrium Y^e_H and Y^e_P that constitutes the costs of EMU for the two partners.

Given that the original income levels (Y^e_H; Y^e_P), hence of employment/unemployment, were the nations' desired ones, the question is then how to restore them. As above, there are two ways to do so. The first is that if *wages are flexible* in both countries, then the increased level of economic activity in *H* will push up *H*'s wages, while the increased unemployment in *P* will depress *P*'s wages. The result will be an upward shift in *S* in *H* to S^2_H (since *S* reflects costs, which have risen with increased wages), and a downward shift in *P* to S^2_P. The figure has been drawn in such a way that the new equilibrium positions (C* and C) precisely restore the original *Y* levels (A* and A), but of course increase *H*'s price level and reduce *P*'s. These price changes will stimulate demand in *P* and depress it in *H*, and their change relative to each other in favour of *P* will result in reinforcing shifts in demand that take both countries back to their original curves (D^1_H, D^1_P) – that is, to points A* and A.

The second is that if labour (*L*) can move freely between the two countries, then those losing jobs in *P* will migrate to *H*. The reduction (or increase) in *L* in *P* (or *H*) will enable both countries to maintain their initial wages; thus they can stay at B* and B. Of course, this means different income levels from the initial ones, but there is no disequilibrium due to the changes in *L* endowments.

What happens if wages are inflexible and *L* is immobile? Obviously, equilibrium in *P* will remain at C. In *H*, however, the increase in *D* will lead to increases in wages and shift the *S* curve upwards, resulting in higher prices there. Hence, *H* has to bear the full brunt of the adjustment, through higher prices – that is, higher inflation. These increased prices, again, will make *P* products more competitive, leading to shifts in demand in their favour. The upshot is that, by being a member of EMU, *H* will have to accept higher inflation than it desired.

But how would the two countries fare outside EMU? If they followed a freely flexible exchange rate system, *H* would raise its interest rate, depressing demand, while *P* would do the opposite, enhancing demand. These policy changes lead to an appreciation of *H*'s currency and a depreciation of *P*'s, enhancing the competitiveness of *P* products in the *H* markets. The interest and exchange rate changes will thus enhance demand in *P* and depress it in *H*. The net effect of these policy changes is to shift the demand curves back to their

original levels and restore equilibrium – that is, go back to A* and A.

This is the same conclusion reached above: as a member of EMU, a country will have to either persevere with more unemployment than it desired or put up with more inflation than it deemed acceptable – that is, such a country cannot adjust to asymmetric shocks. Hence the major contribution of OCA theory is to point out that for nations to form OCAs they have to have symmetric shocks, or, they must have flexible wages and free labour mobility. Recall, however, that this conclusion is null and void in the long run in the previous case, and is valid here only if the change in demand is permanent (if it is short-lived, then what is the fuss about?) (see de Grauwe 2005); for the EU, Gros (1996) and others find that shocks are sectoral, hence cannot be tackled in terms of exchange rate changes.

10.4.4 OCA in a nutshell

The previous section considered explicitly only two prerequisites of OCA, but the others have been dealt with in the section on the definition and some will be catered for in the next section. So here is a brief enumeration of all the factors.

OCA's message is very simple: two countries would gain from having a single currency when the benefits of the elimination of exchange rate risks and enhanced price transparency outweigh the costs of adjusting to country-specific (asymmetric) shocks due to loss of control over their own interest and exchange rates. *OCA is not about the overall costs and benefits of EMU; it is a cost-benefit analysis of the costs of EMU.* The theory sets out the conditions that would ensure against costs, or at least limit their extent:

1. Price/wage flexibility, which would enable markets to clear fully, thus eliminating the need for the lost policy instruments (page 155).
2. Labour/capital mobility, which would fully compensate for the adjustments that the lost policy instruments would achieve (page 155).
3. Financial market integration, which would cater for inter-area payments imbalances and enhance long-term adjustment through wealth effects (see previous section).
4. Open economies, meaning members have high exports/income ratios and trade mainly with each other, and thus would benefit from fixed exchange rates between them (see previous section and next page).
5. Production spread across a variety of goods and services, which would insulate against fluctuations in the demand for individual commodities, dispensing with the necessity for frequent changes in the terms of trade by way of exchange rate changes (see previous section and next page).
6. Similarity of production structures, which ensures similar shocks, eliminating the need for individually tailored policies (see previous section and next page).
7. Similarity of inflation rates, which would minimize payment imbalances (page 152).
8. Greater degree of fiscal integration, which would make it easier to eliminate divergent shocks through fiscal transfers (see Section 10.6 page 159 and Chapters 11 and 12).

Note that these need not apply inclusively, since an acceptable performance in one criterion may compensate for a poorer performance on another – for example, a high degree of labour mobility would reduce the need for a high degree of wage flexibility. Also note, importantly, that these criteria say nothing about the gains from integration (see left column), but the next section does so.

Before we proceed, however, it should be mentioned that a later Mundell (1973a) is less sceptical of EMUs. This is due to his adding a new dimension to his analysis: EMU provides an insurance mechanism, enabling members to manage asymmetric shocks better, relative to having their own exchange rate uncertainty outside. Suppose members experience a temporary asymmetric shock. Inside EMU, consumers in the adversely affected country can borrow automatically from a member to mitigate their circumstances. In the absence of EMU, the existence of separate monies and uncertain exchange rates would deter the lenders; hence temporary shocks cannot be alleviated. Also, under uncertainty, movements in the exchanges themselves may be the cause of asymmetric shocks, rather than enabling members to cope with them.

10.5 A 'popular' cost approach

As mentioned, OCA theory is concerned with only the loss of the exchange rate as a policy instrument when what is needed is an examination of the overall costs and benefits of EMU. Before dealing with this, here is a simple version of the losses, made popular in the context of the discussions concerning the euro as the single currency for the EU. It is known as the impossible trilogy, or inconsistent trinity, principle.

The principle states that only two out of the following three are mutually compatible:

1. Completely free capital mobility
2. An independent monetary policy
3. A fixed exchange rate.

This is because, with full capital mobility, a nation's own interest rate is tied to the world interest rate, at least for a country too small to influence global financial markets. More precisely, any difference between the domestic and world interest rates must be matched by an expected rate of depreciation of the exchange rate – for example, if the interest rate is 6 per cent in the domestic market, but 4 per cent in the world market, the global market must expect the currency to depreciate by 2 per cent this year. This is known as the interest parity condition, which implies that integrated financial markets equalize expected asset returns; hence assets denominated in a currency expected to depreciate must offer an exactly compensating higher yield for the expected depreciation.

Under such circumstances, a country that wants to conduct an independent monetary policy, raising or lowering its interest rate to control its level of employment/unemployment, must allow its exchange rate to fluctuate in the market. Conversely, a country confronted with full capital mobility, which wants to fix its exchange rate, must set its domestic interest rate to be exactly equal to the rate in the country to which it pegs its currency. Since monetary policy is then determined abroad, the country has effectively lost its monetary independence.

The loss caused by EMU membership is as already indicated, but here its extent is determined by the combined Mundell–McKinnon–Kenen (respectively, 1961, 1963 and 1969) criteria, which render price adjustments through exchange rate changes less effective or less compelling:

(a) Openness to mutual trade
(b) Diverse economies
(c) Mobility of factors of production, especially of labour.

Greater openness to mutual trade implies that most prices would be determined at the union level, which means that relative prices would be less susceptible to being influenced by changes in the exchange rate. An economy more diverse in terms of production would be less likely to suffer from country-specific shocks, reducing the need for the exchange rate as a policy tool. Greater factor mobility enables the economy to tackle *asymmetric shocks* via migration, hence reducing the need for adjustment through the exchange rate.

EU nations score well on the first criterion, since the ratio of their exports to their GDP is 20–70 per cent (combining both exports and imports for 2001 gives the EU 12.3 per cent, with Belgium 91.7 per cent and France, Germany, Italy and the UK around 30 per cent), while that for the USA and Japan is, respectively, 11 per cent (13.5) and 7 per cent (10.8). Note that the USA is the preferred reference nation, but there is no evidence that it is an OCA (de Grauwe 2005, and references cited there), which invokes the criticism that the only area that meets OCA conditions is one that already has a currency – a circular argument. EU nations also score well in terms of the second criterion, even though they are not all as well endowed with oil or gas resources as the Netherlands and the UK. As to the third criterion, they score badly in comparison with the USA, since EU labour mobility is lower (see Chapters 7 and 8) due to, inter alia, the Europeans' tendency to stick to their place of birth, not only nationally, but also regionally. There is also a tendency for migration to be temporary and only involve part of a larger family (see Chapter 8).

Although there is no definitive estimate of the costs, due to the relative lack of labour mobility, it is generally thought to be considerable. However, it would have to be very large to offset the gains from EMU. In any case, much of the problem from lack of mobility is as relevant within the members as between them, and this applies to the USA too. It therefore requires addressing through structural policy in each member, regardless of EMU, or regardless of membership of the EU itself for that matter. Tackling the problem has become more important since the late 1960s and will remain so in the face of faster rates of technical change in products and production methods; in part, it is a consequence of globalization, so it is a change that will have to be made in any case.

Nonetheless, even on purely economic grounds, the longer-term perspective will not lend support to some

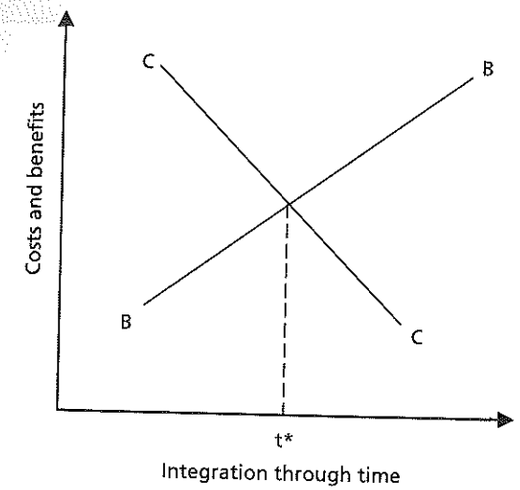

Figure 10.5 Krugman's (1990) cost–benefits of EMU

of the more pessimistic assessments. Consider, for example, Krugman's (1990) model, which utilizes such a perspective when examining the costs and benefits of EMU. In Figure 10.5 the costs are represented by line CC and the benefits by line BB, and both are expressed in relation to GDP. The benefits from the single currency are shown to rise with integration, since, for example, intra-EU trade, which has been rising with integration over time (see Figure 5.8 in Chapter 5, page 76), Tables 5.11–5.13 on the website and El-Agraa 1999), will be conducted at lesser costs (Frankel and Rose 2002), while the losses from ceding the exchange rate as a policy variable decline with time. In the economic jargon used above, changes in the exchange rate are needed to absorb asymmetric shocks, but these will decline with time, becoming less asymmetric as integration proceeds and becomes more intensive. In short, as the member economies become more integrated, the use of the exchange rate instrument for variations against members' currencies would become undesirable. Thus, for countries seriously and permanently involved in EMU, sooner or later a time would arrive when the benefits will exceed the costs. All this is tantamount to stating that OCA is non-operational, if not altogether irrelevant; indeed, a very long time ago, Corden (1972b) castigated it as one of 'feasibility', rather than 'optimality', and although Bayoumi and Eichengreen (1996) developed methods for identifying the suitability of various EU nations for EMU, their method only succeeds in ranking suitability rather than calculating actual costs/benefits, which would indicate where the line separating included from excluded countries should be (see Capie and Wood in El-Agraa 2002b). Moreover, Issing (2008, p. 50) points out that OCA criteria are neither definitive nor complete, and conditions such as the necessary market flexibility can also be created *after* the event, and hence are endogenous – that is, dependent on the process itself.

In many respects the key policy choice issue relates to uncertainty about the future. If a prospective EMU member could be certain that the economies would grow more closely together, in the sense of becoming more economically similar, and that the chance of having a serious external shock that affects only one of them or both in opposite directions, then worries about a single monetary policy being inappropriate would be reduced – that is, symmetry would be enhanced.

However, a priori, such developments can only be assessed; they cannot be known. Moreover, OCA analysis tends to ignore the fact that behaviour is likely to change after the event and assesses net EMU benefits on the basis of *ex ante* behaviour (Issing 2008). Mayes and Suvanto (2002) take this even further and argue that in the case of Finland, for example, one of the factors swaying the authorities in favour of EMU membership is that it would force generally favourable changes in labour market behaviour. In other words, knowing that the exchange rate mechanism is not available to accommodate asymmetric shocks may actually cause people to change their behaviour, so that the impact of the shocks is reduced to acceptable levels.

Furthermore, there is a tendency to ignore positive asymmetric shocks. In such cases the impact of the favourable shock will be magnified by EMU membership. Out of the union, such a shock would increase the demand for the currency as investors from other countries sought to join in the benefits. The surge in demand would probably push the domestic central bank into raising interest rates to head off any inflationary pressure, thereby also raising the exchange rate and reducing the expected rate of growth. Inside EMU, the capital inflow will have a much more limited impact on the exchange rate, as it relates only to a part of the union. Similarly, the response of monetary policy will be negligible. Knowing that there will be no offsetting policy changes, in turn, will help keep down inflationary pressures. Such an experience seems to

have occurred with the favourable technology shock, or Nokia phenomenon, in Finland. The growth/inflation combination that occurred in the early EMU years was considerably more favourable than that which prevailed in earlier decades. Other factors, such as the continuing impact of the collapse of the former Soviet Union and the banking crisis in the early 1990s, may also have been influential, but the evidence is, at the very least, suggestive.

10.6 Fiscal policy in monetary unions

Although this chapter is concerned with EMU theory, EMU is essentially an EU phenomenon in the sense that sovereign nations voluntarily decide to adopt it. The USA is, of course, an EMU, and, as we have seen, it is used by all analysts as the benchmark against which to judge EMUs, but it is a single nation. It may therefore prove helpful, before drawing overall conclusions, to digress somewhat by examining the role of fiscal policy in monetary unions, including the USA. Aspects of this are dealt with in Chapter 12, but a bit of overlap is warranted.

Durable EMUs are characterized by large central budgets that facilitate fiscal policy and transfers between regions. Fiscal policy is the manipulation of the balance between government expenditure and revenue so as to influence aggregate demand in the economy. This has three elements in EMU: the overall fiscal situation, interactions and transfers between members. Macroeconomic policy is more effective if monetary and fiscal policies are coordinated. This was apparent in the recent recession, starting in 2007, where a loose monetary policy needed to be augmented by a fiscal stimulus. However, with individual members' fiscal policies responding to their individual macroeconomic situation, the overall fiscal stance is likely to be suitable.

Interactions between members can occur in two ways: first, the potential effect of national fiscal policy on EMU's monetary policy, and second, absorption. If national fiscal policy of some EMU members is too loose, this could lead the MA (see Chapters 12 and 19) to raise interest rates at the expense of the responsible members. This is possible, but for it to be significant the members involved would have to be large and the looseness great. So this seems to be a marginal problem.

Absorption relates to the national income accounting identity that a country's balance of payments current account balance (CA) is equal to national income/output minus absorption: the national use of goods and services in consumption, government expenditure and investment. Or that CA is equal to net private saving plus the government fiscal balance (government revenue minus government expenditure). So the national fiscal stance will affect other countries in EMU via their balance of payments. For example, in EMU, Germany's high level of private saving more than offset the modest fiscal deficits and the country has a large surplus on CA. With most EMU trade being internal, the counterpart of this large surplus is deficits in other Eurozone members. So there is an important interaction between national fiscal positions, CA and national macroeconomic situations. In EMU with a large central budget, the effects of these regional imbalances would be at least partially offset by fiscal transfers between regions, the issue to which the discussion now turns.

With automatic transfers from the central/federal budget, fiscal policy will act as a means of inter-regional risk sharing by transferring resources between regions (see Chapters 11 and 12). These transfers perform three types of function (Fatás 1998): inter-temporal stabilization, inter-regional insurance and inter-regional redistribution. The first two stabilize regional income and the third reduces inequalities in income levels between regions. Inter-temporal stabilization smoothes fluctuations in regional income levels due to the stabilization of the national economy by movements in the national public sector deficits: the Keynesian stabilization function. Inter-regional insurance transfers tax revenue from fast-growing regions to slow-growing ones when economic cycles are imperfectly correlated between regions. Inter-regional redistribution involves the transfer of resources from more to less prosperous regions, so it is related to levels of rather than changes in income. Such redistribution might be justified in terms of the solidarity of the nation state, to achieve a fairer individual distribution of income, or to enhance overall economic efficiency. The delineation of these transfers in theory and their separation in reality are another matter; in national monetary unions transfers between regions fulfil all three functions.

These three functions relate to three problems that regions face in EMU: asymmetric shocks,

competitiveness and differences in regional income. Differences in regional income levels relate to long-term economic growth, not stabilization, so are not a concern for EMU except in terms of its long-term political cohesion. Asymmetric shocks and competitiveness relate to stabilization, so are an EMU issue. Regions within EMU that face an adverse asymmetric shock have this partially offset by higher receipts from and lower payments to the federal budget, but how important is this stabilization? Initial research (Sala-i-Martin and Sachs 1992), indicated that inter-regional flows of public finance were important in reducing fluctuations in regional income. Gradually, more refined research techniques have whittled away at the estimated effects, and more recent research suggests that federal taxes and transfers only reduce regional income fluctuations by 10 per cent (Fatás 1998; Asdrubali *et al.* 2002). These estimates of stabilization are for the USA, a monetary union comparable in size to EMU. Whether it is a good basis for comparison with EMU could be questioned because of the difference between US states and EU countries. The national economies[3] of EMU remain diversified, so their vulnerability to asymmetric shocks and, consequently, the need for inter-regional stabilization is less. The greater separation of EU nations may also enhance the potential for differences in rates of wage and price inflation: an effective alternative adjustment mechanism (see page 157). By comparison with the USA, European national economies lack adjustment mechanisms such as labour mobility and cross-border capital holdings and flows, but are perhaps less vulnerable to asymmetric shocks than US states. Although, as the recent recession indicates, the vulnerability of national economies, even to symmetric shock, can vary substantially.

By contrast, competitiveness issues loom much larger for a monetary union such as EMU; the separation of national economies makes wider divergences in wage/price inflation possible. The ability to reduce these divergences may also be more difficult if they are related to structural features of the economy. It may have been thought that a common monetary policy and some coordination of fiscal policies would be sufficient to ensure similarity of national inflation rates in EMU, but this has not proved to be the case. In the absence of exchange rate adjustment, the adjustment of competitiveness is a long and painful process, with lower growth and higher unemployment being needed to bear down on inflation. If these are insufficient to adjust competitiveness, then EMU could find itself with nations with persistently high unemployment and lower income levels, in the same way that nation states have such regions – for example, the Mezzogiorno in Italy. This indicates that EMU may require fiscal transfers from prosperous to problem nations.

Fiscal policy and government deficits lead to government debt, which is an issue for EMUs. National governments can adopt a relatively relaxed attitude to their debt, because the debt in developed countries is predominantly held by national citizens and institutions, and, in the worst case, the debt could be repaid by expanding the domestic money supply.[4] Membership of EMU changes the nature of government debt, and foreign financing of debt within the EMU may increase because it is denominated in the same currency. With the money supply controlled by the ECB, national governments can no longer service their debts by creating money. So EMU encourages looser fiscal policy, but makes its debt consequences more serious. A nation with high government debt in EMU would have to increase taxes and reduce government expenditure, which would reduce national income, making servicing the debt more difficult. The hope would be that this deflation would restore price competitiveness and expand demand in the private sector, but this is a slow and uncertain process. This is, of course, a description of the current dilemma of Greece. It follows that it is important that countries enter EMUs with manageable government debt, and that there are mechanisms to prevent the excessive accumulation of debt.[5]

This analysis indicates that EMU either requires a significant central budget or very tight controls on national governments' budgets and limits on debt. When reading Chapters 11 and 12, you should consider whether the EU's EMU meets this requirement.

10.7 Conclusion

This chapter has gone to some lengths to emphasize three EMU facets, the wider process of economic and monetary integration that has been dominating the integration process in Europe since before the turn of the century. These are:

1. The development of EMU has to be seen in the light of both the longer-term and the wider political context. Narrow short-run economic assessments can make the decisions that have been taken look illogical.
2. EMU is expected to change the behaviour and structure of the European economy. Assessment of the likely impact therefore has to include these structural changes. Many traditional models that have been used to assess the impact of integration either do not take this into account adequately or have sometimes been used in ways that ignore these essential structural components of the process of change.
3. While the focus on the monetary aspect of EMU is understandable, it is the economic 'E' in EMU that is both the more complex issue and the key to the ultimate success of the enterprise.

Hence the next two chapters appraise both the development of EMU over the last forty years, and the way in which it is currently operating and will develop as the accession countries join, in the light of these three observations.

Summary

- EMU requires the complete and irrevocable fixing of members' exchange rates, as well as the complete mobility of capital between them.
- For EMU to work in practice, three elements need to be added:
  1. a single monetary policy
  2. a common pool of foreign exchange reserves and their management
  3. a single central bank or monetary authority.
- EMU economic benefits come from various sources, including:
  1. savings in foreign exchange reserves
  2. reductions in the costs of financial management
  3. certainty and stability of prices.
- EMU economic costs are due to the loss of the exchange rate as a policy instrument.
- The losses from EMU stem from the optimum currency area (OCA) analysis, which shows that to minimize them would require, inter alia, labour and capital mobility and/or flexibility in wages and prices, and/or common central fiscal arrangements.
- OCA analysis is not operational and its conditions may be met after EMU creation, so it is not the be-all and end-all.

Questions and essay topics

1. What is EMU?
2. What are the economic benefits of EMU?
3. What are the economic costs of EMU?
4. What is an optimum currency area?
5. What conditions have to be met in order to reduce the costs of EMU?
6. What is the impossible trilogy or inconsistent trinity?
7. What is the interest parity condition?
8. How does Mundell reconcile his later OCA optimism with his earlier scepticism?
9. 'OCA is a cost-analysis of EMU, not a cost-benefit analysis of it.' Explain and discuss.
10. 'OCA conditions can be met after the event, so what is all the fuss?' Explain and discuss.

FURTHER READING

de Grauwe, P. (2009) *Economics of Monetary Union*, Oxford University Press.

NOTES

1 Seignorage is the benefit to a country if its currency is accumulated as reserves by other governments, companies or individuals in other countries. This reserve accumulation means that the currency issue country can acquire foreign goods, services or assets in exchange.

2 There is only a minute chance that the two countries' inflation rates would coincide.

3 It is national economies that are important here, because the persistence of large national budgets means that inter-regional transfers can continue within nation states, albeit constrained by the requirement of the Stability and Growth Pact.

4 There are potential problems, such as crowding out, government borrowing reducing private borrowing and investment. Expanding the money supply to finance the government debt servicing can be inflationary or

hyperinflationary. This places constraints on governments' use of such financing.

5 Debt markets should have constrained Eurozone government borrowing by requiring much higher rates of interest from governments with high levels of debt. This did not happen until the credit crunch made obvious the problems of these countries – yet another example of the failure of financial markets.

11 The development of EU economic and monetary integration

DAVID MAYES AND ALI EL-AGRAA

11.1 Introduction

The aim of achieving economic and monetary union (EMU), although enshrined in the Treaty on European Union (TEU, or the Maastricht Treaty), and hence in the Treaty of Lisbon, is not a new phenomenon for the EU (see Chapter 2). This chapter provides a historical perspective by travelling the route taken by the EU in this direction. The actual route followed has been the combination of the objectives for increasing economic integration, paving the way for what some hoped to be the political unity of Europe (see Section 2.2.2, page 25), and the more immediate economic needs and shocks along that path. Nevertheless, the initial ideas, sketched out as early as 1970, bear striking similarities to what has eventually been accomplished.

The chapter begins by considering the first attempt at EMU, based on the 1971 Werner Report, which committed then European Community (EC) member states (MSs) to achieving it in three stages, beginning in 1971 and finishing in 1980. After examining the reasons for its failure, it goes on to tackle the 1979 European Monetary System (EMS), a limited arrangement aimed at dealing with the monetary upheavals of the time by creating a zone of monetary stability. It then turns to the revival of EMU in the two Delors reports, which culminated in its formal adoption in the 1992 Maastricht Treaty, again to be achieved in three stages, beginning in 1990 and finishing in 1997, or 1999 at the very latest. We then look into how it has progressed and why some MSs remain outside, before offering our conclusions.

11.2 The Werner Report

From 1967, the prevailing world order for exchange rates, established as part of the Bretton Woods agreement in 1944, began to fall apart. Until that point the system of having exchange rates that were 'fixed', but adjustable occasionally when the existing rate was shown to be unsustainable, had worked rather well. Fixity permitted fluctuations within 1 per cent of a peg with the US dollar, which in turn was convertible to gold at $35 per ounce. Despite some initial repositioning after the war, the number of occasions on which pegs had been changed meant that the system had seemed credible. The contrast with problems after the First World War, with hyperinflation in Germany and then the deflationary impact of trying to return to the gold standard, was striking. However, while the early problems lay with other countries trying to stabilize themselves with respect to the USA, the problem in the 1960s was that the USA, hindered by the cost of the Vietnam war, was no longer able to act as the anchor for the international system.

Other countries therefore had to look elsewhere for stability. While the main initial thrust was towards a reform of the Bretton Woods system, the EC looked at the possibility of trying to create a locally stable system with the same sort of architecture for itself. In 1969, during The Hague summit (see Chapter 2), the original six MSs (the Six) decided that the EC should progressively transform itself into an EMU, and set up a committee, led by Pierre Werner, then prime minister of Luxembourg, to consider the issues involved. The Werner Committee presented an interim report in June 1970 and a final report in October of the same year. The latter became generally known as the Werner Report, and was endorsed by the Council in February 1971.

According to Council resolution, the EC would (*OJ C* 1971):

1. Constitute a zone where persons, goods, services and capital would move freely – but without distorting competition, or creating structural and regional imbalances.