Concerning Currency Unions

By David Laidler*

Introduction

A decade ago the majority of economists favored one form or another of exchange rate flexibility between individual countries. The "fixed exchange rate" system to which various forms of exchange rate flexibility were regarded superior was, in fact, usually an "adjustable peg" system of the Bretton Woods variety. The merits of a system of rigidly and perpetually fixed exchange rates or, what amounts to the same thing, a common international currency, were less frequently discussed. Matters are now very different. An influential body of opinion exists to the effect that just such a system would provide the best of all possible means of organizing the international monetary system.[1] Some also argue that it is a practical possibility that such a system soon be established, if not on a worldwide basis, then at least within certain important groups of countries (such as, for example, the European Economic Community). In this paper I shall argue that, although this body of opinion is to be taken seriously, there is still room for doubt about aspects of the case that underlies it.

The case for a currency union is closely related to that loose-knit body of doctrine known as "monetarism", without being an integral part of it, but it is not my purpose here to attack that case by launching a general assault on its theoretical foundations. I accept many, indeed probably most, of the theoretical preconceptions and empirical judgements that underly it. Hence the first task I shall undertake in the pages that follow is to sketch out that case, and to discuss those aspects of it

* Department of Economics, University of Western Ontario, London, Western Ontario, Canada.

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[1] The names of *Laffer* and *Mundell* are closely linked with this body of opinion. *Wanniski* (1975) gives a clear account of their views. See also *Parkin's* (1973) ANZAS lecture.

with which I agree. Only when this common ground is clearly identified does it become possible to deal with substantive areas of disagreement. As we shall see, the issues at stake hinge upon analysis of situations both of long-run equilibrium and of short-run disequilibrium; these aspects of the question will be dealt with in turn.

The Case for a Currency Union

The essence of the case for a currency union between any group of countries is simply stated. The use of money as a means of exchange, a store of value and a unit of account enables agents to economize on the use of scarce resources in the generation and transmission of the information upon which consumption, production, and employment decisions are based. If national monies exist and if rates of exchange between them can fluctuate, those engaged in international transactions must either generate for themselves information about the likely course of such fluctuations, face the risks inherent in taking decisions in the light of incomplete information about them, or pay specialized agents to take such risks on their behalf. One way or another, real resources must be devoted to dealing with such problems, problems which would not exist were exchange rates between national monies rigidly and perpetually fixed or were one money to circulate freely throughout a group of countries. The formation of a currency union thus extends to economic relations between the countries making it up the advantages achieved within the national economy by the use of a common currency.[2]

Such arguments as these have long been understood, and they do not represent a novel element in contemporary debates. What is new is the fresh light cast by recent work on what advantages there are that would be lost if countries gave up national monetary autonomy by abandoning their own currencies and the possibility of altering, or allowing to vary, the prices at which these exchange against one another. It used to be argued frequently that the most important such advantage involved the ability to use monetary policy actively to pursue domestic income and employment targets. Experience of the last decade has made us much less sanguine than we were about just what can be achieved by such "fine tuning". Acceptance of the desirability of adopting some sort of a rule to determine the behavior of a country's money supply is now more widespread than it was.

Advocacy of a monetary rule has, in the past, been closely associated with advocacy of national monetary autonomy and freely floating ex-

[2] See *Johnson* (1963) for a clear statement of this point of view, one which he himself, however, does not hold.

change rates.[3] After all, the money supply of any one country in a currency union, or even under pegged exchange rates, is an endogenous variable. The only way in which a country can guarantee its own ability to adhere to a self-imposed rule for the monetary expansion rate, independently of what policies are being pursued elsewhere, is to have its own currency and adopt exchange rate flexibility. Contemporary advocates of currency unions understand and accept this line of reasoning, but they go on to argue that to consider the matter in this way is to take too narrow a view of the issues at stake.

If each potential member of a currency unions has its own currency, and if some adopt money supply rules and others persist in fine tuning, then exchange rate *stability,* let alone fixity, is going to be impossible to maintain between them. If short-term capital is highly mobile between the countries in question, any divergence of domestic monetary policies is bound to cause exchange rates to fluctuate, no matter what the formal institutional arrangements of the foreign exchange market, and the international monetary system is going to be inefficient in its operation. Thus it is not just desirable that individual countries adopt rules to govern the behavior of their money supplies in order to enhance their own domestic stability; it is desirable that they do so in order to enhance the stability of the international economy.[4] If each of a group of countries adopts a monetary expansion rule, then they will enjoy long-run stable domestic inflation rates, and hence, given that the purchasing power parity doctrine is a reasonable explanation of the long-run behavior of exchange rates, stable long-run rates of change in equilibrium exchange rates as well.[5] Stable rates of change in the pattern of exchange rates is much to be preferred to instability but, it is argued, *constancy* of exchange rates will provide even greater efficiency in the international economy. Hence it is an apparently short step to go on to argue that if each of such a group of countries has independently chosen to follow money supply rules, then those countries may as well pick their monetary expansion rates so as to be compatible with long-run constancy of exchange rates.

However, to pick monetary expansion rates that generate exchange rate constancy requires international agreement. Moreover, it cannot be guaranteed that a given set of rules for monetary expansion rates in various countries can forever be compatible with constant exchange

[3] See in particular *Friedman* (1960).

[4] As *Purvis* (1976) argues, failure to distinguish carefully between arguments based on the viewpoint of the individual country and those based on that of the world as a whole, has caused considerable confusion in the debate about exchange rates.

[5] For empirical evidence on purchasing power parity, see *Gailliot* (1970) and *Myhrman* (1976), Chapter 8.

rates. If the real rate of growth of any country were to change relative to those ruling elsewhere, or if the real income elasticity of demand for money ruling in any economy were to alter, as it has been observed to do in both the United States and Britain over the last seventy years or so, a rate of monetary expansion previously compatible with a zero rate of exchange rate change, given the monetary rules being followed abroad, would no longer be so.[6] Thus to opt for long-run constant exchange rates, in conjunction with governing money supply behavior by rules, involves more than having individual countries adopt compatible domestic policies. Rather it involves the adoption of a rule for the behavior of their aggregate money supply to be implemented by some international authority or another, with the operation of the price-specie flow mechanism determining the manner in which that world money supply is allocated between individual countries. In short, it involves the formation of a currency union.

I have already noted that there is much of the foregoing case that I accept. I agree that short-term capital is now so highly mobile internationally that divergent fine tuning monetary policies are bound to lead to damaging exchange rate fluctuations. For this reason, as well as those stemming from a general pessimism about the effectiveness of monetary fine tuning, I too would advocate the adoption of a rule to govern the monetary expansion rate of any country, and would expect such a step to lead to stable long-run rates of inflation and, if other countries also adopted rules to a stable rate of exchange rate change for the country concerned. Moreover, I agree that the exchange rate stability that would arise if all countries adopted domestic monetary rules would have desirable results for the efficiency of the international economy, and that exchange rate constancy does have advantages over mere stability as far as that efficiency is concerned.

That, however, is as far as I go with the advocates of currency union. The subsequent steps in their argument hinge on the implicit assumption that, given that it has already adopted a monetary rule, there is nothing for a country to lose if it abandons its own currency, joins a currency union and thereby gives up its ability to select its own long-term inflation rate. I do not accept this. I believe that there are some long-run losses involved in giving up this ability. More important, I also believe that there are potentially important gains to be had from maintaining individual currencies and permitting exchange rates between them to fluctuate about their long-term trends in the short-run. I will take up these matters in turn.

[6] For empirical evidence on the income elasticity of demand for money in these countries, see *Laidler* (1971), Table 1.

Long-Run Issues

It has already been remarked that the principal advantages of a currency union stem from the greater economy in the use of scarce resources which can be achieved by having the same means of exchange and unit of account in use in both foreign and domestic transactions. On the other hand, a system of national monies linked by flexible rates permit monetary policy to be used to achieve domestic ends. The key question that must be resolved in any attempt to choose between these alternative regimes from the point of view of long-run analysis is just what domestic variables can have their long-run equilibrium values influenced by an autonomous monetary policy. Recent advances in macroeconomics have led to a marked change in perspective on this issue.

It has never been a matter of controversy that the principal long-run effect of monetary independence is that it confers on an individual economy the ability to choose its own inflation rate. In and of itself, such an ability has never been highly regarded; instead, other gains which, it was alleged, could be had as result of the ability to select an inflation rate have been stressed. In particular, the Phillips curve seemed to imply that, if an inflation rate could be chosen independently of that ruling in the rest of the world, so also could a domestic unemployment rate. Thus, so the argument went, a system of national monetary autonomy permitted different economies, whose populations had different tastes vis-à-vis inflation and unemployment, to indulge those tastes.

Now these Phillips-curve-based predictions involve an assumption of money illusion, an assumption that it is possible to lower real wages by adopting a higher rate of inflation.[7] Modern macro theory has it that, in the long-run, the expected and actual price levels are equal to one another as are the expected and actual rates of change of the price level. One particular application of this view yields the "natural unemployment rate" hypothesis whose major policy implication is that any tradeoff between inflation and unemployment which policymakers can exploit, if it exists at all, is only transitory. As I have argued elsewhere (*Laidler*, 1976), the evidence on the natural rate hypothesis is such as to leave the disinterested observer in doubt about its empirical truth or falsity; but that very doubt is sufficient to undermine an important element in the traditional case for monetary autonomy. If we do not know the extent to which we can improve the unemployment situation in the long run by the use of inflationary monetary policy, and if attempts to do so carry with them the risk of ever accelerating

[7] *Corden* (1972) who appears to accept the relevance of such predictions, is, nevertheless, explicitly aware that they do rest upon an assumption of money illusion.

inflation should the natural unemployment rate hypothesis turn out to be true, then the policy freedom which is sacrificed by joining a currency union is illusory. Policymakers who cannot be sure whether an inflation-unemployment tradeoff exists, let alone what its nature may be if it does exist, are in no position to take advantage of any freedom to exploit such a tradeoff that the maintenance of monetary independence might confer upon them.[8]

It would be easy to jump from the foregoing argument to the conclusion that the ability to choose its own inflation rate confers no long-run benefits on an individual country. Such a conclusion would be valid only if variations in the long run, and hence fully anticipated, inflation rate had no effect on the equilibrium values of other economic variables, only if money were neutral. Unless all money balances, including high powered money, bear a competitive rate of return, we know that money is not neutral. The seignorage accruing to the monetary authority will vary the rate of inflation, as will the allocation of resources between consumption and capital accumulation, not to mention between work, leisure, and trading activities.

Seignorage is, of course, just an old-fashioned name for the tax that is levied on cash balances when a competitive rate of return is not paid on them, and the resource allocation effects of varying the rate of seignorage are but manifestations of the welfare consequences of raising tax revenue in that particular way. Once the point is stated in this fashion it is clear, as *Sumner* (1976) has noted, that to be able to choose the amount of seignorage it collects gives a national government an extra degree of freedom in designing its tax structure. Unless the tax rate to be applied to cash balances within an optimal tax structure is the same for all countries linked together in a currency union, there is a potential benefit to be realized by each of them from the ability individually to generate a different long-run inflation rate that the maintenance of national monetary independence would confer. Given that tastes, technology, and the availability of resources are inevitably going to differ between countries, and given that such differences will influence the relative collection costs of different taxes as well as the structure of the economy upon which they are going to be levied, the presumption must be that the optimal seignorage rate will vary, and that there are therefore gains to be made, even in the long run, from maintaining national monetary independence.[9]

Now the foregoing argument is certainly not as weighty as one based on the ability to control the level of employment in the long run would

[8] See *Sumner* (1976) for a thorough discussion of the relevance of the natural unemployment hypothesis to the exchange rate debate.

[9] *Marty* (1976) has analyzed seignorage as a problem of optimal taxation.

have been, had it proved valid. If the inflation rate for a currency union was chosen so as to produce a "second best" tax structure designed subject to the constraint that the tax levied on cash balances was to be the same for each country, one would have to agree with *Sumner* (1976) that it would be difficult to get very excited about the welfare losses that might arise for any economy as a result of being a member of such a union. But is it any easier to get excited about the long-run gains from having a common currency? Does it really take up a significant amount of resources to deal with the extra costs of trading in a world in which exchange rates between national monies, though not remaining fixed, stably and predictably adjust to long-run differences in inflation rates? The most sensible conclusion to draw from the foregoing discussion is surely that the arguments which we have considered so far are unlikely to be crucial to the choice between joining a currency union and maintaining national monetary autonomy.

Nevertheless we have not yet finished with our discussion of seignorage. The possibility of raising revenue by taxing cash balances raises two closely related issues that must be settled among countries that seek to form a currency union. Before such a union is viable the countries involved in it must agree on how much seignorage is to be collected, and the manner in which it is to be distributed between them.[10] Neither of these questions is a matter for international negotiation when countries maintain their monetary independence. What we have already said about the significance of the welfare losses arising from a non-optimal rate of seignorage for the individual country might seem to imply that there would be little to gain or lose for the individual country in having to accept a non-optimal rate of taxation on money balances, and hence that such a tax rate would be easy to negotiate. However our earlier discussion was premised on a "second best" tax structure being in force. If seignorage were the *only* tax to be levied on an across-country basis, it would be politically difficult to have its rate chosen with a view to providing a second-best solution to the optimal tax problems of the countries involved in a currency union. This is because it is possible to gear the arrangements adopted for the collection and distribution of seignorage in order to effect international transfers of income. Potential recipients of such transfers would certainly have every incentive to press for a revenue maximizing rather than welfare maximizing rate of

[10] See *Grubel* (1966) for an earlier account of the issues raised here. Recent history provides us with two concrete examples of such problems. The debate about the creation and allocation of SDRs is the first of these. The second is the way in which the United States, as the producer of the major reserve currency, used that position to extract seignorage from the rest of the world during the Vietnam war in a manner that ultimately led to the collapse of the Bretton Woods system.

seignorage, and the extent to which they would be successful would depend critically upon the institutional framework set up to administer the working of the union's monetary system.

It is well known that the welfare costs of overutilizing taxation of cash balances are relatively severe but the formation of a currency union, according to the foregoing argument, carries with it the danger that such taxation would be overutilized. To be sure, there are methods of organizing matters so that the operation of the monetary system was not used to effect international redistributions of income. An agreement to pay competitive interest on all components of the money supply, or the adoption of commodity money as a reserve base for the system would accomplish this. However the key question is not the technical one of how to organize the monetary system of a currency union so that it would generate a zero rate of seignorage, but the political one of how to ensure that it would not in fact be organized with the aim of providing a means of income redistribution, an aim whose implementation might result in an inefficiently high rate of inflation for the union.

Moreover even if the danger of overutilizing a tax on cash balances was initially avoided, unless, as we have already noted, a costly commodity based monetary system was chosen, or a system in which all money bore interest at a competitive rate, which would involve an in general non-optimal tax rate on money, the very existence of seignorage would provide a source of continuing potential conflict between countries over its distribution. Within a currency union the amount of seignorage which any country would pay would be equal to its domestic money supply times the difference between the market nominal interest rate and any rate of return it might bear. Anything that might alter the distribution of money supply between countries over time would cause variation in an individual country's payments of seignorage and hence alter the distributional consequences of any simple formula for the allocation of receipts. The rules for such allocation would thus in practice be open to continous pressure for renegotiation.

The best guarantee against the problems that we have here raised becoming matters of practical importance would be the existence of relatively small disparities of income between currency union members and, more generally, the existence of alternative means for affecting across-country redistribution of income.[11] Thus they do not amount to a general case against currency unions, but do suggest that some unions

[11] Note that *Johnson* (1969) placed great emphasis on the absence of international fiscal harmony in putting the case for flexible rates. He did not, however, link this directly with questions concerning taxing cash balances. He discussed many of the issues involved with the existence of seignorage in (1966).

would be more likely to be feasible than others. I will come back to this point later, but now turn to dealing with short-run issues.

Short-Run Issues

This paper is addressing the question as to whether a group of countries, each of which would adopt a money rule under a system of national autonomy, would be better off to form a currency union. Thus, although we know a great deal about the consequences for domestic variables of nominal shocks — alterations in the domestic rate of monetary expansion, or the rate ruling in the rest of the world — under alternative exchange rate schemes, that knowledge is not relevant to the issues under debate here. Such shocks are ruled out if monetary rules are in force.

But this does not mean that real shocks are ruled out. Changes in tastes do sometimes occur, as they do in available technology; natural resources do get depleted; and so on. If there is no money illusion, the ultimate consequences of such happenings as these for an individual country can in no way be made different by having a different monetary system. If a country's real income falls, or the real terms of trade move against it, that cannot be offset by an exchange rate change. However, it is conceivable that the path whereby an economy moves from one long-run equilibrium to the new one required by such a change can differ depending upon monetary arrangements, and that one path may be preferable to another.

Consider the case of an economy that, for some reason, suffers a fall in its real income and in its equilibrium level of real wages as a result of a deterioration in its terms of trade. If that country is a member of a currency union of which it makes up a relatively small part, its equilibrium price level and its rate of change will be given by those ruling in the union as a whole, so that a lower real wage means a lower money wage. If, instead, that country combined a constant rate of growth for its own nominal money supply with a flexible exchange rate, the requirement that lower levels of real income and real wages prevail would be met by the establishment of a higher price level and a lower exchange rate. To make matters as clear as possible let us think for a moment of a very special case where equilibrium real income and the equilibrium real wage in each industry are affected in equal proportions by the change in question and in which the real income elasticity of demand for money is unity. In this case, under a currency union, a uniform fall in money wages would re-establish equilibrium, while with national monetary independence a currency depreciation with no change in money wages would suffice. In the long run it would not matter which

happened — the real effects would be the same in either case but in the short run it might matter very much indeed, for reasons that I shall now discuss.

Wages, prices, and exchange rates do not set themselves.[12] Economic agents set them, and real resources are used up both in taking decisions to adjust them and in the actual process of adjustment. Once this is recognized, it becomes clear that it is not necessarily a matter of indifference whether a country relies on money wages or the exchange rate to adjust to changed circumstances. At the very least, the alternatives might involve different resource costs. Of course the example we have considered here is a very special case indeed. Real shocks that change income, and/or the terms of trade, typically require changes in relative prices and wages, as well as changes in their economy-wide-average levels. If this is so, given a currency union, the ajdustment under consideration will certainly impose the costs involved in changing prices and wages; but, with national monetary autonomy, such costs will still be incurred, with that of changing the exchange rate being added to them. However this does not mean that the currency union alternative is the more attractive of the two; because it is not the cost of making one sort or another of price change *per se* that is of central importance in the present context, but what the existence of such costs implies for the speed at which prices adjust, and hence for the length of time it takes for a new equilibrium to be established after the economy is shocked.

This is a matter of particular importance when the re-establishment of equilibrium requires that real wages be reduced (or rise less rapidly than in the past) since the persistence of disequilibrium in such a case will involve an abnormally high level of unemployment. If we could rely upon money wages and the exchange rate to adjust with equal speed, there would be nothing to choose between a currency union and monetary autonomy, but if the process of money wage adjustment were less rapid than exchange rate adjustment, then that would be an important point in favour of maintaining monetary autonomy. Casual empiricism suggests that exchange rates are potentially a lot more flexible than money wages, and there are good *a priori* reasons, arising from the nature of the foreign exchange and labour markets, why this should be so.

When there are autonomous national monies, there exists a foreign exchange market operated by specialist dealers whose explicit role is to set the exchange rate and to hold inventories of currencies with

[12] The following argument owes a great deal to conversations with *George Zis*, who nevertheless is not necessarily to be implicated in the conclusion I draw from it.

which they stand ready to deal with the public at large at the prices they set. The costs to them of generating the information upon which to base their pricing decisions, and of changing the prices that they set, are small relative to the gains and losses available to them. In such a market it is not unreasonable to expect that something very close to "rational expectations" will underlie the prices that actually rule. This is but another way of asserting that speculative behavior will typically be such as to take the foreign exchange market rapidly towards, rather than away from, equilibrium. It has all the essential characteristics of what Sir *John Hicks* (1974) has termed a "flexprice" market. The labor market, on the other hand, is *Hick*'s archetypical "fixprice" market. It is decentralized, and contains no agents whose specialized task is to set money wages and hold inventories of labor. In the labor market, the costs to the relevant agents of generating the extra information that would lead them closer to a market clearing price are likely to be high relative to the benefits accruing to them from so doing. Moreover, the widespread existence of long-term wage contracts, which are themselves a response to the costs of gathering and processing information, makes it prohibitively expensive for agents bound by them to respond rapidly to new information about changed circumstances, except by altering employment levels. And this is not to mention the rigidities introduced by the presence of monopoly elements in the market. One does not have to go all the way with *Hicks*, who argues that the behavior of money wages is to all intents and purposes independent of the behavior of the supply and demand for labor, in order to recognize that the labor market is for all these reasons likely to be sluggish in generating changes in money wages in response to changed market conditions.[13]

If the foregoing arguments are valid, then real wages can be changed more rapidly by allowing the exchange rate and the price level to vary than by holding the price level fixed and putting the burden of adjustment solely onto money wages. This is not to say that national monetary autonomy carries with it a guarantee of perpetual full employment, because we have already seen that the circumstances in which an exogenous shock requiring a fall in the real wage could be met by having all the adjusting done by the exchange rate and none at all by money wages, are very special indeed. However, it is to argue that, given such autonomy, the economy will adjust more rapidly to equilibrium in response to any shock that requires a fall in the level of real

[13] Indeed if we do go all the way with *Hicks*, and postulate the existence of complete real wage rigidity, the gains that we are here suggesting that flexible rates can achieve no longer exist, since there is no market mechanism that can reduce real wages. *Hicks*' analysis thus leads to a case for fixed exchange rates combined with permanent wages and price controls — though he himself does not develop it that far. See *Hicks* (1974), Chapter 3.

wages and hence will experience less transitional unemployment than it would under a currency union.

Not all shocks require that real wages fall — some cause equilibrium real wages to rise. If one believes that the labor market behaves so that money wages can react more rapidly in an upward direction than downward, then he will be less concerned with the advantages of flexible exchange rates in such a case. Even if there is symmetry in the slowness of money wages to adjust upwards and downwards, unemployment would not be a key problem if such slow adjustment kept the economy out of equilibrium at too low a real wage. Nevertheless there would still be resource allocation costs to be borne in such circumstances, costs that could be mitigated by the more rapid adjustment to equilibrium that we have argued is promised by exchange rate flexibility.

Now the truth or falsity of the foregoing argument cannot be settled on purely *a priori* grounds. It rests on the empirical proposition that those involved in the wage bargaining process are, relative to those operating in the foreign exchange market, slow to perceive the need for a price change and slow to implement it, so that the average level of real wages can be kept closer to its equilibrium level by permitting the exchange rate to fluctuate than by relying on money wage fluctuations. It is worth noting that, if those involved in the labor market are slow to see the need for a change in real wages, but rapid both in recognizing when real wages have changed and in moving to restore their level, then the advantages that we have been claiming for a system of national monetary autonomy will not exist. Under such circumstances an exchange rate change that lowers the real wage would be met at once by a compensatory money wage increase and a classic "cost push" generated wage price spiral, accompanied by unemployment would result. In short if wage rigidity is *real wage rigidity* stemming from slowness in economic agents to perceive the need for real wages or their rate of growth to change rather than *money wage rigidity* arising from short-run money illusion and/or from high costs of money wage adjustment, then the forgoing arguments against currency unions are not valid. Though it must be clear from my arguments that I believe money wage rigidity to be important, it is nevertheless the case that, in the present state of knowledge, there seems to be no formal empirical evidence either to support or undermine that belief.[14]

[14] The preceding paragraph owes much to discussion with *Michael Parkin*. Note that, in earlier literature on exchange rates and currency unions it was frequently argued that a small and specialized economy, importing most of its consumer goods, would not benefit from maintaining a flexible exchange rate; this is because those involved in wage bargaining would be unlikely to suffer from money illusion when the exchange rate changed, and because in

Now I have dealt with arguments about the short-run behavior of the economy as if they did not have any implications for the long-run factors analyzed in the previous section of this paper, but is worth noting that they may in fact have such implications. It has been argued that the maintenance of monetary independence by individual countries would lead to smaller short-term fluctuations in output and employment. Given the asymmetry of the relationship between the excess demand for labor and the level of unemployment, this immediately implies that the average level of unemployment over time will, for a similar pattern of shocks, be higher in a country which belongs to a currency union. To the extent that human capital deteriorates more rapidly when it is unemployed, and to the extent that less investment in new human capital takes place in the presence of unemployment, this could have long-term effects both in terms of raising the natural unemployment rate of the economy, and reducing the level of output associated with it. We know next to nothing about the extent to which the evolution of an economy's long-run equilibrium characteristics are affected by the existence of short-run disequilibria, so that there is no way of assessing the importance, if any, to be placed upon the arguments just advanced.[15] To the extent that they are given credence, they add to the case against currency unions.

One *caveat* concerning international fiscal cooperation should be noted before this discussion is complete. If mechanisms exist whereby real income transfers can be made between countries that belong to a currency union, then they can be used either to offset permanently the effects of terms of trade changes on real income output, and employment, or to subsidize employment during the transition to a new equilibrium structure of real wages. As with the long-run arguments, so also the amount of weight to be attached to the short-run arguments against currency unions is lessened if we conceive of such an union being adopted as part of a process of more general international economic integration.

Conclusions

Let us now sum up the arguments of the last three sections of this paper. They stop far short of making a case that, for *any* group of countries, a currency union is *a priori* less desirable than the maintenance of national monetary autonomy. The hypothesis of the existence of a

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the limit they might even resort to bargaining in terms of some foreign currency rather than their own. The relationship between this argument, which is to be found, for example, in *Corden* (1972) and the foregoing paragraph should be evident.

[15] *Phelps* (1972), Chapter 3, seems to provide the most thorough discussion of these issues in the existing literature.

long run inflation-unemployment trade off combined with the observation that different nations have different tastes vis-à-vis these variables was the key element in earlier versions of the case for flexible exchange rates, but it can no longer be regarded as valid. Nevertheless, there are other advantages to maintaining national monetary autonomy and the fact that Phillips' trade off has been discredited does not immediately imply that a world wide currency union is desirable. The arguments that we have presented suggest that some groups of countries stand to gain more — or lose less — by forming such a union than others, that some currency unions are more feasible than others.

First, a group of countries whose governments are unable to agree about the merits of using monetary policy to "fine tune" the economy are not going to be able to form a union. However, if one regards monetary fine tuning as mistaken, then the ability to indulge in it can hardly be counted as an advantage of maintaining national monetary independence. Indeed, many advocates of currency unions regard the fact that membership of one would effectively prevent a national government from indulging in irresponsible domestic monetary policies as one of the principal advantages conferred by that membership.[16]

Secondly, we have noticed the possibility that, with the formation of a currency union, seignorage would become a potentially ready source of revenue for international redistribution, and that the resulting pressures towards inflation would be less in a currency union made up of countries whose levels of income were rather similar than in one where great disparities existed. Thus, it is much harder, for example, to see inflation as a danger in a currency union made up of the EEC countries than in a world wide currency union. Arguments that SDR's be put into circulation by distributing them initially to poor countries are precisely arguments that seignorage be used to redistribute income internationally; they are not uncommon, and they do carry with them the threat that world liquidity might be overexpanded for the sake of redistributing income if a world wide currency union was formed.

Thirdly, we have noted that the maintenance of national monetary autonomy might help a country cushion the employment effects of certain real shocks, but of course it will do so only if the other potential members of a currency union do not also suffer from the same shocks at the same time. If, as I have suggested, the relevant shocks are likely to involve changes in tastes and technology, then a currency union between countries of similar industrial structure is going to be more feasible than one which involves very disparate economies. It is also worth noting that such similarity between countries might make it easier for them

[16] *Laffer* and *Mundell* make much of this point. See *Wanniski* (1975).

to decide on the rate of seignorage to be levied within the currency union, since the optimal tax structure for each country will be similar in such a case.

Finally, and most important of all, we have noted that all the arguments against currency unions that we have advanced are weakened if the existence of some degree of fiscal unity is postulated. If there exist fiscal means for redistributing income between countries, the tendency to overindulge in money creation for such purposes is lessened. If unaffected countries can be taxed in order to subsidize transitions imposed on other countries by real shocks, then the desirability of maintaining monetary independence is reduced. Indeed, we can look at this matter from the opposite viewpoint. Suppose a group of countries do form some kind of fiscal union, but each maintains its own currency with flexible exchange rates between them. In what currency then are taxes to be collected? In what currency are tax calculations to be made? In what currency are subsidies to be fixed? and so on. Clearly a fiscal union would be much easier to administer with a common currency than without.

In short, our arguments lead us to a not very original conclusion about currency unions.[17] The formation of such a union extends to the international economy the advantages gained within a national economy by having a common currency. National economies, however, have other institutions that help them to counteract the difficulties that particular regions from time to time experience as a result of belonging to a national currency area. If such institutions can be extended to the international economy along with the adoption of a common currency, the case against forming a currency union becomes much weaker. In the last resort then, what is or is not a feasible currency union is more a political than an economic matter.

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[17] And one that has been stressed in the past particularly by *Johnson* (1963, 1969).

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