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The Great Depression:
A Repeat in the 1980s ?

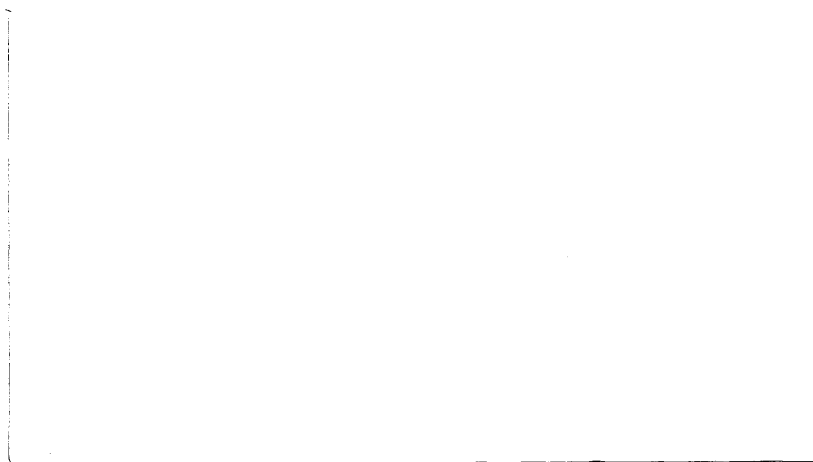
Alfred Steinherr*

Internal Paper



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The Great Depression:
A Repeat in the 1980s ?

Alfred Steinherr*

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ABSTRACT

This paper is an essay. Its spirit is intended to reflect the mood and preoccupations generated by the post-1973 recession and the re-emergence of disintegrating factors and disequilibria proper to the depressions in the history of industrial societies. The central theme is therefore an assessment of the need to worry about whether it really is all happening again. This essay avoids making projections but rather attempts to identify problem areas and particularly those contractionary forces present in the current phase of the business cycle.

Neoclassical growth theory has developed the conditions under which economies converge smoothly to a path of steady growth, aptly called a state of economic bliss. This world of neoclassical growth theory is certainly not the world we live in, in which dynamic processes are much more complicated and erratic because the future is uncertain. Unanticipated shocks perturb the system, expected demand or expected relations between prices and costs may turn out mistaken. Even rational investors may end up with over- or underinvestments once the future unfolds. To work off excess capacity or to reallocate resources from one market to another requires substantial periods of time and introduces monotonic or cyclical variations into investments and output of the firm. Serial correlations of this nature are reinforced by elastic (i.e., extrapolative) expectations and generate an aggregate business cycle since major economic variables (wage growth, government policy, world demand) affect all sectors of the economy. Such swings in economic activity are only reversed when floors or ceilings are reached at which economic agents become confident enough that the likelihood of a reversal of the cycle exceeds sufficiently the likelihood of further deviation from long-run trend.

Section 2 discusses the implications of slow growth (experienced since 1973) and comes to the conclusion that low growth trend may be unstable and may carry the seed for a cumulative downturn. Slow or zero growth may be incompatible with existing social institutions and expectations and impedes distributional and allocative mechanisms. Jointly these factors set up endogenous forces which make for further declines in economic activity. Whether this will occur in practice depends mainly on how rigid economic structures are. The length of the recession in itself

is important in this respect, since rigidities may diminish as the recession is drawn out. On the other hand, expectations tend to become more pessimistic the longer the recession lasts and what is considered as normal business conditions is likely to be revised downward.

Section 3 summarizes the theory of long waves in economic evolution, called Kondratiev waves. Here it is argued that the long expansion from 1945 to 1973, culminating in a boom during the 1960s, may be considered as the prosperity phase of a Kondratiev cycle. This contrasts with the Keynesian view that postwar growth could have been sustained indefinitely with proper policy mixes. During the 1970s many disequilibria, built up during the long expansionary period, have become apparent which bear a striking resemblance to those associated with previous depressions. These disequilibria are discussed at length in this essay and it will suffice to give an example here. From 1945 to 1973 the price of oil steadily declined in real terms while the price of substitute energies rose. This is a clear disequilibrium phenomenon since the equilibrium price path of a natural resource and of its substitutes is characterized by exponential growth close to the real rate of interest. Had the price of energy evolved along such a path world growth would have been little, if at all, affected. But by 1973 the disequilibrium had reached such an extent that drastic correction was required. It was the suddenness and size of the oil price increase which shocked demand and an industrial structure developed on the basis of a disequilibrium oil price. Adjustment of demand and, above all, of supply to the new oil price requires substantial time and is made more painful by rigidities in factor prices and the fixity of productive capital in the short-run.

A disturbing feature from a European viewpoint is the observed slower adaptation of the European economies to the changed economic conditions after 1973, as compared with, say, Japan and the United States. In Europe attitudes towards economic growth have become more critical and demands for increased security (free of charge!) have tended to stifle structural change, entrepreneurial initiative and creative innovation. Many European economies suffer now from excessive real wage cost growth during the 1970s which has made their traditional industries less competitive in relation to cheap-labour countries. In addition,

the reallocation of resources to future technology industries has been less rapid and less successful than in Japan and the United States. As a result, non-public sector employment has declined in the European Economic Community since 1973 while it has increased in the United States as never before in history.

After the failure of economic policies to control inflation and to engineer a durable recovery the stagflation, which now enters into its 9th year, has considerably reduced the earlier confidence in the potency of anti-cyclical policy. In the 1980s despair and helplessness is spreading among policy-makers and no general consensus is in sight about a promising policy approach for recovery with inflation stability.

Sections 4 and 5 are devoted to international issues. Section 4 discusses the decline in international leadership in the 1970s, the problems inherent in the evolution of the international monetary system, the international transmission of the business cycle, and the danger of rising protectionism. Close comparisons with the interwar period emerge again with striking clarity. The US monopoly of world leadership, and perhaps her willingness to redistribute the benefits of international exchange, have declined while the new potential suppliers of leadership, the EEC and Japan, have not achieved yet the maturity and determination required for strong and effective leadership roles. While the EEC has not been able to realize its full potential in the past the opportunity and need for increased EEC leadership for macroeconomic policy coordination, for trade policy and for the international monetary system are now stronger than ever.

The dollar-gold standard was abandoned in 1971 without implementation of any of the grand proposals for international monetary reform in vogue during the 1960s. During the 1970s world liquidity has therefore expanded in a largely uncontrolled and erratic fashion, contributing to the acceleration of world inflation and to more rapid growth of world consumption than investment. At the same time the world economy had to cope with massive supply shocks which have been transmitted internationally in ways different from more demand based impulses to which policy makers were accustomed. The world-wide redistribution of income favouring oil-exporting countries and newly industrialized countries has made it more difficult to achieve convergence in international policy responses and protectionist attitudes in industrial countries have once more surfaced.

Finally, in financing the large external imbalances accumulated during the 1970s and during 1980-82, commercial banks have encountered in 1982 difficulties of unprecedented magnitudes in the postwar period which are discussed in Section 5. This discussion focuses on risks in international financial intermediation and stresses the dilemma in a situation in which borrowing countries either deflate or attempt to increase their indebtedness further. In either case, and particularly in the absence of a coordinated approach, country default, now and in the future, is the major risk, with potential financial snowballing effects that could endanger financial stability and build up further depressionary elements.

In Section 6 some broad conclusions are drawn. Enough contractionary elements are in the economic pipeline to make a lengthening or further worsening of the recession plausible. However, this is not a forecast. Some expansionary forces are noted in passing which, if combined with judicious national and international policies, could prevail over the contractionary ones.

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- In 1965 President Johnson was making a controversial statement when he said: "I do not believe recessions are inevitable". That statement is no longer controversial. Recessions are now generally considered to be fundamentally preventable, like airplane crashes and unlike hurricanes. But we have not banished air crashes from the land, and it is not clear that we have the wisdom or the ability to eliminate recessions -

Arthur M. Okun,
The Political Economy of Prosperity.

1. Introduction

This paper is an attempt at identifying some factors (shocks, institutional malfunctioning, economic processes, policy choices) that could prolong and deepen the current recession further during the years ahead. While the general scope of these considerations is naturally the world economy, industrial countries and, in particular, the European Economic Community (EEC) receive particular attention. No attempt is made at assessing the likelihood of occurrence of particular phenomena since in the absence of observable event frequencies no objective probabilities are available and therefore the scope for different probability beliefs is not suitably bounded. Nevertheless, the fact that none of the factors discussed are impossible suggests that taking cognizance might be useful for policy preparation. The aim of this paper is not to provide forecasts or a plausible scenario, but rather to draw attention to possible problems and risks for economic growth and international relations, notwithstanding many positive factors also discernible but not discussed in this paper.

Recent experience in economic forecasting suggests that the negative factors at work are not fully apprehended and forecasts have tended to be generally overoptimistic. For example, the Economic Report to the President, published in February 1982, provided the following forecast for the US economy on p. 209: "The current recession is expected to end early in 1982, followed by a resumption of growth by mid-year." Commission forecasts of real US GDP growth during 1982 were 0.3 per cent in February 1982, revised downward to - 1.6 per cent in the May 1982 forecast. For the EEC, the Commission forecast a real GDP growth for 1982 of 2.0 per cent in October 1981, of 1.4 per cent in May 1982, and of 0.3 per cent in October 1982. The forecast of volume of world imports for 1982 was progressively revised from a growth rate of 4.3 per cent, to 2.6 per cent and finally to - 1.0 per cent. Since other short-term forecasts exhibit similar patterns, the speed at which economic conditions deteriorate unexpectedly is of some concern and puts even more seriously in doubt the validity of medium-term forecasts according to which growth will accelerate again in 1983.

Pessimistic scenarios are of course prepared by several institutions. For example, the World Economic Outlook (WEO) of the International Monetary Fund (IMF) regularly contains such a scenario. In the WEO of 1982 the average rate of GNP growth for industrial countries over the 1984-86 period is projected at slightly above 3 per cent per annum for the central scenario while the growth rate drops to 2 per cent under the pessimistic scenario. This projection has to be seen against a 4.85 per cent growth for 1963-73, 2.75 per cent for 1973-79, and 1 per cent for the 1980-82 period. However, it is doubtful that the so-called pessimistic scenario really contains the major risks, since it is based on the assumptions that no further shocks or qualitative jumps (country defaults, higher trade restrictiveness) will occur. This suggests therefore that although an average annual growth between 1 and 2 per cent for the period 1980-86 is already a matter for serious concern, even worse outcomes are not unthinkable. Furthermore, as I shall argue, the medium term prospects for the EEC are less favourable than for Japan and the United States.

A useful framework for reflection is provided by the lessons of history. Although unanimity is lacking with regard to the dominant causes of the Great Depression (Brunner, 1981), which was neither particularly deep nor protracted compared to its predecessors in the 19th century, a substantial inventory of possible causes or contributing factors is available. They range from mistaken policies (monetary and fiscal policies, exchange rate policies and return to the gold standard), the war reparations problem, supply reallocations for primary commodities, technological factors such as a slowdown in major innovations, psychological factors generated by the stock market crash, to a lack of international leadership after the withdrawal of the United Kingdom from its role assumed during the 19th century and the "belle epoque". Mutatis mutandis, all of these factors are apparent in today's world as potential dangers and destabilizing forces.

One explanation of the Great Depression which assigns only a secondary role to exogenous events is in my view particularly relevant for an interpretation of the possible evolution in the 1980s. This is the view, expounded by Schumpeter (1939), that booms and depressions are in the nature of economic evolution. Business cycle theory of long economic waves has become less fashionable since the Keynesian revolution which has been taken to mean that the business cycle can be stabilized through demand

management. However, Keynesian theory is essentially short-run and therefore only applicable to stabilization of short cycles. Those economists, notably Harrod and Hicks, who have developed the theory of long-run cyclical evolution (the knife-edge problem, multiplier-accelerator models, floors and ceilings in trade cycles) have not had the same influence on policy thinking, possibly due to policy makers' concern with the short run and the empirical difficulty of assessing the more distant future.

The arguments in this paper are structured as follows. Section 2 develops some implications of the current slowdown of growth and, for sharper focus, of a zero-growth scenario. Section 3 outlines those economic factors which generate long (Kondratiev) waves, and suggests the possibility of a fourth Kondratiev wave, with its expansionary phase starting after World War II and ending in the mid-seventies. Section 4 investigates the major problems embedded in international interdependencies and Section 5 discusses the risks inherent in international financial intermediation. Conclusions are drawn in Section 6.

2. Implications of Slow Growth

The average annual growth of GNP in industrial countries for the 1980-82 period is projected at about 1 per cent, and below 1 per cent for the EEC. While advocates of a zero-growth target may not be particularly concerned by the prospect of continued growth close to zero, this section shows that no further adverse exogenous shocks are required to move a slow-growing economy into actual decline. Zero growth implies already major breakdowns of the existing institutional and social tissue ⁽¹⁾. I will not

(1) This view is shared by Schumpeter (1939, p. 1033) who notes: "Capitalism is essentially a process of economic change. Without that change or, more precisely, that kind of change which we have called evolution, capitalist society cannot exist. Maladjustments, unemployment and underutilization of resources ..., and neutral, unstable, and subnormal equilibria might hence well stay with a non-expanding world".

explain why an economy is growing slowly, nor analyze the possibility of reversing the trend. My concern is to note the negative implications of slow growth which may in fact prevail over some positive factors. What then are the implications of continuing slow growth ?

With zero growth of production employment remains at best constant, and is in fact declining with technological progress and labour-saving investments. Although productivity growth is likely to continue its downward trend it is unlikely that it will remain slightly positive. Zero growth then implies a decline in employment by the rate of productivity growth, and because in many EEC countries entries into the labour force are expected to accelerate until the mid-1980s, the growth of unemployment will rise above the rate due to employment decline. Since unemployment compensations are not managed on insurance principles a constant or increasing level of unemployment requires a constant or increasing transfer of income from the employed to the unemployed. The full impacts of these transfers are not felt yet, although rational agents would anticipate them, since governments have allowed public sector deficits to increase. But in a stationary economy the public sector cannot run a deficit forever, and is therefore forced to increase taxation or to reduce its expenditures over time. Therefore either some social services will not be provided anymore or taxation of all or some income groups has to increase with unfavourable implications for incentives to work, save and invest ⁽²⁾. In many countries funds are already being curtailed for infrastructural investments (the problems of cities), education, research, state supported big investment projects (energy) and cuts are envisaged in socially particularly sensitive areas such as pensions, unemployment compensations, and medical care. Some of these expenditure reductions may be compensated

(2) Estimation of these effects is difficult and somewhat unreliable since it requires a general equilibrium framework. However, recent work shows that the substitution effects tend to be much stronger than what was suggested by earlier empirical investigations. See, for example, Atkinson and Stiglitz (1980).

by increased rationality in the use of available resources but beyond that the decline in public investment represents the seeds for further deterioration of long-run growth perspectives.

Economic growth is characterised by gradual elimination of industries for which demand is declining and rapid growth of those industries for which demand expands. This reallocation of resources, while never easy, is facilitated by the prospects of achieving high incomes, higher returns to capital and of providing managerial challenges. In a stationary economy decline of any industry is seen as a threat to employment and as a loss of capital so that all owners of the factors of production resist the change and seek public assistance for protecting their interests. Savings therefore become increasingly channeled into low productivity industries instead of being used for creating a brighter future. Moreover, ailing industries are usually badly managed partly because bright managers avoid those industries. As Thurow (1980, p. 81) notes: "Who wants a job where the basic problem is to decide whom to fire each day and where new, exciting investments are not happening? In a dying industry everyone is out to protect what they have rather than to build something better. They know that gains in efficiency will simply result in more layoffs".

A stationary economy is bound to face increased distributional problems, brilliantly discussed by Thurow. In the present context it is useful to distinguish domestic and international issues of income distribution. Both have in common that with growth distribution is a "non-zero sum game" while without growth redistribution imposes absolute welfare losses on some segments of society. Within each country society can be dissected into various, often overlapping groups contending for their distributional share: labour against capital, the employed against the unemployed, the retired and those preparing for entry into the labour force, private sector against public sector, tenured labour against untenured labour, rich regions against poorer regions, etc. This climate is likely to produce non-negligible efficiency losses: disincentives to work or to invest in physical capital when marginal returns are decreased to finance high transfer payments; to invest in education when job prospects are meager; incentives to abandon the private sector and to enter secure, public service jobs; and, more directly, increased general unrest and strikes. The most important of all efficiency losses resulting from the distributional battle is however resistance to economic change.

Particularly in Europe, the often praised social achievements represent at the present time a danger for European societies to cope with change. On the one hand economic agents (income earners, firms, government) have become accustomed to expect rising real incomes over the life cycle with major risks being taken care of by government. But the external income transfers (oil), the loss of European competitiveness, and the internal transfers (unemployment compensation, pension payments with declining birth rates, expansion of unproductive jobs, free education with rising participation rates, etc.) make it virtually impossible to satisfy all these aspirations. Some signs of a gradual disintegration of those institutions can already be witnessed in several European countries. The inherent dangers are twofold, each potentially very serious. On the one hand, politico-social turmoil and unrest, if present institutions are disintegrated too disruptively; on the other hand, lack of responsiveness to the external challenge if present institutions are not adapted in time. Perhaps the first danger is not as serious as the second judging by the lack of violent reactions to current policies in the United Kingdom, while the decline of Belgium is a very preoccupying example of institutional rigidities preventing spontaneous or policy induced structural adjustment.

Poor countries will also suffer from slow growth in industrial countries since the growth of aid is likely to decline absolutely and as a share of industrial countries' GNP. But reduced aid will aggravate the difficulties of poor nations, force a decline in their absorption and hence diminish their demand for exports of industrial countries.

A further international phenomenon will contribute to turning the stationary economy in fact to a declining economy. The working hypothesis of this section has been a constant level of production without any explanation of how prices evolve. In a closed economy government intervention and rigidities in behavior of wage earners may lead to a fairly rigid relative price structure. This is, however, impossible in an international environment with an unchanged degree of protectionism. With a slowly growing world economy competition is bound to intensify and there will always be

some economies which will do better than others. When competition increases and productivity grows faster in some countries prices of these competitors will decline. The stationary economy will then see its world market share decline (so that domestic production declines) or its terms of trade worsen. Alternatively, it may try to avoid these losses and take refuge behind a growing protectionist wall to discover that one form of welfare loss is traded for another that may be even more serious.

The conclusion of this section is therefore that the initial hypothesis of a stationary economy is untenable. A stationary economy is bound to evolve into a declining economy with an array of the most serious internal and external difficulties until some of the institutional factors responsible for slow growth in the first place will give way, or until the world-wide business cycle improves ⁽³⁾.

3. Are Long-run Economic Cycles Obsolete ?

Relatively steady growth in the post-war period combined with the confidence based on Keynesian stabilization theory, has tended to divert attention away from long-run business cycles to the extent that many have considered them to be obsolete ⁽⁴⁾. Only recently have economists started

(3) I refer to institutions since as documented by economic history this is a prime factor in explaining differences in economic growth patterns between countries. For example, the first industrial revolution did not take place in England simply because of some technological inventions which somehow occurred there and not elsewhere. The institutions of 18th century England liberated the latent scientific and entrepreneurial energies which were still bridled in most parts of continental Europe. Similarly, the slow postwar growth of the United Kingdom is not due to exogenously determined work habits, a lower human capital (quite the contrary!), or a lower and outdated initial capital stock (in an economy with low frictions old capital is replaced by new capital when this is economical), but is mainly due to institutional differences. See Landes (1968) and Shonfield (1965).

(4) See, for example, Bronfenbrenner (1969).

again to turn their attention to the long-run dynamics of economic evolution recognizing that some major economic phenomena are realized only with very long lags: research and development, investment and capital accumulation, change in economic structure, reversing inflationary expectations, etc. (5).

The reason for which I invoke business cycle theory and in particular the theory of long waves is to draw attention to institutional and structural characteristics and the long-run implications of short-term stabilization. This opens up a framework within which recent economic evolution can be seen and some potential future difficulties can be appreciated. Although I consider this framework as a useful one, I do not suggest that history repeats itself in the sense that there is a repetitive rigid timing pattern or that the driving forces are invariant from one cycle to the next, nor do I suggest that depressions are unavoidable. Since the 1930s many institutional and technological changes have occurred that dampen the amplitude and phase of economic cycles (creation of institutional safeguards, international cooperation, automatic stabilizers, increased speed of technological change). To begin, I shall sketch the hypothesis of long waves in economic evolution and then note the salient features of the expansion phase until 1973 and the adverse factors bred during the end of the boom.

3.1 The Kondratiev Long Waves

Starting with the first industrial revolution "long waves" lasting over half-a-century can be observed in the evolution of industrial countries. Kondratiev (1926) elaborated the statistical evidence for the existence of such long waves but failed in providing any convincing explanation of an internal mechanism which would generate long waves with alternating periods of expansion and depression (6). It was Schumpeter (1939)

(5) One manifestation of this reorientation is the recent rediscovery of "supply economics".

(6) Depression is usually defined as a "long" period of time during which the trend of economic growth exhibits a marked decline, without becoming necessarily negative. The decline in price levels, considered as an important feature of economic depressions in the 19th century, is clearly not of the same relevance any more.

who first succeeded in offering an explanation of why in the race between labour absorption in new activities and labour displacements in established industries, one process draws ahead for a long time period and the other develops in consequence.

Schumpeter's interpretation is based on technological revolutions or "innovations" ⁽⁷⁾ as the main motor of long cycles, but his interpretation is not confined to technology: social changes and financial conditions are seen by him as related endogenous factors reinforcing the technological components. He negates any belief in a rigid timing pattern for long waves (e.g. 25-30 years of expansion followed by a depression of comparable length) but stresses the underlying endogenous dynamics producing long waves which may be lengthened, shortened, accentuated or attenuated by a host of factors including policies.

Why does innovational activity tend to produce long waves ? To emphasize the present day relevance of the arguments, I shall not confine myself to historical factors but draw more extensively on modern observations. Consider as a first step for sketching the basic argument the implications of the theory of the "product cycle". New products are usually developed by one or few producers using a technological breakthrough or simply identifying new demands. At the initial stage firms satisfy the upper segments of the demand curve, selling thus at high prices and amortising initial set-up costs. Marginal production costs are of little importance so that production requires less efficiency and can take place in high-wage-cost countries. Over time, as the product is being developed for a mass-market, production costs become increasingly decisive and firms are compelled to rationalize production; in the process, labour-intensive production may even be moved to low-wage countries. This process tends to be accelerated by new competitors entering the market and declining profit margins. Economies able to generate continuously new products or processes or to perfect existing ones will be able to sustain high growth, those not able to do so will experience lower growth. Hence,

(7) Technological change has to be understood in a wide sense, including management techniques, organisational forms, and market organisation.

economic cycles can be seen to derive from the ability to innovate and to exploit effectively the growth and maturity phases of the product cycle.

Even if the probability laws of economic events were independently distributed over industries and over time (which they are not), particular constellations of events are capable of producing qualitative changes, not unlike biological mutations, setting off periods of growth or of decline. Hence, economic cycles derive from serial correlation in economic time series, the covariance among major economic variables, and the "mutations" (structural changes) produced either by shocks or endogenously by particular performance structures.

Long waves only result from innovations if they are discontinuous, that is bunched together with economy-wide repercussions. Schumpeter associates with the three Kondratiev cycles known at his time the development of steam power, of railroads and electric power, and of the automobile: technological revolutions with sizeable secondary effects and very strong economy-wide repercussions capable of producing high serial correlation of innovative activity.

The reasons for the emergence of a turning point in a Kondratiev long wave now have to be identified to substantiate Clément Juglar's claim that "the only cause of depression is prosperity". During the upswing there will of course be some labour displacement as new technologies are introduced but on a relatively small scale. Aggregate employment expands due to a steep increase in employment in the industries and services directly associated with the new technologies and later in other complementary industries. New technologies require specific skills and it usually takes decades to train engineers and to sufficiently increase the supply of workers with specific skills. Temporary shortages generate scarcity rents and a general upward pressure on all wage rates through comparability claims. This, in turn, will ultimately increase the pressure to adopt labour-saving technologies, reinforced by the arguments of the product cycle. Social resistance to rationalization also dwindles decades after the first introduction of new technology. The cost and performance advantages, at first debatable, become more and more obvious, particularly when the new skills become more abundant, when managers familiar with the new technology emerge and designs are standardised and simplified. At least in our century, international competitive pressures reinforce the rationalization process.

While the previous arguments give some support to the hypothesis that long waves are generated by technological innovations they are not sufficient to explain why at the end of a Kondratiev upswing, generated by a bunching of innovations, another innovative bunching does not occur and, instead, only arises after a depression. Explanation of this phenomenon relies on additional, but interrelated factors. One is the establishment of a technological "paradigma", paraphrasing Kuhn's (1962) terminology: it is easier to expand and improve existing and known technology than to launch entirely new ones. Hence, during the expansionary phase of the Kondratiev cycle competitive and innovative pressure is directed at improving and rationalizing existing rather than at developing new technologies. During the downturn these pressures become extreme and innovative possibilities become more limited so that the research for entirely new technologies intensifies. Since new technology requires long lead times (often decades) to become economically usable the new technological breakthrough is likely to occur well after the turning point.

A reinforcing factor is that during the end of an expansionary phase the incentives and social conditions are not optimally suited for big leaps in technological development: increasing bureaucratisation, growing rigidities obstructing resource reallocations, and higher taxation to finance transfer payments are some of the institutional disincentives already discussed. Furthermore, relying on a political economy approach, Olson (1982) argues that during long periods of expansion societies accumulate interest groups and collusions for redistributive actions and undergo a process of increasing economic concentration. One important implication is that "distributional coalitions slow down a society's capacity to adopt new technologies and establish barriers to entry that reduce a society's capacity to reallocate resources quickly in response to changing conditions, and thereby reduce the rate of economic growth" (Olson, p. 145). Recession (and wars) are seen in that framework as factors that upset the process of increasing distributional coalition formation. The rapid post-war growth of Germany and Japan is consistent with this framework.

Introduction of new technologies initially requires increased investments. Over time wage earners receive the benefit of higher productivity and possibly more, as has been the case in recent years. Reinforced by stiffer competition due to market penetration by newcomers, profit shares tend to decline in the late phases of the boom, and the means and incentives for capacity expansion diminish. At the same time labour-saving technological progress raises the required investment for maintaining a high employment growth path.

The role of business expectations in this process is admirably described by Keynes (1936, pp. 315-17):

"The later stages of the boom are characterised by optimistic expectations as to the future yield of capital goods sufficiently strong to offset their growing abundance and their rising costs of production and, probably, a rise in the rate of interest also. It is of the nature of organised investment markets ..., that, when disillusion falls upon an over-optimistic and over-bought market, it, "(a reasonable estimate of the future yield of capital assets)" should fall with sudden and catastrophic force ... It is the return of confidence ... which is so insusceptible to control in an economy of individualistic capitalism"(8).

Once the turning point of the long wave is reached many factors tend to mutually reinforce the downturn as has become apparent in Section 2. Furthermore, declining growth in industrial countries exerts a downward pressure on commodity prices and hence on the income of commodity exporting countries, many of which are in the developing stage. Due to the dependency of developing countries on few basic commodities export earnings of these countries decrease and make it difficult for these countries to service and repay the international loans accumulated during the commodity boom of the expansionary phase. International financial crises develop with contractionary impacts in lending countries (further discussed in Section 5) and borrowing countries are compelled to deflate their economies thereby affecting exports of lending countries.

(8) Investment behavior with some of these features is endogenised in the simulation model developed by Forrester (1976). He uses a two-sector economy producing consumer and capital goods. Impulses from the consumer goods sector are transmitted with long lags to the capital producing sector. Through a multiplier-accelerator mechanism the interdependence between both sectors has the potential of producing fluctuations of a 50-years duration, basically because investors exaggerate continuously (but ex-ante with perfect rationality) in either direction.

Due to each country's attempt to increase world market shares and to protect domestic production from imports, recessions are characterized by increasing trade protection, lesser obedience to the laws of comparative advantage and more conflictual international relationships containing the risk of degenerating into (trade) wars, further discussed in Section 4.

An attempt is now made to apply this sketchily outlined framework of the Kondratiev cycle to the postwar period, and to see whether a turning point of a fourth Kondratiev cycle might have occurred in the 1970s.

But before that we may ask whether the view of long waves does not run counter to Keynesian wisdom? I would argue that it does not. The traditional controversy about Keynesian stabilization policies concerns only the question whether policy makers can stabilize aggregate demand. It does not concern issues such as shifts in demand for individual industries requiring restructuring of the productive side of the economy. Nor does it concern supply growth or random shocks to the productive structure of an economy. In the wake of the supply shocks of the 1970s the awareness that long-run cycles might still be alive has therefore been heightened again. In fact, if the post-war period until 1973 is regarded as the prosperity phase of the Kondratiev-cycle, the absence of deep recessions in industrial countries for about a quarter of a century appears as a standard feature of traditional business cycle theory, and provides no evidence for the view that long waves are dead.

3.2 The Period of Expansion (1945-1973)

After World War II the need for reconstruction provided a major impetus for growth ⁽⁹⁾, and was singularly aided by the strong international leadership assumed by the United States. The desire to avoid a recurrence of the interwar experience led to the creation of the Bretton Woods system, and to the trading rules embodied in the GATT. Furthermore, direct financial assistance was made available for the reconstruction of Europe as later aid was made available for LDCs.

(9) Wars represent important turning points for long waves, both at the ceiling and at the floor.

Under these extremely favourable institutional conditions industrial countries not only were able to grow rapidly but they also became aware of the mutual benefits from international exchange. Successive GATT rounds of tariff and quantitative trade barrier reductions, the creation of the EEC, international financial integration and international policy cooperation all advanced significantly on the understanding that there was a "public good" to be shared. Productivity grew at unprecedented rates as international competition shook up previously protected domestic industries; as foreign trade allowed a greater exploitation of returns to scale from increasing specialisation; as demand was made more uniform in the entire Western world, satisfied by multinational companies, and as the life of the product cycle shortened under the impact of accelerated innovation and product development. In Europe the return to full employment was extremely rapid and already in the 1960s Europe had to rely on immigration for incremental labour supplies.

After the period of reconstruction, Europe continued to grow rapidly during the 1960s aided by exceptionally high growth in the United States and by the maintained overvaluation of the US dollar which was reflected in declining US trade surpluses. These factors and LDCs' needs combined to stimulate European "export-led" growth.

As to technology, Europe benefitted from the "technology-gap" and could confine herself to adapting best-practice techniques. In a Schumpeterian sense four sectors played leading roles: construction for the period of reconstruction (the "building boom" - Shonfield, 1965); automobiles, similarly to the role played in the United States during the third Kondratiev upswing, and mechanical and electrical engineering to reequip European industry and LDC economies; and, most so in the United States, electronics. The inter-industry repercussions of these sectors are extremely important: upstream for construction and automobiles, downstream for engineering and the electronics industry. For example, while actual employment in the U.S. computer industry itself is not very big, overall employment in downstream service industries is very sizeable. The industry-wide impulses are comparable to those of the steam engine, the railways and electricity in their times, making possible the creation of activities unthinkable without computers. It is estimated that, at least during the 1950s and 1960s, the introduction of computers and related equipment was employment-creating and not employment-destructing (Freeman, 1978). However, as the result of mature and cheap computer technology (e.g., large scale integration chips replacing discrete components), produced with enormous scale economies and facilitating

automation in industry and services, the labour-displacing effect has sharply increased in the 1970s, reinforced by the strongly increased cost of labour (Sachs, 1979).

3.3 The Slowdown of Expansion (1974-1982)

Table I summarizes average growth rates of real wages, employment, productivity and GNP in the European Economic Community, the United States and Japan.

The average growth rate of real GDP during the period 1974-80 is in all three areas less than half the average growth rate for the period 1961-73 with a further deterioration in 1981 and 1982 ⁽¹⁰⁾. In the EEC and Japan productivity growth for 1974-80 was less than half the average growth during 1961-73 and in the United States the productivity decline was even stronger. A further strong deceleration has occurred everywhere during 1980-82. By contrast, employment growth in the United States was sustained during 1974-80 above the pre-1973 levels while in the EEC it declined to less than half the rate achieved during 1961-73, and in Japan the decline was slightly less. Employment growth slowed down further during 1980-82, the two-years average growth rate declining to 0.25 per cent in the United States and to -1.3 per cent in the EEC. The combined effects of the productivity slowdown and the employment decline resulted in about zero output growth for 1980-82 in the United States and the EEC. By at least one traditional definition of a Kondratiev depression, based on a significant downward shift of the trend in GDP growth, the world economy has already entered into a depression. In this text I shall comply, however, with the official fiction of calling the current situation a recession.

(10) Official data on GDP growth are however underestimates due to the rapid growth of the "underground economy" which could now account for over 15 per cent of measured GDP in many industrial countries compared to less than 10 per cent in the early 1960s. See Tanzi (1982).

Table 1: Growth of real wages, productivity, employment and output

	<u>1961-73</u> ⁽¹⁾	<u>1974-80</u> ⁽¹⁾	<u>1981</u> ⁽²⁾	<u>1982</u> ⁽²⁾
<u>Real wage increases (% p.a.)</u>				
(using CPI as deflator)				
EEC	5,0	2,6	0,9	0,3
United States	2,5	0,1	1,4	0,9
Japan	7,6	2,5	2,5	3,4
<u>Productivity growth (GDP at Factor Cost (per person employed) (% p.a.))</u>				
EEC	4,4	2,1	0,9	1,5
United States	2,2	0,1	0,9	-1,0
Japan	8,5	2,9	1,2	2,0
<u>Unemployment rate</u>				
	(1970)	(1976)	(1981)	(1982)
EEC	2,0	4,8	7,8	9,4
United States	4,9	8,5	7,6	9,4
Japan	1,1	1,9	2,2	2,3
<u>Employment growth (% p.a.)</u>				
EEC	0,2	0,1	-1,5	-1,1
United States	1,9	2,1	1,1	-0,6
Japan	1,3	0,9	0,8	0,5
<u>Output growth (GDP at Factor Cost) (% p.a.)</u>				
EEC	4,9	2,2	-0,6	0,3
United States	4,1	2,3	2,0	-1,6
Japan	9,9	3,8	3,0	2,5

(1) Average percentage increase for the period. Source: Real Wages and Employment, Commission of the European Communities, Doc. II/214/82-E/rev. 1.

(2) Commission forecasts: September-October 1982.

Although it is customary to assign to the oil shocks of the 1970s the major responsibility for the slowdown in economic activity, it is quite obvious that sooner or later a slowdown would have occurred anyhow. No phenomenon can grow at an exponential rate forever without being thwarted by some constraint - which was the main message of the Club of Rome Report. Therefore, apart from timing and exact magnitudes, the rise in oil prices would have occurred even without OPEC. Other raw material prices also increased strongly in real terms in the 1970s without cartel formations as they had increased during previous late expansionary phases of the Kondratiev cycle. Similarly, concern for the environmental repercussions of growth was, sooner or later, an inevitable consequence of growth. Of equal importance are technological factors and a number of changes in attitudes, institutions, and economic relations developed during the expansion which ultimately produce endogenously a slowdown ⁽¹¹⁾.

(i) A general attitude against growth

This is exemplified by the growth of various anti-growth movements since the mid-1960s ("zero growth targets", "small is beautiful", "back to nature"). The ramifications of these movements are diverse, influencing work attitudes, emphasizing redistributive policies and the quality of growth among other. Two of considerable importance are the ecologist and anti-nuclear movements. In some countries they have successfully delayed major investment programs in nuclear energy and other polluting industries. Thus growth can breed general anti-growth attitudes which produce major constraints on the growth process itself before the full opportunity cost of slower growth is being realized.

(11) "The rapid economic progress which liberal international policy makes possible, generates growing expectations of further progress which, fomented and exploited by the politicians, eventually outgrow the system's capacity to deliver. The popular expectations focus on stability in particular: stability not only of one's income but of one's position in the social group, and thus of the rate of growth of one's income and of its relation to the incomes of others. Eventually, a degree of stability comes to be desired which makes stable progress impossible. Economic progress implies novelty and social adaptation to it. But before this insight dawns upon the society, the state has been called upon, and has promised to make progress possible without change". (Tumlir, 1978, pp. 6-7).

(ii) A general struggle for more security

At the beginning of the prosperity phase labour supply tends to be quite elastic. As prosperity spreads and consumption patterns adjust the elasticity of labour supply declines whilst the demand for security and consolidation of acquired positions tends to increase. This is reflected in private contracts (the insurance industry grows at a faster rate than GNP everywhere), in political institutions (unemployment compensation, retirement plans), global wage bargaining (length of contracts, wage indexation, barriers to lay-offs) and the trend of labour supply towards secure jobs (public service jobs) ⁽¹²⁾.

Similarly, and in accordance with the framework suggested by Olson (1982), the entrepreneurial function becomes increasingly institutionalized within large business organisations (increasing economic concentration) and in government/private sector relationships compelling government more and more to stimulate investment and research, to provide protection for business and eventually to avoid business failures. Sustained growth for more than two decades has induced workers, corporations and governments to consider security as a "public good", hence to be produced by government.

During the phase of expansion entrepreneurial activity is richly remunerated, to some extent independent of entrepreneurial choice. For example, until the 1960s virtually any stock market investment in Europe provided high returns. The picture changed dramatically in the 1970s. Business failures accelerated and with marked relative price changes only judicious entrepreneurial choices led to success. One way of expressing this change is that uncertainties have increased substantially and that entrepreneurs and capital owners now have to assume their true function: to take risks, to innovate and to adapt. Unfortunately, they, too, find it easier to call upon government and their belief in

(12) Schumpeter noted already that the rise of bureaucracy is a typical sign of consolidation of the Kondratiev-cycle. See Table 3 for data on government employment.

governmental non-interference singularly ebbs during recessions. It is, for instance, remarkable that solutions sought for industry with large excess capacities such as the European steel industry, very much resemble the cartel and market-share arrangements of the interwar period, and generate similar international conflict. In some countries overcapacity itself is the consequence of government support, providing an example of the vicious circle where intervention produces the need for more intervention. Objectively many risks are macroeconomic and, particularly during recessions, more difficult to assess or to influence by individual agents, and rigidities referred to before render adaptation and innovation much more difficult now when it is required most. Thus, as a consequence of prosperity and of government intervention, a once flexible economy becomes increasingly ossified. This ossification is more serious in Europe than in the United States where one out of 8 to 10 jobs has been shifted in recent years from declining to growing activities. Unlike in Europe, the growth of new firms is high enough to compensate for firm failures (Birch, 1981).

(iii) Slowdown of employment-creating technological progress and of innovative activity

As argued before an acceleration in the application of labour-saving technical progress has always been associated with the downturn of the long wave (Dupriez, 1980). Capital investment which was mainly directed to capacity expansion is switched to capital deepening, and the obsolescence of older machines is intensified. The backlog of technological possibilities is increasingly exploited to rationalize industry. As a result, and combined with real wage rigidities, unemployment increases during that phase of the cycle.

But how can one then explain the decline in productivity growth in the industrial countries? Apart from industry specific factors ⁽¹³⁾ there are two explanations. One is the rise in idle capacity during recessions, increasing overhead costs per unit produced and, when transaction costs are high, further increasing unit costs as variable inputs are not adjusted in proportion to output. A second reason is to be found in the change of the product mix. If disinvestment in low-productivity industries is slow while

(13) Among industry-specific factors are environmental regulations. The induced productivity loss is partly fictional, as the output (better environment) is not part of measured output, and partly real as these regulations introduced additional distortions.

expansion of high-productivity industries is hampered by rigidities and increased taxation to finance low-productivity activities, overall productivity growth declines ⁽¹⁴⁾.

An example of unfavourable product mix is provided by subsidization of the agricultural sector. Labour productivity in agriculture is in most countries substantially less than in manufacturing and private services, ranging from a relative productivity level of 0.35 in Japan to 0.93 in the United Kingdom (see Table 2). Subsidies to agriculture thus lower aggregate productivity both by slowing the transfer of employment out of agriculture and by reducing productivity growth of the non-agricultural sector on which falls the budgetary cost of subsidies.

The phenomenon of de-industrialisation, that is declining employment in industry, can be observed in most European economies since 1973 (see tables 2 and 3). Even if released labour was absorbed in the service sector productivity growth would decline: industry and in particular manufacturing, has often been designated as the "engine of growth", not only because of its weight in GDP but because it has growth-inducing characteristics that other sectors lack. By "Verdoorn's law", manufacturing output growth and manufacturing productivity growth are highly correlated (static and dynamic economies of scale), while "Kaldor's law" relates manufacturing growth to overall growth of productivity as non-industrial sectors are characterised either by diminishing returns or by the existence of surplus labor, or by both.

Graph 1 illustrates the trade off between productivity growth and employment growth for major OECD countries, for the time periods 1960-73 and 1973-80. The median productivity and employment growth rates separate the plane into four quadrants. Most observations (average growth rates for the period) lie in quadrants I and III indicating the existence of a trade off: high employment growth is achieved at the cost of low

(14) Thurow (1980, pp. 86-89) estimates that for the United States about 30 per cent of the productivity decline in the 1970s is due to idle capacity, 40 per cent to shifts in the product mix, and the rest to industry specific reasons.

Table 2 - Relative Labour Productivity and Share of Employment of Major Economic Sectors in Selected OECD Countries

Country	Output per employed in				Share in total employment							
	Agriculture	Manufacturing	Private Services	Government	Agriculture		Manufacturing		Private Services		Government	
					1960	1977	1960	1977	1960	1977	1960	1977
	as a proportion of output per employed for total economy				in 1970							
Belgium	0.80	1.07	0.99	0.79	8.5	3.5	31.5	27.0	36.0	44.0	12.0	16.0
France	0.56	1.16	1.02	0.75 ^c	21.0	9.5	25.5	26.0	27.5	37.0	13.0	14.0
Germany	0.42	1.10	0.99	0.87	13.5	6.5	37.0 ^{b,e}	36.5	30.0	34.0	8.0	14.5
Italy	0.50	1.12 ^b	1.13	0.97	29.5 ^e	14.5	24.0	28.0 ^b	28.0 ^e	35.5	8.0 ^e	12.5
Netherlands	0.78	1.28 ^{a,b}	0.87	.	12.5	7.0	35.0 ^b	25.0 ^b	41.0	55.5	.	.
United Kingdom	0.93	0.88	1.11	0.82	4.5 ^e	2.5	35.5 ^e	30.0	34.0 ^e	36.0	15.0 ^e	22.0
United States	0.65	1.20	1.04	0.78	7.5	4.0	23.5	20.5	43.5	46.5	16.0	17.0
Japan	0.35	1.32	0.97	1.08 ^d	32.5	12.0	21.5	25.0	36.5	49.0	3.0 ^d	3.5 ^d

^a Related to the private business sector. - ^b Including mining. - ^c Including Community services. - ^d Public administration and defense. - ^e 1961.

rationalization, that is, low productivity growth. Only two countries exhibit a different pattern for both periods: Japan has achieved simultaneously high productivity growth and high employment growth while the United Kingdom has achieved low growth rates for both.

Comparing both time periods two important differences are noticeable: first, the trade-off has shifted during 1973-80 toward the origin. All countries have a lower productivity growth than in the previous period and a lower employment growth. Second, the differential country performances have narrowed considerably during 1973-80.

The macroeconomic performance masks of course industry specific factors. For example, low productivity growth may be due to economy-wide factors such as low growth of wage payments or low aggregate investment, or to an inefficient sectoral allocation of resources.

Research and development (R & D) tends to be correlated with corporate profits and government finances. Consequently, R & D expenditures start to decline at the end of the upswing. For example, in the United States, overall expenditures for R & D fell from 3 per cent of GNP in 1970 to 2 per cent in 1980 ⁽¹⁵⁾. Moreover, R & D expenditures tend to be redirected from basic research with only long-term results to short-run cost-saving innovations. The possibilities for new technological break-throughs are therefore further delayed.

(15) Thurow (1980, p. 85). From OECD, Science and Technology Indicators, and Community services the following data are available:

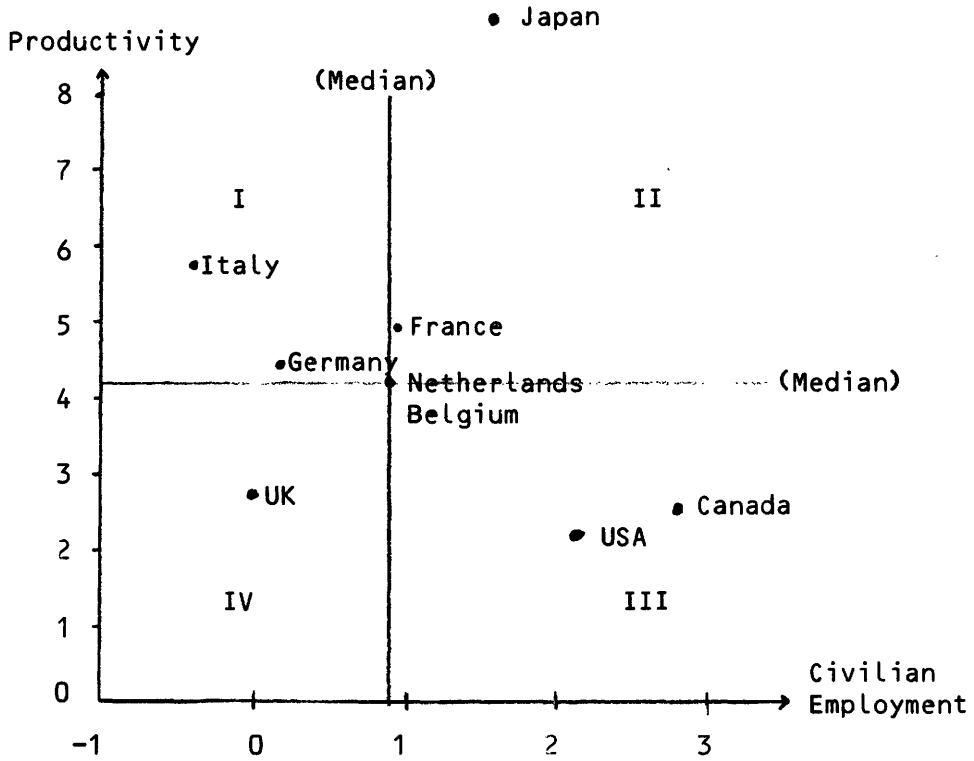
Total R & D expenditures, as % of GDP

	D	F	I	NL*	B*	UK
1970	2.0	2.0	0.9	1.0	0.8	2.1
1980	2.3	1.9	0.5	0.9	0.6	2.3

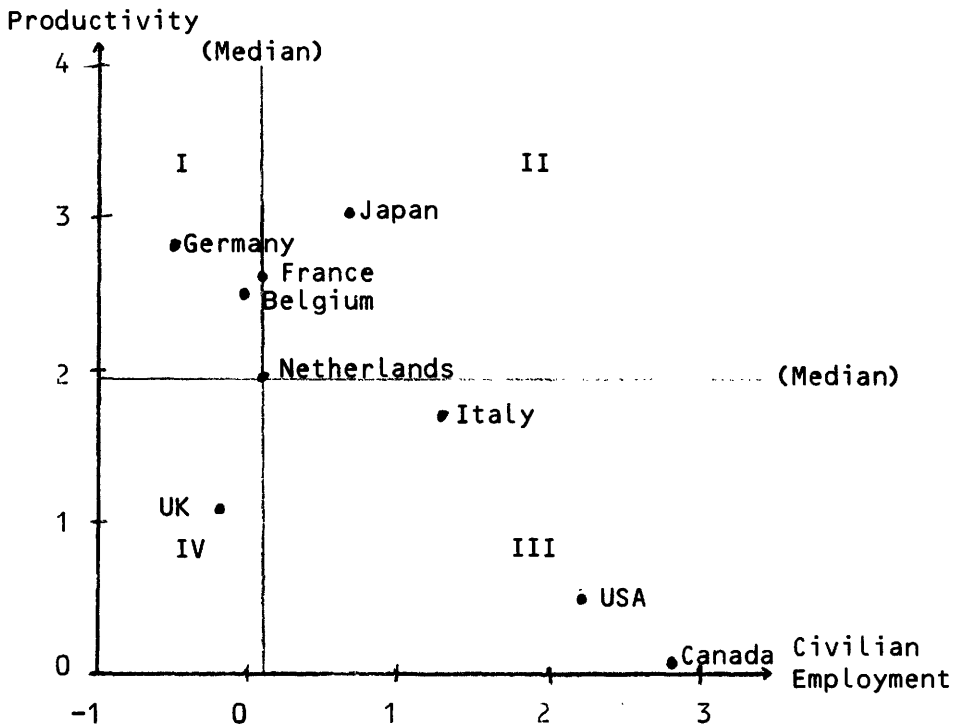
*) only government financed R & D.

Graph 1 : Growth of productivity and civilian employment (annual averages) for major OECD countries

a) Average annual growth during 1960-1973



b) Average annual growth during 1973-1980



Source : OECD, Historical Statistics, 1960-1980.

Particularly preoccupying is the innovative retardation of Europe. The period of reconstruction provided enough impetus for growth without the need to develop extensively new technologies. Technology and management techniques were either already available or could be obtained from the United States (the technology gap). Despite her technological disadvantage, Europe soon became extremely competitive adapting successfully best-practice techniques with her industrial experience and her lower labour costs, but remained confined mostly in traditional industries. Europe first did not feel the need and later, when catching-up in standard technologies was achieved, could not find the means to become a leader in future technologies (computers, electronics, aircraft, space technology, etc.)⁽¹⁶⁾.

A further aggravating factor were European labour migrations during the 1960s. In the absence of labour inflows relative prices of labour in the EEC would have risen more strongly in the 1960s. This would have provoked an early restructuring in favour of human and physical capital-intensive sectors and production methods. Instead, labour immigration allowed to keep wages for unskilled labour lower than otherwise and, hence, reduced the pressure on structural change and innovation. An additional and perfectly symmetric escape has been provided by moving production to low labour-cost countries. While the labour emigration and capital receiving countries doubtlessly benefitted from this process and growth therefore became internationally more evenly spread, it is also clear that actual growth and growth potential in the high-labour-cost countries declined. Correction of the errors of the past is now much more difficult with the EEC technologically trailing behind Japan and the United States and her economies in recession, with low profits and a stern time constraint.

While the United States did not traverse the 1970s unscathed the evolution of the U.S. economy has been more favourable than that of the EEC. In the United States where real wage growth was much slower than in the EEC (see Table 1) total employment increased by about 15.4 million from 1973 to 1981 to which public sector employment contributed with an increase of 2.3 million additional jobs. In the EEC total employment remained about constant over the same time period but private sector employment declined by 1.6 million jobs. Table 3 gives growth rates for general government and non-government employment for the 1970s. The differences in employment growth between the United States and the EEC provide an illustration of

(16) The loss of European competitiveness in high-technology markets is shown in Cardiff (1982).

Table 3 - Average Annual Growth Rates of Employment in Selected OECD Countries

	1965 - 1970			1975 - 1980			
	I	II	III	I	II	III	IV
Belgium	2.2	0.2	2.2	3.5	-0.6	1.6	-2.4
France	1.8	0.1	.	1.3	-0.1	1.7	-1.1
Germany	3.4	-1.6	0	1.6	0.2	0.1	-1.3
Italy	3.8	-0.3	1.4	1.7	0.5	2.5	1.3
United Kingdom	3.2	-0.6	0.2	0.5	-0.3	-0.2	-1.6
United States	1.1	1.2	2.2	1.3	2.6	3.6	0.9
Japan	3.0	0.4	1.7	1.4	1.3	1.9	0.0

- I General government
- II Total excluding general government
- III Service sector excluding general government
- IV Industry (1973-80)

Source: OECD, Annual National Accounts

how wage and other rigidities contribute to employment destruction and points to the difficulties in the often attempted explanation of the decline in employment growth attributing the cause to the oil shock or lack of general demand. Furthermore, the current recession in the United States can be considered partly as a deliberate policy choice to strengthen the dynamic potential of the U.S. economy and thus as a preparatory phase for the next industrial revolution. In fact, a major process of industrial change and restructuration is under way in the United States, with a considerable decline in old industries and a reallocation of resources towards fast growing and innovative service industries (financial intermediation, insurance, transport, computer software) and high technology industries (energy, telecommunications, electronics, biogenetics).

In Japan as well, despite high productivity in traditional industries, major reallocations have taken place and new technologies have been opened (computers, microchips, electronics).

Europe is characterized by much more rigid structures ⁽¹⁷⁾, and has been trying to hold on to traditional activities although competitive advantages have not been lost only temporarily but, most likely, permanently. During the 1960s and 1970s the international division of labour has been mainly reflected in intra-industry specialisation in Europe and, unlike in Japan, very little inter-industry specialisation. The list of now threatened industries comprise the major vehicles of growth in the post-war period such as steel and coal, shipbuilding, textiles, optical instruments and others. The growth of newly industrialised countries (NICs) will provide increasing competition in areas such as automobiles, traditional mechanical and electrical engineering and toolmaking, whereas oil producing countries have gained a clear advantage in petro-chemicals. LDCs have a competitive advantage in the production of labour-intensive goods by the Heckscher-Ohlin theorem. Their export drive exerts downward pressure on real wages in industrial countries by the Stolper-Samuelson theorem. In this situation real wage rigidities create unemployment,

(17) Sachs (1979) shows that real wage rigidity is much stronger in Europe than in the United States and Japan.

not only for the domestic reasons already indicated, but also for this Stolper-Samuelson effect (Giersch and Wolter, 1982). Since labour is faced with the trade-off between lower real wages or imported unemployment, joined by capital-owners of import-competing industries, a strong lobby is formed calling for import restrictions, although economy-wide efficiency losses would be created.

In the 1980s the EEC is therefore faced with increasing challenges in its traditional activities, including agriculture, and a serious lag in future technologies. The danger of further losses in employment and real income is therefore considerable and a gradual erosion of the commitment to "free trade", already discernible now, is more than a theoretical possibility.

iv) Declining profits and investment

Economic expansion has always been characterized by high profitability of innovations and of investments which provides the incentives and the internal funds for further investment. However, already in the late 1960s an unprecedented acceleration of real wage costs (wage incomes and payroll taxes) occurred. Combined with the downward rigidity of real wages the oil shocks of the 1970s had therefore a major negative impact in the EEC on profit shares in GNP and therefore on employment (Steinherr, 1982).

Table 4 shows that the share of gross fixed capital formation (GFCF) in GDP has substantially declined for most OECD countries in the late 1970s. Short-run complementarity between energy and capital in the production process is such that high energy prices have depreciated part of the capital stock in economic terms, so that an increasing share of investment is required for replacement of obsolete capital (Baily, 1981). For well-known reasons, this effect is not properly measured in national income accounts so that GDP and net investment data are seriously overestimated.

Table 4 : Investment ratio (GFCF as % of GDP)
Current prices

Country \ Year	1970	1973	1976	1979	1980	1981	1982
Belgium	22.7	21.4	22.1	20.6	21.4	19.5	19.0
Denmark	24.7	24.8	23.0	20.5	18.3	15.6	15.7
Germany	25.6	24.5	20.7	22.6	23.6	22.8	21.4
Greece	23.6	28.0	21.2	25.6	23.5	20.8	19.7
France	23.4	23.8	23.3	21.4	21.6	21.1	20.3
Ireland	22.7	25.3	24.8	31.4	28.9	30.1	28.5
Italy	21.4	20.8	20.0	18.9	20.0	20.3	20.1
Luxemburg	23.5	27.4	24.5	25.0	25.3	25.1	25.7
Netherlands	25.7	23.0	19.2	21.1	21.0	19.0	18.2
United Kingdom	18.6	19.5	19.0	17.8	17.8	16.2	16.2
EC - 10	22.9	22.9	21.1	21.0	21.2	20.11	19.4
United States	17.6	19.1	17.2	19.4	17.7	15.4	14.9
Japan	35.5	36.4	31.3	32.0	31.7	31.0	30.9

Sources : EUROSTAT National Accounts 1970-1979 and Economic Budgets DG.II 1981-1982.

Table 5 : Relative Factor Prices (Base 100 in 1964)

	United States		France		United Kingdom		F.R. of Germany	
	I	II	I	II	I	II	I	II
	1964	100	100	100	100	100	100	100
1965	105,2	99,5	104,6	95,8	102,0	98,9	100,9	92,7
1966	105,0	97,7	110,2	95,0	108,7	98,8	102,9	88,1
1967	108,1	98,5	110,2	89,5	114,8	100,8	108,4	94,4
1968	111,6	94,3	133,7	99,9	113,3	95,7	115,6	99,9
1969	112,3	90,4	154,2	103,7	107,2	86,0	118,2	91,5
1970	110,4	91,9	144,7	93,6	124,1	88,6	128,6	88,9
1971	115,7	101,3	159,4	105,2	139,4	98,4	152,3	101,0
1972	117,6	99,1	177,3	105,9	155,1	100,3	169,6	105,0
1973	119,2	102,6	201,8	111,4	141,2	84,0	150,6	92,3
1974	120,2	144,7	202,4	175,1	120,3	96,5	162,5	110,2
1975	127,8	166,7	237,2	182,7	173,3	134,9	192,6	134,4
1976	137,1	167,6	243,9	181,2	222,3	178,3	183,0	124,6
1977	129,3	162,4	229,1	167,6	230,2	197,5	206,3	131,1
1978	120,9	147,4	240,8	158,0	193,5	154,3	206,2	124,9
1979			277,3	191,8				

I = price of labour
price of capital

II = price of energy
price of capital

Source : P. Artus and C. Peyroux (1981).

v) Economic policies

For a long time the policy emphasis in industrial countries has been placed on short-run macroeconomic management with the goal of minimizing unemployment under the constraint of a politically acceptable inflation rate, i.e., to direct the economy to a preferred point on the Phillips curve whose stable existence was more or less taken for granted. In the pursuit of macroeconomic demand management, as has been argued already, the long-run implication of policies had been somewhat neglected. That there might be a potential conflict between short-run stabilization and long-run growth is illustrated by the "paradox of thrift": from a short-run Keynesian viewpoint a high savings rate might increase unemployment and output losses, cet. par., while from a long-run classical viewpoint a high savings rate is necessary for high output and employment growth. Since the long-run is a succession of short-runs, continuous application of Keynesian policies aimed either at absorbing excess savings through non productive capacity augmenting uses (higher public consumption) or at inducing a reduction in private savings rates necessarily conflicts with the aim of high growth in the long run. Only anti-cyclically conducted demand management around a stationary trend of public sector consumption would avoid this intertemporal conflict (18).

In fact, demand management has not resulted in anticyclical behaviour of government expenditures but has resulted in a steeper trend increase of the public sector's share of GDP. This provides an additional explanation for the recent decline in productivity growth: with productivity growth lower in the public sector than in the private sector a more rapid resource shift to the public sector lowers aggregate productivity growth (see Table 2).

(18) This constraint can be incorporated into Keynesian models through a government budget constraint for long run equilibrium. The long-run effects of government policies are then substantially different from the short-run results. For an application to open economies see Steinherr (1975).

Table 6 illustrates the acceleration of the increase in public sector expenditures by showing government expenditures (not including state enterprises) relative to GDP, and the increasing absorption of private savings through government deficits between 1960 and 1980. Although it is an impossible task to determine in some sense "optimal" ratios to which actual ratios could be compared, the drastic increase in public expenditures in all countries and the increase in public deficits, particularly in Belgium and Italy, can with some confidence be considered as excessive and in conflict with long-term growth desiderata.

Taxation as well as government deficits have had to be increased to finance the rise in public expenditures and this entailed some adverse long-term implications. The typical forms which higher taxation takes results in disincentives for the private sector.⁽¹⁹⁾ Higher fiscal deficits, so innocuous in the standard Keynesian model, have adverse long-run effects as noted above. They tend to raise inflationary expectations since sooner or later deficits are monetized; and they crowd out investment as both compete for private savings. Accumulation of increasing deficits for many years has also resulted in high public debt, limiting the scope for further deficit increases at a time when recession worsens. High real interest rates, at least partly due to the need to finance mounting deficits, absorb increasing proportions of government revenue for debt servicing and tend to deepen fiscal deficits further.

(19) It might be objected that (a) some of the countries with the highest fiscal burden have achieved high growth (e.g. Sweden); and (b) that causality can run from high growth to high taxation or from high taxation to slow growth. The hypothesis of this paper is that high growth indeed has made even more rapid expansion of government expenditures possible which in turn has created disincentives and has slowed down growth. As to (a) even a fully socialized economy could achieve high growth, but the more economic principles are respected the better the growth performance can be expected to be. It could also be argued that during the 1950s and 1960s the policy change to Keynesian demand management has made demand growth more predictable and investments therefore less risky (Shonfield, 1965). This advantage of demand management has to some extent been lost with the supply shocks of the 1970s and the fact that what was initially considered as an anti-cyclical policy resulted in an increasing trend of public sector growth.

Table 6: The Evolution of Government Expenditures and Deficits in Major OECD Countries

	Total outlays of Government as a percentage of GDP		Government deficits or surpluses (-) as a percentage of net private savings		General Government GFCF as a percentage of total public expenditure		
	1960	1973	1980	1973	1965	1973	1979
Belgium	30,3	39,1	51,7	18,88	7,9	9,0	7,9
France	34,6	38,5	46,2	-3,99	10,5	7,6	4,9
Germany	32,0	40,5	46,7	1,90	15,2	12,3	10,9
Italy	30,1	37,8	45,6	63,44	10,6	7,9	9,7
United Kingdom	32,6	41,1	44,6	28,12	12,4	13,4	5,1
Netherlands	33,7	48,7	62,5	-1,28	12,0	9,0	6,4
United States	27,8	31,2	33,2	5,94
Japan	20,7	22,1	32,7	6,38

Sources : OECD Historical Statistics 1960-1980, Table 6.3; International Financial Yearbook 1979 and International Financial Statistics, August 1982; OECD : National Accounts, Vol. 1, 1951-1980.

(1) For 1979.

... = not computed.

Once private agents realize the long-run implications of demand policy (and we have no real reason to believe they will not) even the short-run effects will be less favourable. This is the basic message from the "rational expectations school". Some governments are now so uncertain about the benefits from counter-cyclical demand policies that they are beginning to subscribe to the view that expansionary demand policies during recession may deepen further the downward trend.

Built-in stabilizers (that is fiscal expenditures which fluctuate anti-cyclically such as unemployment benefits, and government receipts which vary cyclically) and the need for structural policies also make it difficult to reduce tax rates or the fiscal deficits during recession. Mounting unemployment and early retirements require increasing transfers, institutional pricing and non-cyclical behaviour of demand for services such as medical care impose rising costs on government budgets; indexation of pensions and an unfavourable age pyramid add problems in some countries; and investment subsidies to encourage job creation require additional outlays. Thus, while public expenditures have increased much more rapidly than GDP this increase represents mainly transfer payments and government consumption whereas the share of gross capital formation in total public expenditures has declined significantly over the last 15 years in most EEC countries (see Table 6).

A large body of the economic literature has assigned to monetary factors, and hence to monetary policy, the determinate cause of business cycles. The best-documented study of monetary factors in the Great Depression is Friedman and Schwartz (1963). Their main argument is that a series of shocks beginning with a sharp deceleration of the US money stock, reinforced by the stock market crash and several bank panics, lowered the money stock for at least four years by magnitudes never experienced before. At the same time velocity declined strongly in part as a consequence of monetary deceleration; and the combined effect of a lower money stock and lower velocity depressed nominal income.

The analysis of Friedman and Schwartz is focussed on the quantity theory of money, and their maintained hypothesis is that causality runs from monetary factors to nominal income. Nevertheless, in their theory the business cycle is not a purely monetary phenomenon, as for example in Hawtrey (1973), since velocity is seen as a stochastic process also influenced by real factors. An exposition that combines in a very fortunate way monetary and real factors is Wicksell's (1934) "cumulative process", turned into a theory of the business cycle by von Hayek (1941). In a nutshell, the Wicksellian cumulative process works as follows. Expenditure is positively related to the excess of the natural rate of return (the real rate on physical capital) over the financial rate of return (the interest rate adjusted for inflationary expectations), with equality between both rates in equilibrium. In the Wicksellian disequilibrium process, banks emerge from recovery with excess liquidity and to expand loans they lower interest rates below the natural rate. This twists the intertemporal allocation of resources toward the present and stimulates expansion. The cumulative mechanism stems from the favourable effects on the national rate of both expansion and low interest rates. Over time, prices tend to rise as resources are more fully employed so that the real money stock declines and speeds up exhaustion of banks' excess reserves. This would lead to a turn of the tide with interest rates rising and the natural rate falling, later reinforced by the slowdown of expansion. Expansionary monetary policy could retard the turn-around of the cumulative process but will be restrained by inflation and the latter's repercussion on the natural rate.

The postwar growth fits quite well the Wicksellian pattern. After the war financial assets were abundant in relation to the stock and flow of goods, that is, the natural rate was high in relation to the financial rate, which stimulated investment and consumption. In the United States stagnation was prevented in the 1960s with a monetary expansion of unprecedented size under the Kennedy and Johnson Administrations. This massive monetary expansion engineered a very successful acceleration of output growth from which benefitted also the rest of the world. However, by the late 1960s monetary expansion had resulted in a world-wide wage and price boom, reinforced by the commodity price boom in the early 1970s. The recessionary impacts of the oil and real wage shocks were cushioned by low (at least ex-post) real rates of interest which

were strongly negative during 1973-75 and still close to zero after 1975. However, it is likely that the acceleration of inflation has not been fully anticipated by the market so that the ex-ante real rate of interest exceeded the ex-post rate with the effect of a reduced investment response. Finally, in the 1980s, real rates have become extremely volatile and have reached record levels by historical standards (especially when adjusted by output prices as the relevant deflator for firms, and not by the consumer price deflator), while as argued in previous sections, the natural rate has declined significantly. The downward cumulative process seems thus to have accelerated in the 1980s as reflected by reduced capital accumulation and more frequent firm bankruptcies.

The recent increase in the cost of capital and its greater volatility is to a large extent due to more restrictive monetary policy and to institutional changes in monetary management. While monetary policy was permissive for many years it has more recently become increasingly recognized as a prime, if not the single most important instrument for reducing the rate of inflation. Both the rate and the predictability of monetary growth influence inflationary expectations. Hence, to lower inflationary expectations, money supply growth has to fall below nominal income growth at the old expected price path and must be expected to remain restrictive; under these conditions expected inflation will decline while nominal interest rates may initially increase so that for some time real interest rates rise strongly following a shift to firmer monetary policy.

These arguments explain, at least partly, why real interest rates reached record levels in 1982. Furthermore, high inflation has produced greater variability of relative prices so that, reinforced by slower growth, the risk premium in interest rates must have risen. Also, if investors are risk-averse, the yield curve of the term structure becomes less positive. The short-term market has therefore expanded at the expense of long-term and equity markets, rendering the financial structure of firms more vulnerable and justifying an additional risk premium. For example, in West Germany industry and commerce networth represented 30 per cent of total assets in 1970, as against 21 per cent in 1980. The downturn of the business cycle, inflation and antinflationary policies together have thus created non-diversifiable risks so that the real rate of interest

should be expected to be higher than before the downturn. But since equity returns have failed to increase correspondingly investors have increasingly turned to high-return and low-risk assets such as government securities. The crowding-out effect of government deficits has therefore been considerable.

In conclusion, policies followed for many years in the hope of maintaining high rates of growth, and based on the mistaken belief that inflation might even stimulate production and employment, have considerably pre-empted the scope for demand policies and have added to the uncertainties surrounding future growth. It seems unlikely therefore that traditional policies can be used to counter the downward trends. Even if demand were stimulated, the response elasticity of firms is likely to be less than what it used to be in the 1960s. The high cost of adjusting employment downward during recession imposed by employment protection laws, combined with the fixity of capital costs, render firms reticent to increase employment and capital outlays when recovery is not expected to be sustained. And doubts about the durable nature of recovery are most sensible after the experience of the last ten years. Moreover, the incidence of higher fiscal expenditure cannot be ignored anymore by the corporate sector after the very strong rise in payroll taxes during the 1970s. In some EEC countries payroll taxes as a percentage of wages and salaries nearly doubled in ten years to reach more than 70 per cent in 1981. It would be difficult to argue that investors should have expected this evolution and the fiscal incidence represented therefore an ex-post depreciation of capital.

To stimulate recovery it would therefore be necessary to reduce existing rigidities and to redefine a durable economic order which would make at least governments' future policies more transparent and foreseeable. This may be asking for the impossible and in practice there is the substantial risk that policies are changed too abruptly from Keynesian stimulation to (temporary?) supply-side inspired deflation as may have been the case in the United States and the United Kingdom. However, reversing inflationary expectations is necessarily painful and requires a deflationary transition period which represents in part the real cost of previous laxer policies.

The greatest danger of a prolonged recession is, of course, that expectations which may have been overoptimistic during expansion (or elastic in Hicks' terminology) become overpessimistic during a recession. In principle, elastic expectations (a reduction in growth generating expectation of further reduction in the future) are reversed when the economy has fallen substantially below what are considered "normal" business conditions. But repeated failure of sustaining recovery as during the last ten years is likely to lead to a downward revision of what is considered as "normal". In such a situation "a secondary slump will set in, far more dangerous than the first, since there is less resistance available to prevent collapse" (Hicks, 1939, p. 298).

4. International Relationships: The Sysiphus Syndrome

In Section 3 the view was presented that economic evolution exhibits long waves. In this section and the next the focus is narrowed to the international aspects of what might be a post World War II Kondratiev cycle. Upswings are characterized by progress in trade liberalization, increased international financial integration and general spreads of positive externalities (constructive leadership, policy coordination, etc.). Downswings in contrast are correlated with regress in all these areas, both as causes and consequences. The emphasis in this and the next section is placed on the forces of disintegration in present international relationships.

4.1 International Leadership

The increasing interdependence of national economies and the integration of regional blocs (EEC) have sharply augmented the sense of common responsibility and the benefits from international cooperation. The diffusion of power (United States, Japan, EEC) could potentially contribute to a greater role for constructive participation and to a sense of effectively sharing the benefits from cooperation and world trade, but also creates the risk of leadership void. Diffusion of power often leads to difficulties for adopting optimal policies requiring substantial policy alignment (vide the failure of the Kissinger proposal for forming a consumer cartel to face OPEC, or the dissensus over locomotive and convoy proposals; or even within the EEC, the difficulties

of macroeconomic policy coordination or of reforming the Community agricultural policy). The question of leadership arises therefore again as in the 1930s. Kindleberger (1973) has argued that the Great Depression would never have been as deep if the United States had taken over the role assumed by the United Kingdom before World War I as a financial world stabilizer, providing last-resort discounting, offering counter-cyclical investment lending, maintaining an open market for distress sales, and enforcing international rules of the game for the world trade and financial system.

The post World War II institutions, as represented by GATT, the IMF, and the IBRD were entrusted precisely with the task of ensuring a coherent and stabilizing international system with generally accepted rules of the game. However, dangers are now visible on many fronts, some of which have already been referred to: the temptation to return to protectionism, the reduced control of the IMF over the adjustment process due to floating exchange rates and the existence of a largely uncontrolled Eurocurrency market, the inadequate funds of IBRD and IMF to finance Third World needs, and rising disequilibria in LDCs. These dangers arise at a time when strong U.S. leadership is declining ⁽²⁰⁾ due to a loss of military hegemony, the dollar's retreat from the role of a monopoly reserve currency, and the rise of Japan and the EEC. In principle, this diffusion of power is not serious since such a small group of countries can be expected to be sufficiently aware of internal interaction that it would provide for the public good "leadership". Unfortunately two facts render the leadership issue problematic. First, "the EEC has not yet acquired the necessary internal cohesion for effective communal participation in such group leadership" (Kindleberger, pp. 307-308). Second, OPEC and the Third World claim increasing participation in control. In the past, international institutions have been successfully controlled by the United States and other industrial countries with a fairly homogenous Weltanschauung and fairly similar interests. These countries were therefore able to provide the public good called "leadership". However, as the recession deepens and as regional imbalances widen consensus within the group and acceptance of this leadership by the rest of the world diminishes and may break down eventually.

(20) "When the limits of the leader's capacity become visible, national rivalry tends to develop and that, too, implies that in the countries recently grown increased popular reliance on state action will make itself felt. Eventually even in the leading country a growing awareness of the costs of leadership will generate demands that the state deploy more of its energy for more narrowly national causes". J. Tumlar (1978, p. 7).

The recent positions taken by the United States with respect to World Bank and IMF funding, and growing dissensus between the United States and the EEC over issues such as EEC trade with Eastern Europe (sanctions on Poland, the Soviet gas pipeline), European steel exports to the United States and EEC agricultural policy illustrate the danger of rising conflict among industrial countries. The claims of LDCs and of OPEC to greater participation (or majority control) in leadership and mounting criticism of several features of the international system (multinational corporations, protectionism in industrial countries, conditionality of IMF lending) represent potentially serious threats. It is indeed unimaginable that lenders (industrial countries) accept minority votes and the large degree of consensus required for effective leadership would most likely be lost.

4.2 The international monetary system

As R. Triffin has observed, world recessions as well as inflations have always been linked to breakdowns of the world monetary system. The role of fluctuations in gold and silver production and the associated adaptations of the metal-standard during the 19th century was analyzed by Fisher (1932). In 1931 the gold-exchange standard based on the pound sterling collapsed while August 1971 marked the end of the gold-standard based on the dollar. Although Triffin (1957) had pointed out the inconsistencies and dangers of the dollar-standard as early as 1957, the dollar-standard limped along until 1971 and has not been replaced by another system yet. As a consequence of the belated abandonment of a defunct system the "dollar-overhang" problem built up, resulting in pronounced shifts in currency preferences after 1971. Since then the need for international liquidity growth should have declined due to a more flexible exchange rate system. But, in fact, during the 1970s international liquidity expanded as never before in history. As shown in Triffin (1982), international reserves have increased rather steadily and moderately from US dollar 45 billion in 1949 to US dollar 79 billion in 1969. When gold is evaluated at market prices, international reserves more than doubled between 1969 and 1972 and reached a peak of US dollar 1.046 billion in September 1980, before falling back again to US dollar 662 billion in June 1982. The largest contribution to the growth and volatility of international reserves is due to the valuation of gold holdings. It could therefore be argued that the present monetary system is even more dependent on the gold market than it was in the 19th century. But even if gold is evaluated

at the fictional price of US dollar 35 per ounce, international reserves still represent US dollar 339 billion in June 1982, or more than four times the level of 1969. The main contributor to the growth of international reserves has remained the US dollar, notwithstanding the fact that for the 1970s as a whole the cumulated US current account deficit is negligible.

The implications of this evolution of the international monetary system are widespread, but the major effect is doubtlessly its contribution to the observed instability and disequilibria built up during the 1970s in currency and goods markets. As noted above, the end of the dollar-standard gave rise to currency shifts that dominated the excessive decline of the dollar until 1979. It also opened the door to an excessive and volatile reserve expansion which escaped international concertation and control. Thereby it has contributed to the rise in world inflation and a more irregular financial environment. Financial re-cycling has been assumed largely by commercial banks which now have to face serious problems discussed in more detail in Section 5. In principle, each country on its own could have compensated for the increased availability of international reserves by more restrictive domestic credit expansion. But, in practice, it has given policymakers an additional degree of freedom and has reduced the constraints on the system by facilitating financing of external deficits.

The increase in international liquidity has to be seen also in the light of the reduced need for international reserves due to the greater flexibility of exchange rates. In a world where pronounced currency shifts occur and where it is difficult to forecast the rhythm of liquidity creation large swings in exchange rates are inevitable. In this environment capital movements can be highly destabilizing for exchange and interest rates. Although no currency price is determined freely by market forces without official intervention, consider the case of monetary expansion in the United States under a purely floating regime (for more details see Dornbusch, 1976). The impact effect is a decline in US interest rates forcing the exchange rate to depreciate immediately by more than what ultimately will be required ("overshooting") in order to allow market participants to expect an appreciation over time. Under these conditions the (covered) interest-rate parity holds. As the exchange rate appreciates US interest rates will increase again, the US price level rises and in the new equilibrium the price level will have risen proportionately to the shift in the money supply so that the real money stock and the interest

rate will return to their initial levels. In the rest of the world exactly the opposite variations occur. Thus, while under fixed rates capital flows take place to arbitrage interest rate differentials and prices will adjust upwards in a similar fashion under both regimes, under flexible rates the real exchange rates evolve cyclically. Hence under flexible rates a considerable additional element of uncertainty exists for international trade and the adjustment process which is systematic and cannot be eliminated through exchange market interventions.

4.3 International transmission of the business cycle

The world has become increasingly interdependent through trade and factor flows (labour and capital)⁽²¹⁾. As a well-diversified economy is more stable than a less diversified economy, so is the world economy more stable than its constituent parts. This is not always perceived as a pure advantage because interdependence obviously implies that not only upswings but also downswings are propagated, and not only exogenous events but also policy decisions make their effects felt throughout the system. The size of an economy becomes important for the policy options available: a large economy is more autonomous but ought to take into account repercussions on the rest of the world; small countries have less autonomy but they can more easily neglect the transmission of their actions on the rest of the world which at times gives rise to the temptation of "free rides".

Coordination of policies, at least among the major countries, is therefore of high potential benefit. However, in difficult times agreement as to the best course of action to follow from the point

(21) The growth of world trade in goods and services started to decline sharply in 1980. Nominal world trade declined for the first time in the post World War II period in 1981 (by 1 per cent) and the EEC projects for 1982 a decline by 5 per cent.

of view of the world economy is usually hard to achieve since the interests of individual countries, or their understanding of how the economy works, may differ substantially.

For a long time the major difficulty for policy coordination (particularly in the EEC) was considered to be national divergences of preferences with respect to the optimal trade-off along the Phillips curve. Although the concept of the Phillips curve is discredited today, stabilization policies still face a trade-off choice in terms of the variance of inflation rates and the variance of output. For each country the slope and position of these trade-off curves are different for institutional reasons, as are possibly the preference functions of governments (Taylor, 1982).

Until the early 1970s international policy coordination enjoyed the benefit of widespread agreement on how the economy works according to the Keynesian paradigm. The scope for disagreements was therefore narrowed to policy objectives, national interests, and facts.

After the decline of the Keynesian paradigm in the 1970s, international policy coordination has been significantly hampered, not only by diverging national interests, but also by the lack of agreement on the effectiveness of various policy options. The monetarist counter-movement has increased its political respectability over recent years and has provided a basis for recent US and UK policy. Thus, the consensus in policy approach, but also the belief that in principle recessions are avoidable through proper policy actions, have faded leaving behind an area full of doubt and controversy - as in the interwar period.

For example, the present emphasis on restrictive monetary policy and the goal of reducing government deficits are considered by the US government as a necessary precondition for a healthier economic environment in the future and by critics as an unnecessary aggravation of the depression, as in the 1930s. The EEC is particularly concerned with the spill-over effects of deeper recession in the United States, forcing US corporations to become more aggressive on foreign markets and crowding out demand for European exporters, and with high real interest spill-overs which tend to discourage investment in the EEC.

Against initial hopes, flexible exchange rates have not insulated economies from the business cycle in the outside world. The major reason is that the exchange rate is the relative price of national currencies, hence the relative price of two stocks, and adjusts therefore quickly to new information. Goods prices, by contrast, are stickier. As a consequence real exchange rates give rise to overshooting with real effects spread over long periods of time. For example, the real appreciation of most EEC currencies in the mid-seventies vis-à-vis the US dollar only resulted in current account reversals in 1980 when the dollar had started already to appreciate in real terms. Overvaluation of the currency prior to 1980 has produced in some EEC countries (most notably in Belgium, but also in Germany and the United Kingdom) a decline of the manufacturing sector and a resource reallocation toward the nontradeable sector which are not easily and rapidly corrected through an exchange rate depreciation. With respect to the Japanese yen the dollar has risen over the last four years by more than 40 per cent although the cumulative price inflation in the United States exceeded the one in Japan by at least 10 per cent.

The flexible exchange rate system has doubtlessly contributed to the adjustment process in the seventies. Despite a tendency for exchange rates to overshoot, market forces do contribute to adjustment of relative prices which would be much more difficult under fixed rates. While speculation produces bandwagon effects and may at times be destabilizing, long swings in exchange rates cannot be attributed to destabilizing speculation. It is the uncertainty surrounding economic policy and the major economic actors which is naturally reflected in high exchange rate variability. But the risk of a foreign exchange crisis as in the 1930s or in 1971 is smaller under flexible rates, although export competitiveness and imported inflation are more difficult to manage.

Some consider the floating exchange rate regime as potentially dangerous given the overshooting to which it gives rise and also given the temptation of dirty-floating especially when the recession worsens. The situation would then not be unlike the beggar-your-neighbour policies of the interwar period. Flexible exchange rates also largely escape the IMF's control and therefore escape international discipline. But the room for manoeuvre seems severely limited. In the absence of exchange market controls interventions in the foreign exchange market correspond to variations

in domestic money supply. Hence, depreciation of the currency and higher domestic inflation are pairs and policy makers only have the choice of impact causality between the two. Observed overshooting phenomena should not induce policy makers to repeat the errors of the 1920s of returning to an outlived exchange rate regime (and to outlived exchange rate values). What is required for more stable exchange rates is more stable monetary policy, ideally internationally synchronized (Emminger, 1982), under a reformed international monetary system as argued above.

Models of international trade stress the international repercussions of a shift in demand with magnitudes depending on whether the economy is relatively closed or open. What is not as well known quantitatively are the repercussions of a supply shock, because they depend on the precise nature of the shock and the phase of the business cycle. Thus, if the US economy expands because the costs of US producers have fallen relative to their competitors, then the latter will experience an income and a substitution effect and the net result is generally ambiguous. Thus, it is extremely difficult to describe in general and unambiguous terms international transmission of the business cycle. Trade interdependencies are therefore not always stabilizing in opposition to what is suggested by Keynesian international multiplier models.

4.4 The interdependency with non-industrial countries

Into this category fall Eastern European countries, OPEC, NICs, and other LDCs. OPEC demonstrates most clearly why trade is mutually beneficial and therefore why OPEC is of importance for industrial countries. For the other groups this is less clear. Why is East-West trade important? For obvious political reasons but for no compelling economic reasons. The benefits from international trade stem from increased efficiency in using available resources and not from finding additional markets for an existing structure of production. Of course, the fact that about 5 per cent of EEC exports go to Eastern European countries means that in the short run any adverse developments there would seriously affect production and employment in the West. But the pattern of specialisation is not such that important long-run gains would be lost. Nevertheless, our short-run dependence is worrisome given the uncertainties surrounding future development of trade (vide the Soviet pipeline negotiations, the curb on Poland's imports, etc.).

Other LDCs represent a similar qualitative case although their markets are more important for industrial countries ⁽²²⁾. In contrast to Marxian predicaments the industrial world does not need the markets of the periphery to avoid its own decline, since there are still too many unsatisfied wants in industrial countries. Nor do they vitally depend on raw materials produced in LDCs with the exception of oil and some other ores. What is important is to maintain international flows of goods to avoid dislocation in the productive structure (a short-run problem) and reduced efficiency of the international division of labour (a long-run problem).

It is very likely that LDCs will have to reduce their absorption during the coming years. The oil-shocks affected non-oil exporting LDCs seriously. Until 1979 an improvement in their export prices softened somewhat the impact of higher oil prices and LDCs managed to finance their external deficits, thereby largely avoiding painful curbs of expenditure. However, with the recession in industrial countries commodity prices are tumbling and terms of trade have again turned against LDCs. Combined with very high world market interest rates and the reticence of industrial countries to increase aid these countries may be forced during the coming years to reduce their absorption growth ⁽²³⁾.

(22) In 1981, the share of exports to LDCs in total exports amounted to 38 per cent for the United States, 45 per cent for Japan, 29 per cent for Italy, 27 per cent for France, 25 per cent for the United Kingdom and 18 per cent for Germany.

(23) Europe is again in a disadvantaged position in their relationships with LDCs. While Europe will feel the full impact of the competition by NICs on her own and on third markets, for aid and trade Europe has particularly close relationships with Africa. This is the continent where growth prospects are bleakest and where therefore demand is growing least, while need for aid and loans is stronger than on other continents.

Demand by OPEC is now expected to grow at much reduced rates. A reduction in demand is not unthinkable even in the absence of political conflicts if the recession in industrial countries is becoming more severe. Some of the high absorption countries such as Mexico and Nigeria, are already hard hit by lower oil demand. They seek to avoid expenditure cuts by borrowing increasingly abroad, however with diminishing success.

Finally, the NICs constitute fast growing markets but any additional exports to these markets will certainly be more than compensated by the rapidly rising share of their exports to the world market.

The evolution of demand for exports of industrial countries and the penetration of their markets by the non-industrial countries will to a large extent depend on whether protectionism is rising further in industrial countries and on the possibility to finance existing disequilibria.

4.5 Rising protectionism

The degree of existing trade restrictions tends to be undervalued in what appears to be a world essentially oriented towards free trade. Free trade is, at best, accepted as a principle by industrial countries and even there only partially. In the non-industrial world trade restrictions are a matter of principle and trade the exception. This situation is defended in LDCs on the basis of the "infant industry" argument and in Eastern Europe on a political basis.

A danger in present circumstances is rising protectionism in industrial countries. This has always been a feature of declining phases of the business cycle of which the last one (the Great Depression) is most vividly remembered. Already now the expression "new protectionism" has been coined, reflecting the rising recourse to non-traditional trade impediments, and an economic plaidoyer for trade restrictions is popularised by the "Cambridge Economic Policy Group" ⁽²⁴⁾. Since from an international point of view it is difficult for industrial countries to increase tariffs or quantitative trade restriction, and unnecessary and suboptimal anyhow,

(24) This group has advocated for some time protection as a means to stimulate growth in the United Kingdom and more recently it has given similar advice to the Mexican government for solving its current difficulties. If adopted, the change in policy orientation from recent experiences relying more on market forces (Chile, Argentina) to using protectionist measures would represent a full swing of the policy pendulum.

they have used more subtle means. These include voluntary trade restrictions, government contracts reserved for domestic industries, government assisted cartel formation, and subsidies provided to high technology projects and a vast array of declining industries. According to Tumlr (1982) the proportion of transactions conducted under all kinds of non-tariff restraints represents now between 40 and 48 per cent of world trade and has been growing by at least 5 percentage points between 1974 and 1980. These figures give, of course, a biased impression since they do not include potential but unrealized trade.

Clearly, protectionism is harmful to industrial countries themselves from a long-run perspective. Perceived short-run benefits include avoidance of employment losses and contentment of existing interest groups. If losses of competitiveness were only temporary then temporary protection or subsidization may be defensible. Otherwise industrial countries take a heavy mortgage on future growth in addition to the welfare losses of consumers.

Trade negotiations among industrial countries concerning European steel exports to the United States, European agricultural policy, Japanese car exports, etc. tend to become more conflictual as the recession lengthens. (Capacity utilisation in the US steel industry is currently estimated slightly above 40 per cent, as compared to 70 per cent of total industry). Moreover, the repercussions of increased protectionism in industrial countries on LDCs would be serious. LDCs now start to realize that the "export-led" approach to growth is more promising than the alternative of "import-substitution". The NICs have all grown exceptionally fast due to their export drive and fully exploiting their comparative cost advantages. By contrast, those LDCs that favoured lessened dependence from industrial countries were bound to accept a sub-optimal use of their factors of production, i.e., to forego the advantage of international specialization. As a consequence their growth performance remained average to mediocre. Rising protectionism in industrial countries would slow down the growth of NICs and tend to reorient development efforts towards South-South trade, even when not optimal, and import-substitution strategies.

Over the last decade, LDCs have borrowed massively to sustain development efforts despite adverse factors. Particularly NICs were able to borrow heavily from international banks to finance their

investments. To service their debt NICs must be able to compete with industrial countries on their own and in third markets. Other LDCs which are mainly exporters of agricultural products, raw materials and only to a minor extent of manufactured products also need easier access to the markets of industrial countries to avoid severe cutbacks in their expenditures, to substitute export earnings for declining aid, and to service their foreign debt. The risk is therefore to restage the German reparations problem of the inter-war period in the 1980s: LDCs receive loans but rising protectionism prevents them from earning the foreign exchange to service or repay their debt.

The previous arguments imply that increasing protectionism in industrial countries creates durable negative effects (the return to "import-substitution") and inflexibilities for the adjustment process. It would also become increasingly difficult to push for trade liberalization in LDCs if industrial countries do the contrary. Thus, even without explicit retaliation (which is likely to occur), rising protectionism by industrial countries will spread to the rest of the world and mark a durable break with the post-war evolution of trade liberalization. The impact of rapidly spreading protectionism could be disastrous, and not at all symmetric to trade liberalization. The latter takes time to produce effects whereas higher protection has an immediate disruptive effect on demand and foreign supply. Exporters will therefore see their traditional demands fall while substitution toward the domestic market requires new products and new marketing, which necessarily requires time.

It is important to see the ramifications of the impacts of rising protectionism beyond the above-mentioned supply and demand effects. One is the change in terms of trade which is most likely less favourable to LDCs. Another is the repercussion on financial markets which will be discussed in the next section. Protectionism together with a financial crisis could provide major shocks to the world economy, would lead to increasing cartelisation and would accentuate military-geopolitical conflicts.

5. International Lending

In the 1930s international financial contraction correlated with financial failures in industrial countries sparked off international conflict and eroded world trade and economic prosperity. The depression provoked steep declines in export earnings of raw material exporting countries through the combined effect of their low export diversification, strong terms of trade declines, and restrictive measures in industrial countries. The same factors are emerging again now. Furthermore, excessive inflationary policies during the 1970s force industrial countries to pursue restrictive monetary policies to break inflationary expectations and hence to accept temporarily high real rates of interest. Eastern European countries and LDCs confront therefore the problem of slower growth of demand for their products, declining terms of trade, rising import restrictions in industrial countries and high interest payments on their foreign debt. Foreign debt of many LDCs and some Eastern European countries was accumulated during years where growth prospects and expected terms of trade looked more favourable; had it been possible to forecast economic evolution properly, most of these countries would have been obliged to expand their absorption less rapidly and to borrow less abroad. Now it is, economically and politically, much more difficult to deflate demand substantially. Out of this state of affairs arise several serious dangers for international financial stability and hence the severity of the economic downturn which are, however, impossible to assess quantitatively.

5.1 The increase in international lending

International banking has expanded dramatically during the 1970s and has assured financing of a large part of payments imbalances of LDCs and Eastern European countries. The exposure of banks to sovereign risk is at a historical record level, exceeding for many large banks their net worth several times, while the unexpected protraction of recession has increased the vulnerability of borrowers in industrial and developing countries. Due to large interbank lendings, difficulties of one, or of several large banks would therefore rapidly affect the entire financial system and the confidence of depositors on which banking principles are built. Deposit shifts from banks in difficulties to other banks would affect the lending ability of the entire banking sector and provoke business failures and scrapping of planned investments; shifts from one national banking system to another would strain exchange markets; shifts from bank deposits into other assets would affect the stock and metal

exchanges. Together these substitutions could provide major disturbances to financial, exchange, stock and commodities markets, and add to the danger of turning the recession into a severe depression.

The recent weakening of oil prices from their peak in 1981 has not compensated other adverse developments for non-oil producing LDCs so that their current account deficits in 1982 are close to those of 1981. But the drop in oil prices has led to very large and unforeseen current account deficits of several oil-producing countries. Growth in non-OPEC LDCs has declined from about 6 per cent average during the seventies to 2 per cent in 1981-82 ⁽²⁵⁾. This has slowed down import demand but export volumes have also been declining due to close to zero growth in industrial countries. Even more dramatic for export earnings is the decline in the terms of trade. Since late 1980 dollar prices of internationally traded commodities, excluding oil, have declined by 35 per cent. The terms of trade of LDCs are now at their lowest level for 30 years, about 20 per cent below their level in the 1975 recession.

As a result, the growth of non-OPEC LDCs' export earnings fell to about 5 per cent in 1981 and is expected to be around - 7 per cent in 1982, compared to an average annual growth rate of about 23 per cent during 1975-80.

The decline in the growth of export earnings combined with the attempt to minimize the impact on domestic absorption has led to a sharp increase in bank borrowing. In 1981 net lending to non-OPEC LDCs by BIS reporting banks increased by 20 per cent and that by US banks by 24 per cent. As most of these loans are short-term and carry very high interest rates (including spreads above LIBOR) debt service payments in 1982 have reached levels which exceed for many countries their export earnings (see Table 7).

In 1982, banks' assessment of the risks involved in lending to developing countries has become much more pessimistic. Monetary authorities in Japan and some European countries have also taken measures to limit bank lending to individual high-risk countries. Net lending to developing countries has therefore been declining sharply in 1982.

(25) The data quoted in this paragraphs are taken from World Financial Markets (1982).

Table 7 - Estimated External Debt Service Payments
(% of exports of goods and services)

	<u>1978</u> Total	<u>1982</u> Total	Interest	Principal*
Argentina	70	179	44	135
Mexico	124	129	37	92
Ecuador	74	122	30	92
Brazil	84	122	45	77
Chile	74	116	40	76
Venezuela	62	95	14	81
Colombia	48	94	25	69
Philippines	53	91	18	74
Peru	142	90	21	69
Turkey	164	68	13	55
Korea	27	53	11	43
Thailand	38	48	10	38
Egypt	42	46	7	41
Yugoslavia	20	48	14	32
Algeria	42	39	12	27
Indonesia	36	27	8	19
Taiwan	16	21	5	16
Nigeria	7	20	7	13
Malaysia	18	17	5	12

*All debt due within the year, including amortization of medium- and long-term debt plus short-term debt outstanding at the beginning of the year.

Source: World Financial Markets, Morgan Guaranty Trust Comp., New York, October 1982.

Commercial bank lending has been mainly directed to a few fast growing NICs and Eastern European countries. This concentration of lending on a few countries increases of course the vulnerability of banks to any adverse developments in these countries. Among potential adverse factors figure primarily a third oil shock and generally deteriorating terms of trade, rising protectionism and continued strict monetary policy in industrial countries resulting in high real rates of interest in a world economy in recession. A particularly disturbing factor of these adverse developments is that they are, in general, not country specific so that all NICs, and in fact all countries, would be affected simultaneously. To the highly correlated effects of external factors have to be added adverse internal factors (business failures, bad harvests, political turmoil), which tend to be less synchronized however.

5.2 Country defaults: some preliminaries

Consider the hypothetical case of insolvency by some major borrowing countries independently of the underlying causes. What is not always clear in discussions of this nature is what is precisely meant by country insolvency. Is one thinking of a temporary shortage of foreign exchange? This is a liquidity problem and it would not be unreasonable to lend additional exchange to service the foreign debt. Is one thinking of a long-term incapacity to service debt? This is an insolvency problem for which there are only two solutions: default or adjustment. Clearly, even if exports were permanently reduced, say, due to a fall in terms of trade expected to be permanent, deflation of domestic demand or a change in relative prices through devaluation could always be used to reduce imports and earn the necessary foreign exchange. Hence insolvency can only occur as the result of a political decision not to adjust the economy. When the perceived cost of adjustment exceeds the discounted future cost of default (which depends heavily on the time preference of the policy maker), it is perfectly rational to default.

What are then the problems? It is perhaps useful to start by stating what is not the problem. Commercial banks so far have found international operations extremely profitable - otherwise they would not have scrambled for that market. No commercial bank has experienced serious trouble due to insolvency of international borrowers and international loan losses have been inferior to domestic loan losses by a multiple factor. What has

happened in recent times is this: when banks stop lending to a country, official lending was made available by international organisations and individual governments to allow increased borrowing and servicing the existing debt. This implies income transfers from tax payers in industrial countries to borrowing countries but without disruptive effects on the international financial system. Thus, the risk of serious accidents in international financial markets to which bankers increasingly draw attention may be rephrased as the risk for banks consisting in not being bailed out early enough by official national or international institutions. However, bank losses do not necessarily represent a macroeconomic problem or concern⁽²⁶⁾; nor is the absence of bank failures a reliable indicator for favourable economic evolution. There are therefore two distinct viewpoints: an economic viewpoint and a banking viewpoint.

From an economic viewpoint, the essential question is whether short-run current account deficits of LDCs and Eastern European countries are compatible with long-term "fundamentals", that is whether borrowers can be expected to earn enough foreign exchange to pay interest costs over the long run. Repayment of the principal is only a subsidiary problem since, as long as interest rates are adjusted to market conditions, the real value of the debt, like a perpetuity, remains constant and there is no economic reason for insisting on repayment. If, however, the borrower's ability to pay interest over the long run is put into question, deflation of domestic demand becomes necessary. In such cases, the major problem for international adjustment and financial stability is posed by the possible refusal of some countries to adjust their economies to more adverse long-term prospects.

Such a refusal might stem from a more optimistic evaluation of economic prospects by borrowers compared to those by lenders, reinforced by the short-run political unattractiveness of deflation and the internal political constraints. Whether any country will actually renounce its future borrowing potential by defaulting on existing debt is, of course, an open question. But historical precedents exist (Germany and Latin American countries in the 1930s)⁽²⁷⁾. Particularly governments in politically unstable

(26) Country default was considered as normal as individual borrower default before World War II. Risk-premia added to risk-free interest rates compensate lenders at least for the ex-ante risk assessment. The lack of default during the present period implies that banks have accumulated substantial risk-premium payments.

(27) For a fuller account of the frequency of country defaults before World War II see Sachs (1982).

countries may prefer the short-run gains from defaulting when new credits are at any rate unobtainable over the long-run due to low credit rating and deteriorated international respectability. Temptation to default is likely to increase when precedences are established or when a country does not act in isolation. Even formation of an implicit or explicit borrower cartel is not unthinkable.

From a banking viewpoint, the cash flow of borrowers is of prime importance. Banks have lent increasingly on short terms and illiquidity of borrowers obliges banks to reschedule loans and to accept a maturity transformation of short-term assets into longer-run assets which may not correspond to their desired loan maturity structure and risk exposure. To illustrate the difference between the economic and banking viewpoint the requirements for current account financing and for bank debt servicing can be compared. The WEO (1982, Table 21) projects for 1982 a current account deficit of about US dollar 100 billion for non-oil developing countries, of which US dollar 76 billion represent the aggregate trade deficit and US dollar 75 billion gross interest payments, partly offset by receipts of US dollar 53 billion for services and private transfers. To finance the aggregate deficit funds required from private sources are projected at US dollar 50 billion. From the banking viewpoint this required increase in net lending is only part of the story. LDCs are scheduled to repay loans totalling US dollar 140 billion in 1982. But the current account projections imply that for the group of LDCs no net debt repayment will take place. Hence, the aggregate short-term debt is either rolled over or transformed into longer term loans which might at least partly conflict with banks' optimising maturity structure and country exposure. That liquidity considerations (banking viewpoint) and solvability (economic viewpoint) are not necessarily highly correlated is illustrated in Table 8 : Argentina and Mexico have a similar cash flow indicator (column 7) but the debt service ratio of Argentina is only half that of Mexico (column 5). Another illustration of increasing liquidity problems in LDC lending is provided by the increasing rescheduling requirements summarized in Table 9, which often force bankers to grant concessions on interest rates.

5.3 Problems of international banking

A recession whose severity or duration exceeds previously held expectations creates difficulties for banks, domestically and internationally, which can be summarized under various analytical categories.

Table 8 : Major LDC borrowers : Debt to banks and cash flows in 1981

	1	2	3	4	5	6	7	8	9
	Total bank debt \$ billion	Net bank debt Current account receipts %	Short term bank debt \$ billion	Debt service on medium term \$ billion	Debt service ratio %	Total payments due \$ billion	Total payments due Current account receipts %	Estimated net flow from banks 1981 \$ billion	As % bank debt 1981 %
Mexico	56.9	147	24.0	12.2	60.0	29.2	97	8.4	19.8
Brazil	52.7	176	14.3	16.0	58.0	30.9	114	1.5	3.2
Venezuela	26.2	25	14.4	6.8	37.0	19.9	77	1.2	4.9
Argentina	24.8	140	9.9	3.6	27.0	12.0	93	3.2	16.1
Korea	19.9	58	10.6	4.0	16.0	12.9	46	1.1	6.8
Yugoslavia	10.7	38	2.3	0.9	20.0	3.4	16	0.2	1.7
Chile	10.5	90	3.6	2.5	45.0	4.6	64	2.8	37.9
Philippines	10.2	76	5.4	2.0	24.0	6.6	77	0.2	2.2
Algeria	8.4	27	0.7	4.6	36.0	5.5	32	-1.8	-20.0
Indonesia	7.2	-	2.5	2.7	12.0	5.2	22	0.7	11.6
Taiwan	6.6	-	3.7	1.6	6.0	5.2	20	1.2	22.0
Israel	6.0	-	4.0	1.2	8.3	4.8	32	1.2	23.9
Nigeria	6.0	19	1.8	1.1	4.0	2.6	11	0.9	20.0
Colombia	5.4	22	2.3	0.8	12.0	2.9	59	0.7	14.4
Thailand	5.1	36	2.8	1.4	17.0	4.3	46	0.8	20.0
Ecuador	4.5	122	1.9	0.6	22.0	2.4	80	0.2	6.3
Turkey	4.2	27	0.8	1.4	17.0	1.7	23	-0.7	-17.5
Malaysia	4.4	7	1.2	0.5	5.0	1.6	10	1.8	67.2
Egypt	4.4	-	2.9	2.0	20.0	4.0	38	1.3	38.4
Peru	4.4	63	2.3	2.1	42.0	3.3	79	-0.1	-1.5
Morocco	3.7	71	1.0	1.6	35.0	2.8	66	-0.1	-2.9
Ivory Coast	3.2	78	0.7	1.0	39.0	1.6	49	-0.2	-6.7

Net bank debt : assets minus liabilities of banks reporting to BIS; - : negative net bank debt; short-term bank debt : debt with original maturity under one year; total payments : calculated as debt service on medium-term debt plus estimated interest on short-term debt, plus rollovers of short-term debt; net flow from banks : calculated as increase in debt reported to BIS minus estimated net interest payments.

Sources : Bank for International Settlements (columns 1,2,3), OECD (4,5), Amex Bank estimates (6,7,8).

From : Euromoney, August 1982.

Table 9 : Debt Rescheduling (official and bank debt)
in million US \$

1956	Argentina	500	1978	Peru	1.212
1959	Turkey	440		Turkey	1.100
1961-	Brazil	300		Total	2.312
1962	Argentina	270	1979	Turkey	3.200
1964	Brazil	270		Zaire	1.000
1965	Argentina	274		Sudan	500
	Turkey	220		Togo	220
	Chile	90		Total	4.920
	Total	584	1980	Turkey	3.000
1966	Indonesia	310		Nicaragua	562
	Ghana	170		Yugoslavia	420
	Total	480		Zaire	402
1967	Indonesia	110		Sierra Leone	40
1968	Indonesia	180		Liberia	35
	Peru	120		Total	4.459
	Ghana	100	1981	Poland	4.300
	India	100		Turkey	3.200
	Total	500		Uganda	730
1969	Peru	100		Sudan	500
1970	Indonesia	2.090		Zaire	500
	Ghana	18		Bolivia	460
	Total	2.108		Pakistan	250
1971	India	100		Togo	242
1972	Chile	258		Nicaragua	180
	Pakistan	236		Madagascar	140
	Cambodia	2		Jamaica	103
	Total	496		Senegal	75
1973	India	340		C A R	72
	Pakistan	107		Liberia	34
	Total	447		Total	10.786
1974	Pakistan	650	1982	Argentina	5.000
	Chile	460		Peru	4.800
	India	194		Poland	4.600
	Ghana	190		Romania	4.000
	Total	1.494		Vietnam	3.500
1975	India	248		Costa Rica	2.600
	Chile	230		Sudan	600
	Total	478		Zaire	530
1976	Zaire	280		Bolivia	450
	India	200		Pakistan	447
	Total	480		Togo	340
1977	Zaire	210		Senegal	300
	India	120		Honduras	220
	Sierra Leone	52		Madagascar	120
	Total	382		Guyana	110
				Malawi	98
				Sierra Leone	68
				Uganda	60
				Liberia	58
				C A R	12
				Total	27.913

From : Euromoney, August 1982.

When either liquidity or long-term fundamentals deteriorate unexpectedly banks find themselves locked-in, in the sense that they cannot easily refuse to borrowing countries (or to industrial borrowers) in difficulties further loans to service their debt without creating difficulties for their own balance sheets. In the past, banks have felt compelled to provide an increasing share of loans for the purpose of maintaining debt service flows. Borrowers realize of course that banks are locked-in and can therefore exert considerable pressure.

In such a case banks are in a dilemma, the crude choice lying between continuing to increase their exposure or to acknowledge loan losses. Although in an economic sense both situations are similar and banks ought to depreciate in either case their loans, in actual practice banks keep loans in their balance sheet in the first case, with some provisions for loan losses, while they would be forced to depreciate them substantially in the second (28).

In general, as long as borrowers are able to pay interest rates no real problem arises : the cash flow and earnings of banks remain unaffected although not their asset rating. If even interest cannot be paid anymore and if banks estimate that problems are temporary, they may roll over interest payments as well. If borrowers are considered insolvent, banks have to acknowledge a capital loss. While a bank with a well diversified portfolio should be able to cover the capital loss on a single borrower with net worth, default by several major borrowers and induced reactions could produce failures of smaller banks with inadequate country

(28) The loan loss provision for 25 major US banks represents an average of 47 basis points of loans in 1981, ranging from 19 basis points for J.P. Morgan to 67 basis points for Marine Midland. Over the years the loan loss provision ratio has declined from a record level of 71 basis points in 1975. If these provisions reflect banks' evaluation of risk, as of end of 1981, and changing risk over time, then either public discussions on international lending risks are exaggerated - or banks are incredibly inefficient in risk evaluation.

Source : Smith - Barney - Harris - Upham Research, September 3, 1982.

risk diversification. Panic in financial markets is, however, not likely to be created especially if Central Banks provide support as in a case of domestic loan losses ⁽²⁹⁾.

Loans provided by any individual bank create a negative externality : the risk associated with a bank's exposure to a country increases when additional loans are being provided by other banks. If all banks operated on the same economic calculus this would not be a problem. But newcomers to the market, lacking the experience of the big established banks and determined to enter the market, may provide loans even when established banks would refuse. This behaviour of newcomers is perfectly rational since they benefit from an externality : the marginal risk associated with an additional loan is in fact shared with all other banks already in the market. Moreover, the country exposure of newcomers is small so that if the covariance with their domestic assets is negative, their overall asset risk would in fact decline, unlike in established banks. In 1982 it seems that small banks have cut their net loan increases much more than big banks and have found it easier to pull out of risky markets. This has forced large banks to take over additional commitments.

(29) To illustrate further the unlikeliness of large international bank failure the example of Citicorp, one of the internationally most exposed banks, is pursued. End of 1981, Citicorp's assets in the Caribbean, Central and South America stood at US dollar 18.2 billion or 15.7 per cent of total assets. Default on all these assets would represent an annual income loss of about US dollar 2 billion. While an important part of outstanding loans may have to be rolled over or rescheduled, definite default on, say, 10 per cent of outstanding loans would be an extreme assumption by any standard (for example, in 1981 international loan losses amounted to US dollar 41 million). Taking this extreme case Citicorp would make a loan loss of US dollar 1.8 billion which compares to US dollar 4.9 billion equity and to worldwide loan loss provisions of US dollar 400 million or to US dollar 63 million for the region on a prorata basis. This shows the extremism of the assumption in terms of Citicorp's own risk assessment. On a flow basis, definite default on assets of US dollar 2 billion entails an annual income loss of about US dollar 250 million which compares to net income before taxes in 1981 of US dollar 855 million. Thus, while large banks could possibly face reduced future earnings, collapses of well-managed banks seem unlikely.

Source : Citicorp, Annual Reports, 1981.

A compensating factor is that the major international banks realize that ill-fate of any large bank will affect all others. This conscience of interdependence creates a positive externality, in the sense of willingness to participate in international bank co-operation to avoid major accidents.

It is difficult to charge borrowers risk premia compensating for worsened economic conditions. On the basis of the principle of adverse risk selection, the most desperate countries, which may anticipate perhaps never to repay the loan, would be the most insensitive to spreads above LIBOR.

In loan renegotiations diverging political views held by governments of lending countries could emerge. The debt renegotiation with Poland provides an example. While European governments were committed to rescheduling, refusal of rescheduling could have been seen as a logical component of the US government's preference for economic sanctions. In such cases of political divergences the least exposed countries would initially be shocked less and therefore be more inclined to refuse rescheduling, although the system-wide repercussions could spread the difficulties.

Of course, debt insolvency is not limited to international loans alone. During recession an increasing number of firms in industrial countries become bankrupt ⁽³⁰⁾ and international difficulties combine with domestic ones. What banks may not have sufficiently taken into account in the past is the covariance structure of their exposure. In the international context individual country risks are not independent of each other (if the oil price drops, all oil-exporting countries have lower export receipts). A world-wide recession also implies that all countries and many industries in each country are faced with increased difficulties so that risks are positively correlated. In fact, domestic difficulties could as well spread to the international market as the other way round.

(30) In the United States corporate failures have sharply increased from a low of about 7.000 failures in 1978 to 24.000 projected for 1982 (Data Resources Inc.). This level has only been exceeded in the years 1930-32. Big corporations in difficulties (AEG, International Harvester, Dom Petroleum, Chrysler) receive of course more easily governmental umbrellas. As to financial intermediaries, during the first 9 months of 1982 33 US banks have failed and three financial scandals have shocked the banking community: Drysdale Government Securities, Banco Ambrosiano, and Penn Square Bank.

Finally, in recent years banks have had difficulties in augmenting their capital base due to high real rates of interest so that their capital-asset ratio has worsened while risk has increased. The capital-asset ratio of US big money-centre banks has declined from close to 9 per cent in 1960 to below 6 per cent in 1981 (The Economist, October 16, 1982, p. 24). If borrower insolvency occurs, bank equity would shrink and banks would have to cut down on loans, domestically and internationally. This would increase domestic and international deflationary pressure. In addition, while banks have exposed themselves perhaps too much to sovereign risks in the past, they could overreact by reducing too much their exposure after some banks ran into difficulties of countries already in trouble and of highly indebted industries in those countries. Some official replacement of commercial lending would then become necessary.

5.4 Lender of last resort responsibilities

Fast development of off-shore financial centres raises the issue of lender of last resort responsibility. If a bank faces difficulties with domestic or foreign loans the national Central Bank would act as a lender of last resort. In addition, if a borrowing country is in payments difficulties, there is usually enough time to renegotiate the debt and to bring in the IMF or governments of creditor countries. More problematic is the case where foreign subsidiaries make losses since supervisory and lender of last resort responsibilities are not clearly defined anymore. The "Basle Concordat" defines supervisory and lender of last resort responsibilities in a way which leaves ambiguities and loopholes (see Dale, 1982). The most serious problem arises when bad management (insufficient portfolio diversification) puts a foreign subsidiary into difficulties. Central banks of the headquarter country and of the subsidiary country would naturally be reluctant to provide support, the information lag could tend to be long since the concerned bank is likely to cover up management mistakes, and there would not be a compelling case for intervention by the IMF or the BIS. There is therefore enough time for repercussion on the banking community.

This raises therefore two related issues. One is the lack of bank supervision (giving rise to lack of information) and of lender of last resort responsibilities in off-shore centres. This lack represents a particularly vulnerable nexus in the international financial system taking also into account the concentration of highly leveraged financial

intermediaries (bank subsidiaries and non-banks) in off-shore centres. Liquidity problems or relatively small loan defaults could more easily develop into insolvency of financial intermediaries in off-shore centres given their small equity base.

The second issue then is how to cope with insolvency. The lender of last resort responsibility is mainly conceived for liquidity problems of a bank in order to avoid the spread of a short-run private lack of financial intermediation into a social efficiency loss affecting the whole banking sector. This function of lender of last resort does not socialize the entrepreneurial risks of banks. Insolvency, by contrast, is usually the result of management mistakes (excessive risk taking and incorrect forecasting) and automatic lender of last resort support would create a moral hazard problem, that is, would induce banks to accept higher risks. Of course, the distinction between liquidity and insolvency is of more theoretical than practical use: at the time when a bank cannot respect its payments anymore it is usually impossible to say whether it has only a liquidity or rather an insolvency problem. Quite often illiquidity also leads to insolvency and vice versa. There is therefore a basic dilemma for the lender of last resort function for which there is only an ex-ante solution: more extensive supervisory control. The control of off-shore centres being at present less extensive than of domestic banking the risk is considerable for bank insolvencies in off-shore centres to set off a widespread financial crisis.

Are monetary authorities adequately equipped for preventing the spread of financial "accidents" ? It is useful to distinguish domestic defaults, country defaults and off-shore defaults.

For domestic defaults bank supervision allows in principle rapid intervention and the money-creating power of Central Banks sets no limit to Central Bank support. Panic and bank-runs can therefore be avoided but not the induced effects on loan and foreign exchange markets which could be dramatic.

For country defaults the speed of intervention is a lesser problem, decisive are the availability of medium-term funds and the capacity to negotiate adjustment policies. This falls mainly under IMF "jurisdiction" and problems should be manageable when debtor countries are willing to adjust. Whether IMF resources would be sufficient in case of multiple large borrower defaults requiring longer-term adjustment depends on the increase in Fund quotas, presently under negotiation.

For off-shore defaults some difficult questions arise. In off-shore markets bank mismanagement (excessive risk-taking given low equity) is more likely to be the source of trouble due to lack of supervision; information is not as readily available; and insolvency is more likely to occur. The open questions are : How to control off-shore centres ? How widespread could the repercussion of off-shore bank defaults be ? How far can Central Bank interventions go in bailing out off-shore banks ? How could Central Bank intervention be organized ?

5.5 Policy dilemma

Even with an increased financial basis of the IMF and improved control over off-shore centres it is unlikely that accidents and deflationary programs can be avoided in the near future. Industrial countries themselves go through a difficult financial phase. As they are rightly reluctant to support unconditionally their own enterprises in difficulty, particularly when these difficulties are partly due to management mistakes, they also are rightly reluctant to support unconditionally borrowing countries whose expenditures are not consistent anymore with present world demand conditions and relative prices. As in the domestic sphere, the policy choices are painful and severely constrained by the psychological, financial and unemployment effects of bankruptcy or country default. The scope for disagreement over the proper adjustment policies is therefore large and negotiations between lending and borrowing countries could become increasingly difficult.

The economic viewpoint could differ from this banking viewpoint in some respects, although both fully converge with respect to the desirability of avoiding the induced effects of a financial crisis. Banks naturally attempt to maximize their profits and they favour therefore increased IMF lending and stabilization programmes. From an economic point of view the socialization of bank risks is not necessarily desirable and

deflationary programmes might go too far, both in terms of welfare losses in debtor countries and, through feed-back effects, in lending countries. Furthermore, investment in primary resources is likely to decline which, combined with reduced price incentives for resource substitution in industrial countries, could program a commodity price boom for the next recovery. It is therefore of considerable importance not to be overwhelmed by short-run liquidity problems and to limit deflation to those cases where longer-term prospects are unfavourable.

The difficulties of LDC borrowers can be appreciated from the necessary adjustments in the uses of GNP, that is

$$Y = C + I + G + K, \text{ or } 1 = C/Y + I/Y + G/Y + K/Y$$

where Y is GNP, C is consumption, I is investment and K the current account surplus (deficit when $K < 0$). A general deflationary policy tends to increase C/Y and to reduce the current account deficit (if imports are proportional to GNP, and exports and the service balance are non-decreasing with GNP, then K/Y increases) so that either I/Y or G/Y, or both, must decline. International cooperation could therefore serve the purposes of ensuring that the fall in I/Y is minimized in order to increase the future capacity for repayment of foreign loans. This can be achieved through two channels. One is to ease the deflationary need by not cutting funds too abruptly. Equally important is to stress in adjustment programmes expenditure-switching policies and that deflationary measures fall directly on government and private consumption.

Financing transitorily illiquid borrowers may not correspond to bankers' preferred option, but requires much lower opportunity costs than excessive deflations ⁽³¹⁾. Of course, the practical difficulty lies in properly assessing medium-term prospects of borrowing countries. (While banks have erred in the past and will err in the future there is, however, no guarantee that official lender would operate on the basis of better forecasts).

(31) According to estimates provided by World Financial Markets (1982) zero growth in net new bank lending in 1982 (as compared to 20 per cent growth in 1981) would have the following (roughly estimated) effects on trade and GDP growth in developing and industrial countries within a year. Real output growth in non-OPEC LDCs would be 3 percentage points less than in case of a 20 per cent increase in net bank lending, and OECD growth would decline by at least 1 percentage point. The trade balance of non-OPEC LDCs would improve by US dollar 45 billion (and the current account even more).

A very suggestive illustration of the potential conflict between a banking and an economic viewpoint is due to Sachs (1982). Illiquid debtor countries have basically a choice between demand restraint or debt default. Banks must make a decision whether to reduce, maintain or increase loans. This situation represents a two-person non-cooperative game which can be represented by the following payoff matrix, where the first entry in each cell stands for the banks' payoff and the second for the debtor's payoff.

		<u>Debtor's Strategy</u>	
		Demand restraint	Default
<u>Creditor's strategy</u>	Reduce Loans	(6, - 3)	(- 6, 2)
	Maintain Loans	(3, 0)	(-15, 6)
	Increase Loans	(0, 6)	(-30, 9)

No significance can be attached to the absolute values of the payoffs, it is only their relative size that matters. Payoffs to debtors increase with higher loans and for each loan level they are better off defaulting. Similarly, banks' payoffs are higher in the absence of defaults whatever the loan exposure and payoffs decline with rising loan exposure given the strategy chosen by debtors. Thus, for any strategy chosen by banks, debtors are better off defaulting. Similarly, whatever strategy is chosen by debtors, banks are better off reducing their loans. In such a non-cooperative game the outcome will be (-6, 2), that is, banks reduce loans and debtors default. This is a "prisoner's dilemma" problem ⁽³²⁾ since a solution exists which is better for both players, namely (0, 6): debtors restrain demand and banks increase loans. This solution, corresponding to the economic viewpoint, can however only be realized through cooperation. In practical terms, this can be achieved through IMF intervention facilitating the flow of loans to the debtor country and increasing the payoffs to banks by avoiding borrower default. This game theoretic example is also consistent with the relatively frequent occurrence of country defaults until World War II, whereas since then international cooperation managed to avoid defaults through debt rescheduling and stabilization programmes.

(32) This example is a simplification avoiding the dynamic aspects of the problem. It is well known that the "prisoner's dilemma" disappears in repetitive games. Hence, the example here pertains best to those cases where governments have a very short horizon so that they are mainly concerned with one (the present) game. It neglects also the interesting aspects of coalition formation among borrowers and among banks.

6. Conclusions

In this essay three attempts are made. First, to show that slow growth as in recent years carries the potential seeds of economic depression. Second, to resuscitate the view that highly developed economies are not naturally or normally growing steadily, barring external shocks, with only small amplitude short-run fluctuations around trend; but rather that economic processes give rise to potential long waves, with depression following prosperity. While these processes should not be taken as a resurrection of historical determinism, they suggest the existence of dynamic forces underlying economic evolution which may make it difficult for economic policy to avoid a depression in the 1980s. Third, to identify some policy dilemmas and weak links in international trade relations and financial markets which could produce further contractions of the world economy.

The conclusion of the paper is that the current situation is already very worrisome and that the stage is set for a potential depression. Since 1973 unemployment has been increasing year-by-year in the EEC with a sharp acceleration after 1979. While GDP at constant prices had risen at an average rate of 4.6 per cent during 1963-73, this rate has declined by 2.9 percentage points to 1.7 per cent for the period 1973-82. Only once, in 1975, has growth exceeded the average rate for 1963-73 and the years of growth contractions outnumber the years of growth acceleration. In no consecutive two-year period have growth rates increased since 1973 indicating that attempts at recovery failed rapidly. The average rate of growth since 1979, including projections for 1982, is close to zero and thus below the average rate of growth of any previous post-1945 three-year period.

Slow and declining growth over a period of 9 years is bound to affect people's expectations about the future. After the first oil shock economic agents may still have considered the high growth of the 1960s and early 1970s as the norm to which the economy would eventually return. In the 1980s it is more likely that this norm has been revised downward. This change in expectations by itself is a formidable obstacle to fast recovery, and any policy that lacks a convincing basis for an upward revision of long-run expectations is bound to fail.

What is then the answer to the question in the title of this essay : "The Great Depression: A Repeat in the 1980s?". In a very limited

sense, a repeat has already occurred. Measured from peak to peak, the U.S. average rate of growth of GDP during 1929-37 was -0.3 per cent or 3.3 percentage points below the previous peak-to-peak average growth rate of 3 per cent for 1918 - 29. This is not very different from the 2.9 percentage point decline in the trend growth for the EEC during 1973-82.

This comparison is obviously somewhat misleading. Slow growth is more easily acceptable and imposes less hardship at the high levels of per capita income in the 1980s than it was in the 1930s, and several sociological and institutional factors dampen today the social repercussions of the recession. Current unemployment, although unacceptably high, is still far below peak unemployment in the 1930s. Moreover, the most spectacular feature of the Great Depression remains the 40 per cent decline in US real GDP in the span of only 3 years. Thanks to the built-in stabilizers and institutional safeguards developed since then it is very unlikely that such a catastrophic downturn could happen again. If anything, the current recession might be drawn out and become gradually more severe. Those contractionary forces and institutional problems that might accentuate the current recession are discussed in great length in this essay.

The legacy of past policy decisions is a serious burden on recovery and limits future policy options severely. Taken one by one, none of the features of the business cycle and none of the potential accidents is likely to push the world into a deep depression before countervailing measures could be taken. However, inadequate policy responses or simultaneity of problem occurrence could slowly do that - and, in fact, most of the possible trouble areas mentioned in this essay are interconnected. For example, if the recession lengthens or if another oil shock occurs, the deficits of LDCs will increase further and the real income of industrial countries will decline as well. LDCs will have to curb their absorption and some of them could become insolvent because banks are already overexposed and industrial countries have to cope with their own income losses. There could then be snowballing repercussions on the Euro-currency market. Furthermore, those industrial countries with greater rigidities would be most affected and would therefore be tempted to resort to trade restrictions which could then be spread internationally and produce repercussions on financial markets. The length of the chain can be adjusted at will but it is clear that the scenario for a cumulative downturn would be set.

At each nexus of the chain there are, of course, policy options. But one cannot be sure that all major actors will always bear the "public goods" aspect in domestic affairs and in international relations in mind. Therefore, a combination of disturbances or of contractionary dynamic processes, with inadequate policy responses in the present phase of the business cycle, represents a serious concern for the near future. Any such scenario, and there are infinite combinations of them, appears to be as much of a danger as the potential disruption created by a single, uncontrollable event (a third oil shock, war).

To conclude, some limitations of the scope of this essay are noted. This essay stresses the implications of the accumulation of unsustainable disequilibria during postwar expansion ("the boom waxes fast and furious" to use Hicks' expression) and the onset of contractionary forces during the 1970s. It deliberately neglects latent expansionary forces which are at present still checked by contractionary ones, and slowly developing changes in the perception of the role of economic policies after the fall from grace of the Keynesian paradigm.

It is quite conceivable that a new wave of expansion is not too far away, particularly since the time span required for economic utilization of technological developments has been reduced drastically. Innovations in automation, communication, biotechnology and development of new materials and raw material sources open vast new economic territories, within which our social values and life patterns will be deeply affected. For this take-off to materialize the current structural imbalances need correction and the forces of economic dynamics have to be unchained to recreate "Prometheus unbound" (Landes). Also in this respect new trends can be discerned. Those governments that shaped economic policy in the 1970s, and that were responsible for the evolution of a more defensive and rigid rather than flexible and creative economic order, have virtually all been replaced recently by governments voted into office on the basis of their promises to reverse this evolution. Deregulation of industries, reexamination of the incentive compatibility of transfer payments and of tax structures, control of the expansion of public expenditures and of government deficits and determination to stem the growth of real wage costs are some of the standard courses on the menu offered by recent vintage governments.

Social attitudes and voter's behaviour suggest that a mutation may have occurred in the social value system and in the perception of the role and scope of economic policy. During the 1970s concern over man's environment, disillusionment with economic growth as a dance around the golden calf, and alienation in techno-bureaucratic structures and automated work places have been growing sharply. The postwar enchantment with economic progress and elastic expectations of an even better and riskless future have come to a halt in the 1970s. These are important elements of the current malaise which render traditional solutions less widely acceptable. But it suggests also new opportunities and complementary alternatives when the material opportunity costs are properly taken into account. Safer and cleaner energies can be made available if consumers are willing to pay the price, the environment can be improved if consumer preferences can be established and public good pricing rules are efficiently applied, job content and the workplace can be enriched and improved and more leisure, education, social services, or health care can be consumed in exchange for lower consumption of material goods. All this can be done without losses in social efficiency, when proper allocation mechanisms are used and when it is fully realized that even our rich economies have limited resources so that nothing can be obtained for free. A qualitative change in the allocation of resources is by no means a retarding factor and could even favour economic growth properly measured. But while there is a choice about the nature of the benefits from growth (more leisure or more GDP), zero or negative growth (measured by an index of social welfare) is no realistic alternative. Marx was certainly right in pointing out that social equilibrium in a non-growing economy is a logical contradiction (but he was wrong in believing that this is specific to capitalist societies).

The rationale for economic growth can only be improvement of social welfare in a world of non-saturated wants. Historically, engrained patterns of behaviour, fights over the distribution of income, and frictions in the reallocation of resources and in the process of societal change have always rendered qualitative mutations controversial. It could well be that the 1970s mark the end of a golden-calf process of growth and the beginning of a qualitatively different process for the

last generation of this millenium. It might then turn out that the current recession was only the necessary frictional and structural cost for achieving a qualitative jump. Maybe.

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