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WORLD STAGFLATION AND INTERNATIONAL
MONETARY ARRANGEMENTS

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The three stylized facts about the economic performance of the industrial countries since 1973 are that growth has fallen, unemployment has risen, and inflation has increased even more. Some statistics illustrating this deterioration in performance are presented in the Appendix: they show that, for the six-year period 1973-78 as against the six-year period 1957-62 that followed the cyclical peak immediately prior to the most serious recession experienced while the Bretton Woods system was in operation, the seven major industrial countries experienced roughly half the growth, 25% more unemployment and four times the inflation. It is a historical fact that this deterioration in world economic performance coincided with the abandonment of the Bretton Woods system, which had often been eulogized for providing the environment that had nurtured economic progress without historical precedent. Nevertheless, coincidence does not establish causality. It is the object of this paper to examine whether there are analytical reasons for believing that in this instance coincidence is more than accidental.

It is argued in the first section of the paper that the general problem of stagflation experienced since 1974 can be broken down into three sub-problems: that of a reduction in the rate of growth of potential output, that of a worsening in the unemployment/inflation trade-off, and that of a failure to achieve even the scaled-down targets for output that were regarded as feasible in the light of the two preceding factors. The succeeding three sections of the paper then consider the possible causes of these three sub-problems.

The procedure adopted in each of these sections is to draw on the results of recent economic research (including in particular the papers¹ presented to a Bank of Spain/Ford Foundation conference held in September 1979) in order to identify the principal factors that appear to have contributed to the particular problem in question, and then to ask which of those factors might result from international monetary arrangements. The latter are interpreted broadly to include the coordination of economic policy and the operation of the Euro-currency markets, rather than simply the exchange-rate regime.

It is concluded that international monetary factors can be assigned no more than a marginal role in the origin of the first two of these sub-problems, i.e. in the reduced rate of growth of potential output or the worsened unemployment/inflation trade-off. In contrast, a major part of the responsibility for the failure to achieve output targets appears to rest with the weakness of implicit or explicit coordination inherent in present world monetary arrangements.

I. Diagnosis of the Problems

When informed that GNP has ceased to grow as rapidly as previously over a period of four or five years, the first reaction of an economist is to ask whether this is because of a lack of demand, or because the growth rate of potential output has slackened (a supply-side explanation). Considerable attention has been devoted to this topic recently by economists working both in individual countries and in international organizations: some of the results are

reported in the Appendix. There seems to be a consensus that throughout the industrial world potential output has fallen, as compared to an extrapolation of its previous path, on two distinct counts (see Figure 1): first, because

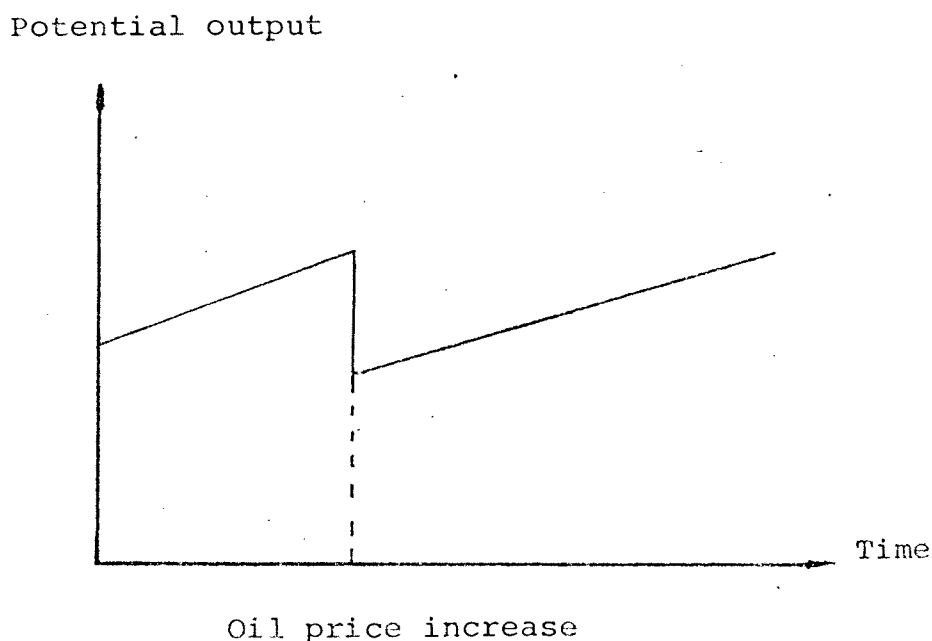


Figure 1

of a once-for-all reduction in potential output as a result of the oil price increase rendering uneconomic a part of the previous capital stock; and, second, because of a subsequent reduction in the rate of growth. This reduction in the growth path of potential output is the problem that will be analyzed in the next section.

The high unemployment rates of recent years obviously suggest that lagging growth is also in part due to weak demand. The estimates of potential output presented in the appendix suggest that it is only in the United States that output had returned to full capacity by 1978; elsewhere significant output gaps, reflecting a weakness in demand,

have indeed persisted.² Such weakness may arise either because the authorities deliberately (no doubt reluctantly) accept slack in the economy, or because their attempts to implement expansionary demand-management policies do not succeed in stimulating output. Both factors have been important since 1973.

The willingness to accept less ambitious output and unemployment targets is a result of the widespread intellectual acceptance of accelerationist theories of inflation which was nurtured by the general experience of such acceleration in the early 1970s. According to the accelerationist theory, when unemployment is below some critical level--the so-called natural rate of unemployment--the net balance of desired relative price changes is positive since all price-setters also seek to insulate their real income against expected general inflation by raising their prices in proportion to the expected rate of inflation. The consequence of unemployment below the natural rate is an accelerating rate of inflation. This theory naturally suggested that the high and accelerating inflation of 1973 had to be reduced through acceptance of a period in which unemployment would exceed the natural rate. There was indeed a conscious international decision, first articulated at the Rambouillet summit meeting and subsequently elaborated at the OECD Ministerial meeting of June 1976, to avoid a repetition of the excesses of the 1973 boom, in terms of the speed of expansion and the minimal margin of slack at the peak. The strategy was further endorsed by the McCracken Report (1977), but with a warning that 'as . . . 'expectational' inflation subsides, we may

well find that there has been an acceleration of the type of inflation which can broadly be attributed to competing claims and malfunctioning of market structures" (paragraph 296).

Experience since that report was drafted suggests that it was right: given the amount of slack that has persisted, inflation has proved more persistent than historical experience would have led one to expect. In the language of the accelerationist theory, the natural rate of unemployment has increased.³ That increase again makes it necessary and rational to accept a higher target level for unemployment. But that in no way detracts from the fact that the worsening of the unemployment/inflation trade-off represents a deterioration in economic performance. The worsened trade-off is the second of the problems causing stagflation.

Granted that targets for the pressure of demand were deliberately scaled down in the interest of combating inflation, the fact remains that the fairly modest targets that were agreed were not achieved. The 1975 recession was certainly a good deal deeper than would have been judged necessary and desirable in the interests of anti-inflationary policy either ex ante or ex post. In 1976 the OECD published its "growth scenario" involving a target growth rate of output of 5 1/2 percent per annum for 1975 to 1980, arguing that this would be consistent with simultaneous restoration of a satisfactory level of employment and a moderation of inflation to 5 percent per annum by that final year. In fact, output has grown at less than 4 percent per annum up to the present; as shown in the Appendix this shortfall was general outside the United States. The shortfall of demand below target is the third of the three problems responsible for stagflation.

II. Growth of Potential Output

The oil price increase caused a once-for-all reduction in potential output in all countries, as a result of a part of the capital stock becoming uneconomic at the new relative input prices. The reasons for the deceleration in the rate of growth of output after 1974, on the other hand, differ sharply between the United States and all other industrialized countries. As noted above, the output gap had been virtually eliminated in the United States by 1978, and therefore, the recorded decline in productivity can be attributed fairly securely to trend rather than cyclical factors. Fellner (1979) has drawn on the recent work of Denison, Kendrick and others in order to break down the recorded reduction of 1.9 percent in the growth of productivity into the elements shown in Table 1.

Table 1

Determinants of Reduction in US Productivity
Growth, 1973-77 Versus 1948-73

(Percent per annum)

Change in age-sex composition of labor force	0.1
Reduction in transfer of resources out of farm sector	0.4
Effect of shifting to less energy-intensive methods of production due to oil price rise	0.3
Effects of health and safety protection, of safeguarding environment, and of counteracting crime	0.4
Reduction of investment	0.2
Total explained	<u>1.4</u>
Unexplained decline in productivity growth	0.5
Total recorded decline	<u>1.9</u>

Source: Fellner (1979)

On this accounting, there is a residual unexplained

decline of some 0.5 percent. Fellner interprets this--as well as a part of the decline "explained" by the fall in investment--as probably being due to unfavorable changes in the legal-institutional setting, notably the distortions caused by inflation, the burdens of increased administrative control and regulation, and a reduction of emphasis on competence and work effort. One might also mention the probability that there has been a reduction in the technical advances meriting economic exploitation, perhaps because of the reduction in the proportion of GNP devoted to research and development⁴ and/or because of the limits to growth that must ultimately be imposed by finite resources.

Accounting for the decline in the growth rates of productive potential of the other major industrial nations is rather less speculative than identifying the causes of the US residual. Lower rates of investment are a part of the story, reinforced by the sharp reduction of the technological lag that had previously allowed countries other than the United States to enjoy the benefits of catching up (Maddison, 1979). Now that productivity levels are so much closer to those of best-practice techniques, and there are no longer the same large pools of labor absorbed in low-productivity subsistence sectors waiting for the chance to transfer to the modern economy, the possibility of miracle-level growth rates (rates in excess of, say, 5 percent per annum) has disappeared. Of course, the technological gap is still present in developing countries, and in the newly-industrializing countries of East Asia, Southern Europe and Latin America it is coupled with the education and entrepreneurship necessary to achieve rapid growth. Just how

important this technological factor is in permitting high rates of growth is suggested by the striking statistics on the comparative growth rates of the nine capitalist economies of East Asia shown in Table 2. While Japan has slipped from being practically the fastest-growing to the slowest-growing country of the region with the near closing of the technological gap, the other countries have exploited the continuing opportunities open to them and several have even accelerated their growth despite the difficult international environment of the 1970s. Conversely, one should expect the downward convergence of the growth rates of the industrial countries that has been observed in the 1970s to be maintained.

Table 2

Growth Rates of GNP/GDP of Capitalist East Asia

<u>Country</u>	<u>1960-69</u>	(Percent per annum) <u>1970-77/78</u>
Hong Kong	9.9	7.7
Indonesia	n.a.	7.8
Japan	10.8	5.3
Korea	8.7	10.2
Malaysia	n.a.	7.9
Philippines	5.2	6.5
Singapore	8.8	9.0
Taiwan	11.4	8.8
Thailand	8.1	7.4

It is therefore perfectly clear that many of the probable causes of the slower growth in productive potential in the industrialized countries have nothing to do with changes in the international monetary system. These include:

the closing of the technological gap; limits to growth imposed by finite resources; reduction of R and D; increased bureaucratic control and regulation; reduced emphasis on competence and effort; greater attention to health, safety, the environment, and counteracting crime; the shift away from energy-intensive methods of production due to the oil price rise; reduced transfer of resources out of the farm sector; and changes in the age-sex composition of the labor force. Incidentally, many of these factors suggest that some decline in growth should be considered natural, and a few even suggest some reduction may be regarded as desirable. Factors that remain, where international monetary changes may have played a role, are; the distortions introduced by inflation; the reduction in resource shifts to more productive sectors, as a result of protectionism; decreased exploitation of scale economies as a result of the deterrent to trade constituted by floating exchange rates; and reduced investment. Each of these possible channels will now be considered in turn.

The literature on the consequences of inflation has not, at least as yet, provided much support for the notion that inflation rates in the ranges experienced by the industrialized countries have sufficiently serious allocative consequences to make a measurable impact on the growth rate.⁵ Furthermore, it is concluded in the next section that international monetary changes do not bear a major part of the responsibility for rapid inflation.

Protectionism of the form recently practiced in the industrialized countries--propping up senile industries which are losing comparative advantage--strikes at the heart

of the growth process, which involves transferring resources out of such industries into those with higher productivity. It can certainly be argued that the international economic system has been too permissive of such conduct, which is harmful to the long-run interest of the nations adopting such policies as well as to the short-run interests of their would-be trading partners. Whether monetary arrangements provide the best way of disciplining commercial policy is more open to question. To the extent that monetary arrangements fostered unemployment (see below), they may also be held responsible for having nurtured the growth of protectionism.

It has long been asserted that one disadvantage of floating exchange rates is that the additional uncertainty they introduce into international transactions would discourage the orientation of production to international markets and so reduce the gain from specialization. There have in fact been signs of a reduction in the elasticity of world trade with respect to income, although obviously there are other possible explanations for this (e.g. protectionism). The tests conducted on the effects of floating on the trade of industrialized countries have not so far confirmed the expected anti-trade bias; on the other hand, there is evidence of this effect in Latin American experience, where adoption of a crawling peg greatly reduced the variability of the real exchange rate (Coes, 1979). The failure to detect this effect in studies of the industrial countries may therefore reflect the limited run of post-floating data so far available and the lag needed for the effect to operate, rather than its absence. However, since growth accountants have attributed

only a modest part of total growth to the benefit from trade (Maddison, 1979, p. 28) this cannot be a major cause of the deceleration of growth.

Reduced investment has generally been considered a major factor in explaining the slower growth of productive potential.⁶ One cause of the reduction in investment is certainly the substantial margin of slack that has persisted outside the United States since 1975, which means that international monetary factors can be blamed to the extent that they contributed to that slack. Another frequently-cited cause is the redistribution of income from profits to labor that has occurred in a number of countries; it would seem far-fetched to interpret this as a consequence of the breakdown of Bretton Woods. The same can be said of the various fiscal and regulatory disincentives to capital formation that have been strengthened in recent years. On the other hand, there have also been claims that exchange-rate uncertainty has had an inhibiting effect on investment. These assertions seem initially to have been based on subjective assessment of business opinion, which constitutes an unreliable source of evidence. The first attempt to assess the evidence econometrically has recently been made by Kenen (1979, Table 17), with results that are consistent with the presence of some negative influence of exchange rate variability, although the evidence is far from decisive. Another approach is to ask whether investment equations estimated on pre-1973 data have been over-predicting investment since 1974, as one would expect if an important new negative influence on investment had started to operate. It appears that there has been some over-prediction in some countries, but not on a

general basis.

The conclusions of this section may be summarized as follows. It is possible that increased exchange-rate uncertainty has had some negative impact on trade and investment, and thereby on growth, but any such effect has almost certainly been marginal. More definitely, the failure of the international economic system to prevent the growth of protectionism should be counted a negative factor. However, the most important potential influences on growth run by way of the level of activity: to the extent that the international monetary system has contributed to the slack that has prevailed since 1974-75, it has not only reduced output relative to potential but also (by fostering protectionism and discouraging investment) retarded the growth of potential. Whether international monetary factors in fact bear responsibility for the slack is the topic of the two following sections.

III. The Unemployment/Inflation Trade-off

It would be easy to explain post-1973 experience if either unemployment or inflation had been higher than before, while the other had been lower. One would then simply argue that the cause was to be found in a different pressure of aggregate demand. The problem arises because both increased; i. e. the trade-off between unemployment and inflation worsened. This worsening constitutes the second of the three problems that require investigation in any attempt to explain stagflation.

One factor to which the accelerationist theory

would certainly point is the high rate of inflation that was inherited in 1973. According to that theory, decelerating an ongoing inflation requires that demand be deflated to the point where the net balance of desired relative price changes is downward, so that inflation falls below the rate generally expected and leads to downward revisions in inflationary expectations. Until those expectations have subsided to an acceptable level, there will inevitably be a transitional period involving either high inflation or high unemployment or both, and it is this uncomfortable transition that has been experienced in recent years. This can certainly explain why an element of stagflation was to be expected after 1973; but, as already argued in Section I, there is persuasive evidence that it cannot explain everything: the natural rate of unemployment has also increased. What are the possible explanations?

1. Demographic Factors. Changes in the composition of the labor force, involving a higher proportion of female and young workers, may account for a significant part of the rise in the natural rate in some countries.

2. Unemployment Insurance. The argument is that the wider availability of such insurance, and the more generous benefit levels paid, have reduced the incentive of the unemployed to seek work and increased the incentive of the employed to seek wage increases that might result in their becoming unemployed. The first of these two effects is well documented, but seems to be small (Marston, 1975, Nickell, 1979). The second effect is more conjectural but may be more important.

3. Union Power. It has seemed rather obvious to many economists and most non-economists that the growth of trade union power, and/or the willingness to exert such power to benefit sectional interests at the expense of the general interest, bears a major responsibility for the deterioration in performance in some countries. This verdict is not unanimous, however, and the lack of objective measures of the exercise of union power makes it difficult to resolve the controversy conclusively.

4. Real Wage Resistance. This refers to a situation in which wage bargaining reflects a determination to maintain a certain real wage level, and even a certain rate of growth of real wages. Presumably this determination is not absolute, but can be modified by a sufficiently lengthy weakening of the bargainers' market position, e.g. by increased unemployment. Nevertheless, any increase in the mutual incompatibility of the real income targets pursued by different sectors within the economy will serve to increase the natural rate of employment until the targets are revised down. There are four factors that can be identified as likely to have increased the inconsistency of real income claims in recent years:

(a) The Oil Price Increase. This reduced the total real income of the industrial countries, and could thus have brought real wage resistance into play.

(b) Lower Growth. The reduction in the rate of growth of potential output could be expected to breed real wage resistance to the extent

that wage bargainers are expecting a certain rate of growth of real wages in line with past experience that is no longer collectively feasible.

(c) Payments Adjustment. Reductions in real wages that are needed to eliminate a current account deficit by expenditure switching policies like depreciation might breed real wage resistance. This forces governments to secure adjustment by expenditure-changing policies, notably deflation, instead. There have been several cases where adjustment apparently did require real wage cuts, most notably in Italy and the UK.

(d) Inflation. Inflation itself may create unrealistic real income levels that are experienced temporarily immediately after a wage increase. These peak real income levels are necessarily mutually inconsistent, the more so the faster the rate of inflation (which may indeed occur precisely because they are irreconcilable). To the extent that it is these peak real incomes rather than mean annual real incomes that determine target real wage levels, the experience of inflation will itself breed real wage resistance against a subsequent deceleration.

5. The Upward-sloping Phillips Curve. Friedman (1977) conjectured that experience of inflation would in the

medium term tend to raise unemployment because of the distortions and reduction in the efficiency of money that it would induce. In time the monetary system might be able to adjust to faster inflation by institutional innovations like indexation, but he argued that in the interim--after expectations had adjusted, but before institutions had adapted--the effect would be to raise equilibrium unemployment. The implications of this theory are very similar to those of that immediately preceding.

6. Wage Indexation. A number of countries have experienced significant extension of wage indexation since the acceleration of inflation in the early 1970s.⁷ This is generally conceived as being inflationary, although both Friedman and Giersch (1974) have argued that it provides not only a technique for reducing the distortions inherent in a high rate of inflation but also for reducing the cost in terms of lost output and unemployment of a stabilization policy to reduce inflation. The truth appears to be that both views are correct; indexation can be inflationary, especially in the face of shocks (like crop failures or the oil price rise) that reduce the available supply--but, if implemented with care on the basis of formulae that avoid the common error of building in claims to real income that exceed the available output, it can provide a way of reducing the cost of stabilization (Lopes and Williamson, 1978). However, since there has in fact been little attempt to achieve consistency in real income claims, the spread of indexation has in practice been another factor that has added to inflationary pressure and pushed up the natural rate of unemployment, especially in combination with the terms of

trade loss caused by the oil price rise.

7. Floating Exchange Rates. There has been considerable discussion of the possibility that exchange-rate flexibility may have been inflationary because of the operation of ratchet effects. The argument is that depreciation of a currency pushes up that country's import prices and pulls up its export prices (in domestic currency), which in turn imparts a general inflationary push through induced rises in the price of import substitutes, goods incorporating imported components, and wages. It is well established that this mechanism operates, and powerfully. The critical question is whether the contrary occurs in a country whose currency appreciates, or whether there is sufficient downward wage and price rigidity to limit seriously the anti-inflationary impact of an appreciation. If so, then a depreciation followed by a subsequent appreciation that restores the exchange rate to its original level will ratchet up the price level, thus implying either higher unemployment or the need for monetary expansion that will ratify the increase in the price level. This provides a rather convincing account of how exchange rate fluctuations could be expected to impart an additional inflationary bias, neutralization of which would presumably require that the economy be run with a higher margin of slack. However, empirical investigation has not as yet provided confirmation of the asymmetry between the effect of appreciation and depreciation that constitutes the core of the theory. On the contrary, appreciation appears to have a symmetrical effect on import and export prices, and there is no evidence that the induced repercussions on prices are asymmetrical either (Goldstein, 1979, pp. 15-22). What

that implies is that if an asymmetry exists it is in wages rather than directly in prices. Peter Kenen, in research conducted for the Group, has found some evidence of such an asymmetry and further evidence may come to light as experience accumulates of countries with appreciating currencies whose underlying rate of inflation is already negligible.

Nevertheless, the weakness of the evidence currently available suggests that the ratchet effect of exchange-rate fluctuations is not a major reinforcement to the inflationary process.

There is a second way in which floating exchange rates could have produced a simultaneous rise in unemployment and inflation. The basic idea is that under fixed exchange rates wages are determined by what the tradable goods industries can afford to pay--a proposition that forms the basis of the Scandinavian theory of inflation and for which there is some empirical support (Nordhaus, 1972). The question is, what replaces this relationship when the exchange rate is no longer fixed? If wage bargainers believe that, in the absence of an exchange-rate commitment, the government will always be prepared to ratify wage increases by expanding the money supply and allowing the exchange rate to depreciate, then presumably they will demand larger wage increases than with fixed rates. If that belief were wrong, i.e., if monetary discipline were not undermined by floating rates,⁸ then the consequence would be higher unemployment as well as higher inflation. However, there is not much reason to believe that unions have suffered from systematically erroneous expectations, as would be required to generate stagflation in this way.

It again seems rather clear that the majority of the factors identified above as probable causes of the worsened unemployment/inflation trade-off would have to be considered independent of international monetary arrangements. This is surely true of the more generous provisions for unemployment insurance; growth of, and greater willingness to exert, trade union power; the increase in real wage resistance; the oil price increase; and the spread of wage indexation. It was also concluded in the preceding section that the decline in the rate of growth of potential output owes little to international monetary factors, except insofar as these may be held responsible for the high margin of slack. Furthermore, while the high level of inflation inherited from the past can certainly not be considered independent of international monetary arrangements, it is rather generally agreed that it was the attempt to prop up the pegged exchange rates of the Bretton Woods system and the explosive growth in international liquidity thus generated that should be held responsible for generalizing inflation. A principal motive for the adoption of floating rates was precisely that of eliminating the obligation to import inflation (Emminger, 1977) and the fact that inflation rates have diverged so much since 1974, with a small number of stability-minded countries by 1978 succeeding in restraining rates of inflation to acceptable levels (see Appendix), is proof that floating has achieved at least this much.

That leaves three channels through which it is possible that international monetary arrangements induced stagflation through requiring payments adjustment that encountered real wage resistance, through the ratchet effects

induced by exchange-rate fluctuations, and through a misplaced belief of wage bargainers that monetary discipline would be eroded by floating.

Consider first the question of payments adjustment and real wage resistance. Black (1977, ch. 5) argued that the depreciation of sterling from 1972 on allowed Britain to borrow more than would otherwise have been possible, thus permitting postponement of the domestic restraint that was an indispensable part of current account adjustment. Presumably one effect of this was to translate the unsustainably-high real wages this permitted into wage targets whose downward revision was necessary to secure payments adjustment but was impeded by real wage resistance, thus ensuring that a large part of the depreciation of sterling was dissipated in additional inflation. Much the same may have happened in other countries, notably Italy; and it seems to be happening again in Britain, on a magnified scale and sustained by North Sea Oil, as this is written. Even if this interpretation of history is accepted, however, one needs to recognize that the possibility of delaying adjustment might also, when wisely grasped, provide the opportunity of minimizing real wage resistance.

As regards the other two possible channels, it is certainly true that exchange rates have exhibited the large and temporary fluctuations needed to provide grist to ratchet effects (see, for example, Artus and Young, 1979, Section IIA). Nevertheless, the weakness of empirical confirmation of the ratchet effects themselves casts doubt on whether this can be ascribed a significant role in causing stagflation.

The argument that wage bargainers had a misplaced belief that floating would erode discipline does not seem very convincing.

I would conclude that, while one cannot rule out the possibility that international monetary factors may have played some marginal role in aggravating the deterioration in the unemployment/inflation trade-off, there are many alternative and more persuasive explanations of this phenomenon.

IV. The Shortfall of Demand

While targets for aggregate demand were deliberately revised down with the aims of combating inflation and responding to the accumulating evidence of lower rates of potential growth and the rise in the natural rate of unemployment, the fact is that the modified targets that were judged appropriate were not achieved. The 1975 recession went deeper than appeared justifiable in the interests of anti-inflationary policy, and outside of the United States the recovery from recession has remained weak. These shortfalls of demand below target constitute the final problem needing analysis.

The depth of the 1975 recession can be ascribed to two general factors: the deflationary policies finally adopted in 1973-74 to counter the previously-accelerating inflation, and the deflationary impact of the oil price increase. Simulation studies have suggested that in a mechanistic sense the deflationary policies were responsible for almost two-thirds of the contraction. However, since the oil price increase gave a sharp twist to the inflationary

spiral and created vast deficits for the oil-importing countries, it created pressures for the perpetuation of restrictive policies for longer than was appropriate or might otherwise have occurred. Most countries therefore seem to have judged it in their national self-interest to maintain restrictive policies until they were certain that inflation had started to abate. Given the usual lags in the impact of demand-management policies and the mutual reinforcement to the deflationary process provided by the simultaneous pursuit of deflationary policies in almost all the major countries, the recession overshot.

Policy began to turn expansionary in late 1974, and became markedly more so in the first half of 1975. There was, presumably in consequence, a fairly strong initial recovery from the recession, from mid-1975 to early 1976. However, policy reverted to being restrictive far sooner than had occurred in previous upswings. The reasons for this were quite different in the "strong" countries (Germany, Japan, Benelux, Switzerland; and at that time also the United States) than in the "weak" ones (Britain, France, Italy, Spain, Sweden). The common characteristic of the strong countries is that they were the ones that had deflated first (they were most certainly not the countries that bore particularly small real income burdens from the oil price rise), which yielded handsome rewards in terms of braking inflation through currency appreciation and thus limiting the inflation-induced rise in the savings ratio, while the boost in export market shares achieved in the final stages of the boom helped sustain external demand through the recession. The moral drawn from

this was that monetary discipline had led them into a "virtuous circle" and must therefore be institutionalized in the form of restrictive money supply targets (or pegging to the DM in the Benelux case). The weak countries, in contrast, avoided deflating until they were forced to do so by external pressures. In a number of cases the need to deflate was postponed through extensive external borrowing, but in due course some combination of reserve losses, difficulties in borrowing and rapid depreciation forced a cutback in demand, even in countries like Norway and Sweden that had entered the recession in a strong position. In 1976 the idea that depreciation led to a 'vicious circle' of inflation, more depreciation, and yet more inflation gained ground, and to avoid or extricate themselves from this situation deflationary programs were adopted by Britain, France, Italy and Sweden (which jointly account for almost 50 percent of the GNP of OECD Europe), despite the fact that it was just at this time that the weakness of recovery from the recession was becoming apparent.

The only country to enjoy a period of relatively strong growth in the period after 1976 was the United States. There is no doubt that the fiscal expansion of the Carter administration in 1977 was a major factor in this outcome. It has also been claimed that monetary policy was more expansive than was thought at the time, owing to a shift in the demand for money,⁹ and it also seems likely that the exchange-rate realignment of the early 1970s was exerting an effect in switching demand toward U.S. goods. This unilateral strong growth was sufficient to transform the dollar from the ranks of the

strong to those of the weak currencies, leading in November 1978 to a crisis package to break the emergent vicious circle. In contrast, the other initially strong countries enhanced their performance in terms of financial stability but paid a price in terms of a large margin of persistent slack. The extreme case is that of Switzerland, where output has still not regained the level of 1972. By 1978, this combination of good financial but weak real performance combined with international pressures to induce a greater willingness to take expansionary actions: Switzerland again provides the extreme case, where policy switched abruptly from pursuit of a money supply target to one of printing more Swiss francs to satisfy the portfolio switch in process. The weak countries achieved something by way of financial stabilization, but at the cost of further increases in the margin of slack. It seemed fortunate that by late 1978 expansion in the strong economies of Japan and Germany was at last picking up, but since then the new oil price increases have ensured that the 1970s will have an end little more satisfactory than their middle in terms of either unemployment or inflation.

It is again necessary to ask to what extent international monetary factors can be held responsible for the unhappy string of events chronicled above. Clearly there are once more some elements that should be classified as exogenous: notably the inflation inherited in 1973, and the oil price increases of 1973 and 1979. There are also some accusations that are sometimes made against the international monetary system that can be unambiguously dismissed on the basis of the preceding narrative, notably the charge that

the Euro-currency markets and the generalization of liability financing of current deficits have fueled inflation. Doubtless these institutions like all financial innovations that promote the access of potential borrowers to additional credit, have the potential power to feed inflation, but since their modus operandi involves the expansion of aggregate demand, the charge that they have (since 1974) promoted inflation is equivalent to saying that one would have welcomed a deeper and/or longer recession in the interest of combating inflation. That is not a majority view. Of course, the ease of borrowing has permitted countries to defer adjustment, and there is no doubt that some abused this possibility.

It would, however, seem difficult to contend that the other mishaps were independent of international monetary arrangements. The 1975 recession bit deeper than should have been allowed, apparently because deflationary policies were pursued with too little recognition of the shocks in the pipeline from other countries that were deflating simultaneously (Izzo and Spaventa, 1979) and perhaps also because demand deflation has the tempting by-products of offloading a part of one's inflation and payments problems onto other countries. Outside of the United States, the 1976 recovery was aborted because the additional deflation forced on the weak countries to escape their vicious circles was not compensated by expansionary action in the strong countries, who preferred to consolidate their anti-inflationary gains by sticking to their monetary targets. In due course, the United States found that it alone was not a sufficiently powerful locomotive to pull the world economy out of recession, although not until the attempt had been carried beyond the point of prudence in

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the face of the warning signal of an exploding payments deficit, and had rekindled a widespread desire to diversify out of the dollar. These central facts of recent historical experience must surely raise doubts as to the efficacy of the existing mix of national policy determination and international coordination. This is not to deny that the period was studded with countless international meetings to discuss the international coordination of economic policy, from summit level down, nor to dismiss their results out of hand: I have already indicated my belief that some of these produced necessary and constructive decisions as to goals. The fact remains that they did not induce a pattern of coherent action that gave reasonable promise of achieving the desired goals. And one may suspect that goals will remain unachieved so long as coordination relies on lining up numerous sovereign governments into a convoy (or whatever) assembled ad hoc for each specific occasion, rather than arising spontaneously out of the individual pursuit of national self-interest within the context of a set of rules that are such as to ensure a broad consistency of national and world interests. Within the context, that is, of an international monetary system.

It is instructive to contrast the existing "non-system" with its predecessor. For all its faults, the Bretton Woods system did provide a set of institutional arrangements that, in conjunction with the prevailing Keynesian intellectual orthodoxy of the time, ensured that enlightened national macro policies would produce a satisfactory functioning of the world economy. In essence, each country directed demand management policies, and especially fiscal policy, to securing full employment, with some deliberate trimming (reinforced by

the monetary impact of payments flows) in the light of its payments situation. So long as payments imbalances were essentially symmetrical. i.e. until the reserve-currency system got out of hand at the end of the 1960s, the system as a whole did not deviate from an appropriate demand target as a result of imbalances within it: indeed, as Triffin used to emphasize (e.g. 1964, pp. 38-39), payments deficits most usually resulted from excess demand and therefore provided an early warning that deflation was needed and a safety valve that limited the extent to which excess demand was translated into inflation as well as an incentive to take action promptly. When imbalances were due to cost discrepancies, par values could be adjusted--with the IMF ready to provide credit to ease the process provided that the accompanying policy package were judged adequate to achieve the objectives. The rarity of par value changes and the assurance that they would result in sustained changes in competitiveness meant that trade flows would respond in a reasonably predictable fashion, which both obviated the need for disruptively severe deflation to secure adjustment and avoided adding undue uncertainty to demand management in other countries. In retrospect one cannot but be impressed by the success with which Keynesian fine-tuning kept the system as a whole close to full employment for a quarter century, without upswings as synchronized as that of 1972-73 or downswings as synchronized as that of 1974-75, and certainly without any examples of conjuncturally-perverse policies to match the simultaneous and uncompensated deflation of four of the principal European economies that occurred in late 1976.

In the debate on flexible exchange rates during the

1960s, it seems to have been taken for granted that flexibility would enhance rather than undermine this benign coincidence of interest since countries would gain insulation from foreign cyclical disturbances and an additional degree of freedom with which to reconcile internal and external objectives. So long as individual countries had appropriate demand targets (rather than becoming undisciplined as a result of the "removal" of the payments constraint), the system as a whole would be able to stay closer to full employment than was possible under Bretton Woods, where demand policies frequently had to be trimmed in the interest of payments balance. There seems to be a consensus developing that floating has failed to live up to these expectations.

1. Floating does virtually nothing to insulate output in one country from demand in the rest of the world (Artus and Young, 1979, p. 13). Although it does not seem to have been widely recognized in 1973, this is in fact an inescapable consequence of the stylized fact that trade volumes respond fast to changes in income but only slowly to changes in relative prices. One implication is that, insofar as the case for conscious demand management is accepted, the need for demand policies to be coordinated, either explicitly or implicitly, has not been reduced.

2. Monetary policy has not in fact furnished the extra degree of freedom in achieving internal objectives that was promised. On the contrary, a monetary policy markedly more expansionary than that in the rest of the world is quickly translated into depreciation and sets off a vicious circle. The conventional wisdom has decided, no doubt

correctly, that vicious circles can always be stopped by monetary discipline (Goldstein, 1979, p. 35). What must also be recognized is that one cannot simultaneously use monetary discipline to break a vicious circle and monetary expansion to achieve the textbook objectives of expanding output without worsening the balance of payments.

Not only have floating exchange rates failed to furnish the anticipated improvements over pegged rates in these respects, but there are a number of ways in which the coordinating mechanisms of Bretton Woods have been destroyed. The first instance is the least tangible, but arguably the most important: there is today no dominant intellectual orthodoxy, let alone one as adequate to the needs of the age as the Keynesian orthodoxy was so long as its basic presupposition of constant prices remained approximately valid. The consequences have included a series of disagreements about policy objectives, priorities and strategies¹⁰ which have repeatedly precluded consistent international action. Second, payments imbalances are no longer in any sense symmetrical; current balances (of oil importers) regularly sum to substantial negative sums, while overall balances are even more asymmetrical as a result of the operation of the reserve-currency system and its Euro-market extension. Because of these facts, it is probably fortunate that there is now less tendency to treat deficits as an early warning that policy is over-expansionary, but that nevertheless removes an important warning signal. Furthermore, desired portfolio shifts between currencies frequently cause intervention in an effort to limit real

exchange rate changes which have no rationale in terms of resource allocation; where sterilization policies differ between the two countries involved, the world money supply is affected capriciously in consequence. More generally, it has been suggested that floating rates may exert a ratchet effect on the world money supply, as countries with depreciating currencies offset more of the induced real contraction of their money supplies than those with appreciating currencies offset of their real expansions. So far as the safety valve function of fixed rates, in preventing excess demand being translated into price inflation, is concerned, things appear to have worked out even worse than critics of floating predicted; instead of a systematic turning in of inflationary pressure, which at least provides an incentive to take remedial action quickly, the capital markets will sometimes finance large deficits willingly--and then, seemingly capriciously, refuse to hold the amount of debt that a country has been tempted into issuing without a depreciation of the exchange rate with its inevitable inflationary impact. Furthermore, exchange rate changes are no longer rare and they are frequently reversed, which may have reduced their efficacy as an adjustment tool--thus requiring more rather than less use of expenditure reducing policies--and must have added to the difficulties of selecting an intelligent policy for aggregate demand. Even more seriously, floating rates make it harder for the authorities to predict the price/output implications of macro economic policy measures, for the fundamental reason that the price/output split of changes in nominal income depends on the reaction of the exchange rate, while that reaction depends on the expectations aroused

by the policy measures as much as on the measures themselves (as a large academic literature by now testifies). When the authorities are unable to predict the consequences of their action, they are unlikely to pursue enlightened policies. Finally, it is interesting to note that a view seems to be developing (IMF, 1979) that the policy mix has in recent years unduly favored expansionary monetary rather than fiscal action; this is precisely what Modigliani and Askari (1973) forecast would occur in a world recession with floating rates, as countries competed for export-led growth. The same logic would suggest that one might also expect a bias toward monetary expansion taking the form of reserve acquisition rather than domestic credit expansion, which the continuing rapid reserve growth suggests has been occurring.

The implication of this sections is that a series of valuable sources of policy coordination were lost in the collapse of the Bretton Woods system, and that the failure to replace these mechanisms bears a major responsibility for the signal failure of governments to achieve the scaled-down objectives that they had proclaimed were feasible.

V. Concluding Remarks

It has been argued in this paper that an important part of the deceleration of economic growth that occurred in the industrialized countries during the 1970s can be attributed to factors that are inevitable or even desirable rather than posing a problem for economic policy. What should give ground for concern is the failure to utilize fully the

available stock of resources, rather than the slower growth of that stock. This underutilization is in part the result of a conscious, and in the circumstances rational, decision to aim for lower pressures of demand, as the price that has to be paid under existing institutional arrangements for keeping inflation from getting out of hand. One may note in passing that a disproportionate part of the burden of combating cost-push pressures through demand restraint is born by competitive sectors, whose real income is squeezed in the process of trying to reconcile by demand restraint the inconsistent real income claims in the less-competitive sectors; since at the global level the competitive sectors are essentially non-oil primary products, this translates into a disproportionate burden for fighting inflation being born by the non-oil developing countries. My own judgement is that by far the most beneficial reforms conceivable would be ones that eliminated the inflationary bias of existing institutions--if not by restoring the blissful situation where the Keynesian axiom of fixed prices was approximately valid, then at least by cutting the natural rate of unemployment. There is, however, little reason to suppose that international monetary reform could contribute much to this end.

The underutilization of resources cannot, however, be entirely attributed to the decision to aim for lower demand pressures in the interest of combating inflation. The 1975 recession went further than intended, and outside the United States the recovery lagged behind plans. I have argued that there does seem to be a prima facie case for believing that international monetary organization, or rather the absence thereof, is in large part responsible for these

failures. The terms of reference of this paper did not extend to the subject of whether, and if so how, it might be possible to design an international monetary system that would give hope of preventing similar failures in the future. However, to avoid misinterpretation, I should perhaps say that I see no possibility of achieving this either by a return to Bretton Woods (two of whose basic presuppositions, of fixed prices and capital immobility, have vanished) or by the sort of tinkering that has been contemplated since the demise of the Committee of Twenty. It may indeed be the case that a worthwhile reform, which would provide an incentive for individual countries to pursue policies that collectively promote the general good, will be possible only when there is again a dominant economic orthodoxy as well suited to its time as the Keynesian one was to the post-war era. Perhaps that means that international monetary reformers have a long wait ahead. But it is just possible that the search for international monetary reform might itself provide the catalyst through which the existing stock of ideas could yield a widely-acceptable synthesis adequate to the final decades of the twentieth century.

FOOTNOTES

1. Particular reliance has been placed on the admirable survey paper of Goldstein (1979).
2. My impression is that the judgment expressed here is widely shared by economists, but it is certainly not unanimous. See Korteweg (1978, p. 10) for an expression of the view that lower growth is entirely accounted for by a reduction in the growth of potential output, and hence that the OECD economies do not presently have any important margin of slack.
3. While econometric estimates of the natural rate are by no means precise, there is some evidence that during the 1970s an upward shift of between 1 and 2 percent has occurred in Canada, the UK and the USA.
4. McCracken (1979, paragraph 202).
5. Indeed, this literature sometimes leaves one wondering why one should bother about something as inconsequential as moderate inflation. The answer is much the same as to why it is better not to smoke rather than to limit cigarette consumption to a level where the statistical effect on health is immeasurably small: the practice is addictive.
6. It is not, however, clear that investment in the more productive forms of capital has fallen in Europe (as opposed to Japan or the USA). Gross fixed investment in plant, machinery, equipment and means of transport as a proportion of GDP rose in 3 of 8 EEC members between 1973 and 1978 (Banca d'Italia, 1978, p. 33).
7. Braun (1976).
8. Goldstein (1979, pp. 7-15) has updated the long-running debate on whether pegged or floating exchange rates exert more discipline, and shows that it is still totally inconclusive.

9. The view that there was an important shift in the demand for money functions is not, however, universally accepted: see Hamburger (1977).

10. On objectives, there were fairly clear disagreements about appropriate current balance targets; on priorities, the obvious clash was on the competing claims of early recovery from recession versus further winding down of inflation; on strategies, the major difference has concerned fixed monetary growth rules and Keynesian demand management.

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Appendix

A COMPARISON OF ECONOMIC PERFORMANCE: BRETTON WOODS VERSUS POST-1973

The purpose of this Appendix is to give a rough quantification of the commonly-acknowledged deterioration in economic performance since 1973. The statistics presented for the 1970s in Table A.1 cover the six years starting with the cyclical peak of 1973 (or, for unemployment, the five years from 1974). For unemployment and inflation, figures for the final year are also given. The comparison-period selected was the six-year period that started with the 1957 peak that immediately preceded the most serious recession to occur while the Bretton Woods system was functioning. The statistics given are confined to the seven principal industrial countries and to a composite of them (weighted by 1975 industrial production), and cover the three principal indicators of growth, unemployment and inflation.

Table A.2 shows an estimate of the "output gap" in manufacturing for the seven major industrial countries over the periods 1957-62 and 1973-78. The output gap is the percentage by which output fell short of estimated potential output, where the latter is calculated by an econometric analysis relating manufacturing output to inputs of labor and capital and incorporating an assumption that labor is utilized at normal and sustainable rather than peak levels of intensity. A negative output gap signifies that output

is above the sustainable level owing to abnormally low structural unemployment and/or extensive overtime.

Table A.1

A Comparison of Economic Performance: 1957-62 Versus 1973-78

Country	Weight	Average annual Growth of real GNP/GDP		Average rate of unemployment			Average annual increase of consumer price index		
		1957-62	1973-78	1958-62	1974-78	1978	1957-62	1973-78	1978
United States	40.6	3.3	2.3	6.0	7.0	5.9	1.5	8.0	8.9
Canada	4.3	3.7	3.3	6.6	7.2	8.3	1.5	9.2	8.7
Japan	18.0	12.0	3.6	1.2	1.9	2.3	3.2	11.3	3.4
France	9.2	5.4	2.8	n.a.	5.3	5.5	4.4	10.7	9.5
Germany	15.7	5.7	2.0	1.7	4.1	4.7	2.0	4.8	2.2
Italy	5.7	7.2 ¹	4.0	4.6	4.9	7.2	2.3	16.4	11.6
United Kingdom	6.5	2.7	0.8	2.0	5.0	6.2	2.2	16.1	8.1
Composite Big Seven	100	5.6	2.6	4.0 ²	5.2 ²	5.2 ²	2.2	9.4	7.0

Sources: Growth: International Financial Statistics, OECD Main Economic Indicators
 Unemployment: UN Statistical Yearbook and Monthly Bulletin of Statistics
 Prices: International Financial Statistics

Notes: ¹1960-62.

²Excluding France.

Table A.2
 The Output Gap in Manufacturing for Seven Industrial Countries, 1957-62 Versus 1973-78
 (Percentage of potential output)

Country	1957	58	59	60	61	62	1973	74	75	76	77	78
United States	4.0	15.8	9.2	11.4	14.4	9.9	-1.6	5.9	13.3	8.0	4.4	1.7
Canada	3.9	11.3	9.7	12.4	13.1	9.2	3.2	2.0	10.9	10.4	11.0	8.7
Japan	-5.4	10.3	5.2	-3.5	-6.8	-1.3	1.1	9.2	24.6	20.4	20.7	18.9
France	-0.4	2.2	4.2	2.1	1.7	1.3	-1.2	0.3	11.6	9.1	12.4	15.3
Germany	2.1	5.4	4.2	-0.8	-1.1	0.8	1.7	3.1	12.4	9.1	9.2	11.6
Italy	3.6	9.3	7.1	3.2	1.4	-1.2	0.7	-2.7	12.4	7.0	10.1	13.0
United Kingdom	1.9	6.1	4.0	-1.8	2.0	5.5	-0.2	2.2	11.5	12.3	13.1	14.9
Composite Big Seven	1.4	10.6	6.7	4.6	5.3	4.6	-0.1	4.6	14.8	10.8	10.0	9.4

Source: Artus and Turner (1978).