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The Rise and Fall of the Golden Age

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0. Introduction

In 1972 after two decades of what has been termed a Golden Age of economic performance it could be confidently written that 'there is no special reason to doubt that the underlying trends of growth in the early and middle 1970s will continue much as in the 1960s ... the growth objectives and the capacity of governments broadly to achieve them, have not altered significantly and no special influence can now be foreseen which would at all drastically change the external environment of the European economies' (United Nations (1972) p. 125). Similar optimism could be found in forecasts and comments about the prospects for the OECD as a whole at that time. Whereas in the early 1960s OECD real GNP growth potential was forecast to grow by 4.1% p.a. in the medium term, this had been revised upwards to 4.6% by the mid 1960s and to 5.1% by the early 1970s. (McCracken (1977) p. 38).

Now after a decade and a half of stagnation and policy confusion the growth objectives of governments and their capacity to achieve them are viewed in a much more circumspect way. In contrast to earlier real growth rates of around 5%, OECD output growth in the medium term is currently forecast to grow at less than 3% p.a., with no significant changes in unemployment rates by the end of the decade. A key question facing policy makers in the advanced and developing economies is whether this represents a permanent or long term decline in the growth prospects in the industrial countries, for on their rates of progress hinge prospects for the world economy as a whole.

We attempt in this paper to throw some light on this vitally important question by adopting a historical approach to the pattern of postwar development across the advanced capitalist countries (ACC's).

This approach is designed to examine the factors which lay behind the emergence of the period of rapid and sustained postwar advance in economic performance in these countries, as well as the factors that lay behind the erosion of the "Golden Age" and which account for the uneven and erratic progress since the early 1970s. We hope to isolate those factors which may be expected to persist as a permanent influence on progress in the longer term, as compared to those which are more transitory, as well as to reveal the fundamental characteristics of the Golden Age itself.

Our analysis ends in 1979. The appointment of Paul Volcker as Chairman of the Federal Reserve in that year symbolised the triumph of monetarist policies and ushered in a period of deliberate heavy deflation, widely-imitated abroad, especially in the UK. This effectively put paid to any prospect of overcoming the second oil price hike by conventional demand management. It finally ended attempts to breathe life back into the Golden Age economic regime.

The paper begins with a short outline of the principal macroeconomic characteristics of the Golden Age in the biggest six ACCs, (the USA, the UK, Japan, Germany, Italy and France).[1] The length, steadiness, speed and spread of the postwar boom are revealed to be so exceptional in the history of capitalism as to suggest that an explanation for its occurrence must be found in a unique economic regime rather than in a chance set of particularly favourable economic circumstances. We have thus organised our analysis of the functioning and emergence of the Golden Age in Section 2 in terms of a four-fold division of the principal characteristics of this pattern.

We discuss first the Macroeconomic Structure, which summarises the macroeconomic relations which ensure the perpetuation of the growth path. Under this heading come the relations between wages and productivity, between profits and capital employed and between investment and consumption. In this connection we place special emphasis on the Profits-Investment-Productivity-Wages-Profits chain.

The key relationship between investment and productivity growth rests on far more than a technical relationship between machines and output. It is important to isolate the System of Production, or general principles governing the techniques of production and the organisation of work, most typical of a particular period. Such an excursion beyond what is conventionally regarded as economics into the spheres of industrial organisation and sociology is, we believe, essential to a rounded account of patterns of growth.

Our third area of analysis is of the Rules of Coordination which produces compatibility between individual behaviour and the macroeconomic pattern. This includes the systems of wage setting and pricing which generate the path of distribution between wages and profits, the state fiscal and credit policies which guarantee incomes or maintain demand and so forth.

Finally, individual countries combine to form an international system, with a particular configuration of trade and capital flows reflecting a hierarchy of competitiveness, and function according to certain implicit or explicit rules. This is the fourth element in the pattern of development - the International Order.

We believe that a particular pattern of development has to exhibit a coherence not just within these spheres, but between them as well.

The macroeconomic structure of individual countries during the Golden Age was founded on and reproduced by a particular system of production, was regulated by a set of coordinating rules and functioned within a particular international order. Such a structure could be undermined by problems originating in one or more of these spheres which then threw the others out of synchronisation. The way in which this occurred is analysed in Section III, which deals with the erosion of the Golden Age. This is followed by a final section in which we present our principal conclusions.

We trust that the account of the Golden Age and its erosion that we give in the course of this paper will demonstrate that our approach is a valuable way of interpreting economic history[2]. We hope it helps create a clearer understanding of the constraints and challenges facing policy makers in their pursuit of a return to a more stable, full employment growth path.

I The Golden Age in Historical Perspective

There is little doubt that the quarter century following post World War II reconstruction was a period of unprecedented prosperity and expansion for the world economy.[3] Between 1950 and 1975 income per person in the developing countries increased on average by 3 per cent per annum, accelerating from 2% in the 1950s to 3.4% in the 1960s. This rate of growth was historically unprecedented for these countries and in excess of that achieved by the developed countries in their period of industrialisation (World Bank (1978)). In the developed countries themselves Table 1 shows that GDP and GDP per head grew almost twice as fast as in any previous period since 1820. Labour productivity grew twice as fast as ever before, and that there was a massive acceleration in the rate of growth of the capital stock. The increase in capital stock represented an investment boom of historically unprecedented length and vigour.

Rapid though the rate of growth of GDP was, it was outstripped by the growth in the volume of trade which was eight times faster than in the period 1913-50 and twice as great as in the century from 1820 (Table 2a). Trade between the Western industrial economies was the most dynamic element in this[4], with trade and output growth especially marked in manufactures. For the world as a whole output of manufactures more than quadrupled between the early 50s and the early 70s, and world trade in manufactures grew eightfold. (Batchelor et al. (1980), United Nations (1972)). The major industrial countries began the Golden Age with an inheritance from the interwar depression of an historically low proportion of manufactures exported and a low level of trade in manufactures (Table 2b). They ended it with the position radically

transformed.

There were also major structural changes in the sectoral composition of total output and in the sectoral distribution of the labour force. These represented the continuation of the long term structural transformation in employment away from agriculture towards industry and then services. (Rowthorn and Wells (1987) Singh (1977)). In this period the principal employment shift was towards services, with the industrial share peaking and then falling between 1960 and 1981 (Table 3). Since productivity growth in industry was substantially higher than in services between 1950 and 1973, the output share of industry did not shift to the same extent as employment.

The years 1950-73 were also characterised by a marked improvement in stability. Table 4 shows that fluctuations in GDP and in export growth were substantially lower than ever before, with unemployment rates one third lower than in the period 1870-1913 and less than one half of those during 1928-30. Consumer prices, however, drifted upwards at an average of 4% per annum, faster than in the previous periods analysed.

After 1973 there was a deterioration in the performance of the world economy and the industrial countries within it. Whilst investment in capital stock held up reasonably well to 1979 (Tables 1 and 4), output, productivity, and export growth all fell sharply, instability in export volumes and GDP increased, and unemployment and inflation both rose. Even so performance during the period 1973-79 still looks comparatively good in long term historical perspective. The position deteriorated radically after 1979.

Whilst all the major industrial countries shared in this period of prosperity and stability to some degree, there were significant differences between them (Table 6). Thus the USA experienced a more modest acceleration in output and capital stock growth than its principal industrial competitors and experienced levels of unemployment quite comparable with long term historical experience (except for the worst depression years). Equally marked was the failure of the rate of productivity growth in the USA to match the acceleration experienced elsewhere. The growth of output per man hour in the USA remained around 2.5% from the turn of the century to the 1970s (before collapsing dramatically in the period 1973-81) (Maddison (1982)). This was in stark contrast to the experience of the other major industrial countries, and has been consistently related by commentators to the technological leadership role of the United States in the Golden Age (Maddison (1982) Freeman et al. (1982)). As Table 5 shows between 1870 and 1913 technical leadership, as proxied by relative output per man hour levels, passed from the UK to the USA. In 1950 only the UK of the major industrial countries had a productivity level over half that of the USA. By 1973 productivity levels ranged between one half and three quarters of the US level and the gap continued to narrow thereafter.

These differential productivity performances were, as Table 6 also shows, paralleled by, export and trade performance, output and capital stock growth, the rate at which capital intensity changed, and in inflation and unemployment. Against this background of the long term statistical record we can now turn to the first of our tasks, an account of the genesis of the Golden Age, and the nature of the economic regime on which it was based.

II The Golden Age and How it Emerged

In this section we outline the main features of the Golden Age and indicate briefly how they emerged from postwar reconstruction.

II.1 The Macroeconomic Structure

The central features of the macroeconomic pattern during the Golden Age were:

(i) rapid and parallel growth of productivity and capital stock per worker;

(ii) parallel growth of real wages and productivity;

The significance of these two relations is that they guaranteed both a roughly constant profit rate and roughly equal growth rates of consumption and production, thus perpetuating the initial rate of accumulation.

Of course such Golden Age growth took place at very different rates in different countries (fastest in Japan, slowest in the USA and UK with continental European countries somewhere between). Growth was mainly centred on the domestic market. Although international trade grew rapidly, it began from a very low base so that for individual countries (other than the very small ones) the domestic market dominated the overall growth of demand. Moreover, an increasing proportion of international trade took place between the advanced countries. Thus it was the internal market of the advanced countries as a group that provided the demand necessary to justify the investment.

As already emphasised the Golden Age saw an unprecedented growth rate of labour productivity along with a similarly high rate of capital accumulation (growth rate of the capital stock). (See Chart 1). Based

on the generalisation of mass production systems (see section II.2 below) it was this high rate of capital accumulation per worker employed that permitted the acceleration of productivity growth as compared to previous periods. Simple econometric estimates based on the experience of capitalist countries over the last 100 years suggest that for every 1 per cent growth of capital stock per worker employed, hourly labour productivity increases by 0.75 per cent. Given that on average capital per worker grew around 2½ per cent per year faster over the period 1950-73 than during 1870-1913, this would account for about two thirds of the 3 percentage points increase (from about 1½% per year to almost 4½% per year) in productivity growth actually observed. This point deserves emphasis because of the continued popularity of neo-classical growth acccunting which typically attributes much less weight to capital stock growth(5).

The rough parallelism between the growth rate of capital per worker and productivity growth in turn ensured that the output capital ratio remained roughly constant. This is an oversimplification inasmuch as other factors such as hours of work and relative rates of productivity growth in consumption and capital goods sectors are involved, but nevertheless, taking the average of the ACCs, the ratio of net output to net business capital stock hardly varied between the early fifties and the late sixties (Chart 2).

The profit rate depends on profit share.(6). This in turn depends on the growth rate of product wages (that is measured in terms of business product rather than workers' consumption) rising in line with the growth rate of labour productivity. Chart 3 shows that these constituents of the profit share grew in parallel. Together with a

stable capital to output ratio this contributed to the rough constancy in the profit rate (Chart 4).

The balance between the growth of real wages and productivity does not simply ensure that the profit rate is maintained; it also allows consumption to grow roughly in line with production. Between 1952 and 1970 the private consumption of the ACCs rose by 4.2 per cent per year whilst production rose by 4.5 per cent. A fundamentally new development of the post-war period was that the massive growth in production was counterbalanced by an equal growth of consumption - a growth of consumption which, as a result of the institutional and policy innovations discussed below (Section II.4) came to be more or less universally forecast and anticipated, extending to all sectors of the population but first and foremost to wage earners.

The significance of the growth of consumption lay not only in the impact on mass living standards but on the assurance it gave to those taking investment decisions of a steadily growing market. This together with the maintenance of what was frequently an already very high profit rate, in relatively tranquil political conditions, provided the essential conditions for the perpetuation of the very high accumulation rates which had seemed likely to fade with the accomplishment of the tasks of post-war reconstruction.

These high rates of accumulation were certainly also bolstered by the rapid growth of international trade which permitted the most successful individual companies to invest at rates which could not have been justified simply by the growth of their national markets. The ratio of exports to GDP at constant prices increased from 9% to 12.4% between 1950 and 1965 and then accelerated to reach 16.8% in 1973.

Exports of manufactures also grew faster in volume terms than production, though for countries other than Germany this trend did not emerge strongly until the 1960s, and in part the overall figures reflected the relatively rapid growth of Europe and Japan where much larger proportions of manufactured output were exported. Despite this strong growth of the volume of exports, the proportion of resources devoted to exports (measured by the current price ratio of exports to GDP) actually declined in Europe and Japan up to the mid-sixties as productivity growth in the export sectors was relatively fast (see Table 2a). Moreover whilst the proportions of imports in supplies of manufactures rose steadily in the European countries, by the early sixties they were still below the levels of 1913 (Maizels (1963) Batchelor et al (1980)). So the stress placed on the growth of trade must be a nuanced one; whilst certainly important for individual sectors it was not until the end of the 1960s that production for international trade absorbed an increasing proportion of labour within the advanced countries - in this sense the Golden Age growth could be regarded as primarily domestically based.

Under the Golden Age pattern of development the inflation rate was not determined prior to the growth process and in principle could take on a range of values. The actual rate reflected the "real" macroeconomic pattern of productivity and income distribution determination. Unlike an (idealised) gold standard, where the determination of the price level reflects relative productivity growth in gold mining as compared to production as a whole, the post-war structure of macroeconomic relations could have taken place in principle

at any rate of inflation (positive or negative). The actual rate reflected the patterns of wage-bargaining, price-setting, credit creation and international economic relations outlined in Sections II.3 and II.4 below. Here we note that inflation was moderate around 4% per cent per year between 1952 and 1968 in the advanced countries, slower in sectors where productivity growth was particularly rapid (exports, manufactures).

Our description of the macro-economic structure of the Golden Age has left aside the question of how it was established within the various countries. It should not be assumed that it emerged relatively unproblematically from the exigencies of postwar recovery; quite a complex and differentiated process was involved.

In the USA the business capital stock grew at around 4% per year from the end of the war up to the mid fifties (this was double the average interwar rate but no higher than before 1914). The end of the war saw exceptionally high profits, even after tax the profit rate was similar in 1945 to the 1929 peak. Demand was kept high initially by pent-up postwar demand (including net exports to countries reconstructing after war damage) and then by Korean war spending and rearmament. Indeed as the latter burst of spending fell away, so did the accumulation rate. It fell to 2½% at the end of the fifties until it was revived by the Kennedy/Johnson fiscal expansion, associated with social programmes and then Vietnam war spending. Postwar institutional and policy development did not generate the level of investor confidence required to push up the corporate propensity to invest to a level sufficient to drive demand up to full utilisation of capacity (and thus realise the potential full employment profit rate). The USA only

experienced a brief period of exceptional accumulation (growth rate of the capital stock of nearly 5%) in the latter part of the sixties. To adapt Joan Robinson's colourful phrase, the US experience of the Golden Age was rather a limping one (giving rise to under consumptionist analyses of the US of which Baran and Sweezy's (1968) was the most famous).

In the other major countries, by contrast, the rate of accumulation edged up more or less steadily to reach peak rates in the early sixties (mid-fifties in Germany). The 1950s, therefore, saw an enormous investment boom. In Europe the rate of accumulation doubled after the late forties to reach some 5½% in the early 1960s; in Japan the acceleration was even more spectacular, a quadrupling of the growth rate of the capital stock to 12%. This levered up productivity growth and allowed output to continue growing rapidly after the reserves of spare capacity and unemployed labour had been used up. The other side of this investment boom was that business investment was also the most dynamic element of demand. As a percentage of GDP it rose from 10% to 13% in Europe between 1952 and 1961 and from 13% to 24% in Japan over the same period. Over the same period total government spending on goods, services and transfers (at current prices) stayed rather steady at around 27% of GDP in Europe and 16% in Japan (Armstrong and Glyn (1986)).

What role did high or rising profits play in this process of accelerated accumulation? After the war the balance between productivity and wages allowed the profit share to be at least at comparable levels to pre-war (even in Germany and Italy where pre-war meant the fascist system). These high rates of profit were generally

maintained until the end of the fifties, before the slow downward trend set in (see section III.1). Japan was the exception where profitability climbed from far-below the pre-war figure to a level probably exceeding it by the end of the fifties (Armstrong, Glyn and Harrison (1984) chart 6.4, Armstrong and Glyn (1986)).

This high level of profitability was a necessary condition for the investment boom of the fifties (and in Japan in particular was further increased by that boom - (Armstrong, Glyn and Harrison (1984) Chapter 8). But it would be wrong to see that investment boom as simply flowing mechanically from the high profit rate. All these countries, with only the UK a partial exception, underwent periods of severe deflation during the period 1947-50. Conservative governments bolstered by Marshall Aid, a potent symbol of US support, sought successfully to restore the "social and financial discipline" which had been disrupted by the turbulence of the immediate post-war years (Armstrong, Glyn and Harrison (1984) chapters 4 and 6).

Whilst successful, these deflationary policies did not immediately restore confidence in the vision of a smooth progression of the economy towards US productivity and consumption standards. In 1951 stock markets in Europe registered share prices, adjusted for inflation, well below the pre-war level. The UN Economic Commission for Europe reported "The general impression was that, after the Korean boom, Western Europe - with the notable exception of West Germany - had entered a period, not of outright downturn, but rather of protracted stagnation." (UNECE (1955) p. 3). In the same report the UN noted that such expectations had been disproved and that "one of the notable features of the present upswing in Europe is the great increase in purchases of consumer durable

goods" (p. 21). This underlines the fact that whilst investment, underpinned by high profits, was the most dynamic factor the growth of consumption expenditure was an essential part of the process of expansion.

In Japan the pattern was rather different; between 1955 and 1961 production of investment goods trebled, whilst consumption (public and private) rose by less than 50%. This extraordinary burst of investment, probably unparalleled in the history of advanced capitalist countries defies any simple explanation; with hindsight it is clear that all the preconditions - high profits, abundant and now docile labour supply, access to new technologies, any active industrial policy and a state committed to rebuilding positions in world markets - were there, but that hardly accounts for the virulence of the upswing. It was not till the 1960s that Japan exhibited the macroeconomic pattern of more balanced growth typical of the Golden Age.

The Golden Age structure was reached at different times, by different routes and corresponding to different rates of expansion in the various ACCs. It should be seen as a way of comprehending the most important trends and inter-relationships, rather than as a precise description of the course of development within individual countries.

II.2 The System of Production

The Golden Age saw the consolidation and extension of the Taylorist principles of work organisation (Braverman (1974), Coriat (1978)):

(i) Rigorous standardisation of work practices through analysis of the "one best way", covering both the manual operations themselves and the time taken to carry them out.

(ii) A corresponding separation between the conception of work (design, engineering) and its execution.

Taylorism was aimed at increasing productivity in its strict sense (output per unit of effort) by the generalisation of the most efficient methods of production, themselves the product of a collective process of 'learning by doing'. But Taylorism was also aimed at control of the intensity of work (effort per hour worked) through the standard procedures with which the worker was obliged to comply.

The expansion of Taylorism was partly extensive. The proportion of those at work who were self-employed, and therefore not directly subject to Taylorist methods of control, in the workplace, fell from 34 per cent of total employment in 1954 to 17 per cent in 1973. The most important reason for this was the run-down of numbers working in agriculture. Industrial employment (the traditional heartland of Taylorism) rose more slowly than services, but Taylorist principles were extended into many service sectors as well (supermarkets, typing pools) (Lipietz (1978)).

But the most important expansion of Taylorism was intensive - the incorporation of work norms into the machinery itself. The classic example, and the symbol of post-war mass production, is the car assembly line where the operations required of workers and the time allowed to carry them out are dictated, mechanically, by the machinery. The separation of conception and execution is thereby deepened because the design of new machinery, as well as associated work practices, is entirely divorced from those who work the machines. Mechanisation was not of course a new phenomenon, but the unprecedented rate at which it occurred during the post-war period justifies singling out the Golden Age system of production as a qualitatively distinct combination of Taylorism and mechanisation.

The spread of best practice American technologies and systems of work organisation throughout Western Europe and Japan was reflected at the macroeconomic level in the slow process of "catch-up" of average productivity levels. In the immediate post-war years employers in some countries (notably Japan and Italy) faced the strong and organised opposition of workers to rationalisation which was the precondition for the introduction of such technologies. It was not until the late forties that the employers' hands were sufficiently strengthened to move ahead as they wished. In other countries (Sweden) a more or less explicit bargain was made whereby labour traded off growing wages against managerial freedom to reorganise production. Common to all were productivity missions sent to the USA to bring back the message as to how American prosperity could be emulated. Thus the delegation sent from the UK by the TUC to study the role of US Trade Unions in promoting productivity emphasized the need to come to terms with 'scientific management' (Leyland (1952)).[7] The various joint industry teams from the UK were unanimous in recommending:

> "more standardization, more research; the use of more effective managerial techniques (e.g. time study and budget control) more mechanization (especially of handling operations), and the better layout of existing factories".
>
> (Leyland (1952)) p. 395

II.3 Rules of co-ordination

Our interpretation of the Golden Age has emphasized a macro-economic structure which was characterized by: profit shares roughly stabilized as a result of roughly parallel growth in productivity and earnings; an unprecedented investment boom; persistent but by later standards moderate inflation; and an overall

balance between the rate of growth of productive potential and the demand for output. However capturing the essence of the Golden Age requires more than defining arithmetically the macroeconomic conditions for balanced growth. It also requires a discussion of the rules of coordination which led decisions by economic agents - firms, groups of workers - into paths consistent with those macro-economic conditions. It is, thus, a question of the social acceptance of these conditions and of the institutions seen as guaranteeing them.

Two aspects are of central importance: first the inter-relationships between price and wage formation, productivity growth and profits; and second the role of the state in macro and microeconomic policy formation (e.g. demand management, competition policy and the provision of social welfare).

Prices Wages Productivity and Profits

In the Golden Age prices of industrial goods were much as before determined by adding a mark-up to costs in a way which was relatively insensitive to short term variations in demand. Primary products however remained more sensitive to short term fluctuations in the balance of market forces.(8) By contrast there were important developments in the pattern of wage formation. Wages were determined by a bargaining procedure that was increasingly collective and centralized in nature. In wage and price determination the state took an increasingly active role via incomes and prices policies, welfare state provisions, and its role as a major employer and producer.

Wage Determination

Increasing concentration was associated with increased insensitivity of mark-up based pricing to short run variations in demand and with concentrated industries having more stable mark-ups over the cycle (Blair (1972), Hultgren (1965) Means (1935) Boyer and Mistral (1978)).

Given the system of fixed exchange rates which characterized the international order in this period, the ability to maintain margins in the face of international competition depended essentially on control over input costs. Since raw material costs were largely set on international markets, control of unit wage costs, through superior productivity growth and the ability to strike a keener wage bargain was crucial. It was a primary characteristic of the Golden Age that the money wage bargains produced nevertheless a rapid rise in real wages, linked more or less closely to productivity growth.

This link did not emerge on the same terms, or in the same way, in the individual ACCs. Once established, however, its more or less explicit recognition became embedded in the particular institutions of the wage determination process, so that a general law could be said to have emerged, in which the rate of money wage increases corresponded to the rate of change of prices plus the rate of change of productivity. Institutionally this involved elements of the following processes: (Eatwell, Llewellyn and Tarling (1974); Turner and Jackson (1970); O.E.E.C. (1961); O.E.C.D. (1979); Tylecote (1981)).

* Leading companies in the most dynamic sectors reached collective agreements with their workers, incorporating a cost of living element and an annual improvement factor. These agreements

then spread across companies in those sectors, either spontaneously, or under union pressure, by the authority of employers associations or as a result of state action.

* Similar wage increases spread out to the non-leading sectors through the pressure of labour market collective bargaining and/or indexed minimum wage regulations.

Depending on the relative strength of these mechanisms (leading sectors, plus comparability and wage drift), the money wage rises were more or less general and the labour markets more or less 'dual'. But the principles involved implied an upward drift in prices but that the general rise in productivity would be effectively reflected in a general rise in purchasing power, and businessmen's expectations came to reflect this. The overall effect was a general encouragement to capacity expanding investment, and a particular encouragement for leading firms. This was because the most efficient producers were able in effect to squeeze the margins of their less efficient competitors by forcing up their wage costs, and were also encouraged by rising wages to scrap their own least efficient plant (Salter (1959)).

All of this is not to suggest that individual wage bargains were made explicitly on the basis of anticipated macroeconomic outcomes. Rather it was the mechanisms of wage bargaining and competitive rivalry in fix-price markets for manufactured goods that tended to produce that effect.

Market Structure and Price Determination in Industrial Goods

The increase in centralization and collective bargaining in the labour market was matched by structural changes in product markets. The period between the 1930s and the early 1950s saw slight downward movements in aggregate concentration in the US, Japan and the UK, and there were initially concerted efforts to deconcentrate and restructure German and Japanese industry during the US occupation. But outside the USA the Golden Age was marked in all the major industrial economies by an upward drift in the concentration of domestic production especially in the mid and late 1960s. The technical basis of this, in terms of capital intensity and scale economies, was reflected in a parallel but much less marked tendency for average plant sizes to increase and in the emergence of similar industrial patterns of concentration, across countries. These trends were reinforced at the beginning of the period in France, Italy and the UK by a substantial programme of public ownership and nationalization, and later by extensive merger activity. This was predominantly horizontal in character in Europe and Japan, and conglomerate in the USA. (Hughes and Singh (1980), Liebermann (1977), Caves and Uekusa (1976)).

The renewed tendency for domestic production to be concentrated in fewer hands was not associated with a general increase in the degree of monopoly power. In fact the period was marked by an increasingly widespread anti trust attack on restrictive trade practices, and cartelization (Edwards (1967)). More significantly, the increasing concentration of domestic production was the outcome of a competitive process that was increasingly international in character. The enormous

expansion of manufactured exports and intra European trade, coupled with substantial direct investment flows as the period wore on, were associated with an increase rather than a diminution in the intensity of competition. Whereas domestic concentration rose, world market concentration was stable or fell in a wide range of primary and manufacturing industries (e.g. automobiles) and US and UK multinational dominance was challenged by the growth of European and especially Japanese corporations operating and trading on a world scale (Vernon (1977), UN (1978) Franko (1978)).

Welfare State Transfer Payments and the Growth of the Public Sector

Collective agreements, minimum wage legislation and the competitive process provided the essential framework within which the incomes of active wage earners rose with productivity. A similar outcome for the economically inactive emerged with the growth of welfare state transfer payments.

The social conflicts of the first half of the century (and the rivalry between fascist, communist and social democratic systems) led to the successive introduction of collective provision for those rendered inactive by industrial accidents, sickness, and age, and to a limited degree by involuntary unemployment. The Golden Age was characterized by a great expansion in the coverage and level of support for those made unemployed (including those formerly self-employed); the introduction of family allowances; the indexation of pensions to cost of living changes; and the introduction of earnings related benefits and pension schemes. There was also a significant convergence in levels of support between countries[9] (Flora and Heidenheimer (1981) Shonfield (1968)).

In Europe the share in current price GDP of transfer payments and subsidies to households as a whole rose from around 8% in 1955-7 to around 12% by the late 1960s and around 16% by the mid 1970s whilst the share of income maintenance expenditures rose from 8.3% in 1962 to 11.4% in 1972[6] (Sawyer (1982)).

To the extent that these transfer and benefit incomes were themselves indexed to prices, and to earnings growth amongst the active population, then the tendency was reinforced for positive anticipations to develop, of an upward general trend in purchasing power. Moreover these payments contributed to an increase in the short term stability of demand and of income. This eased the ability of wage earners to raise loans, thus facilitating the expansion of consumer credit arrangements.

The combination of public sector income maintenance and the high wage/high investment pattern was so successful in maintaining effective demand that the policy problem for much of the golden age appeared to be how to damp down excess demand rather than how to boost it to maintain full employment.

There seem to have been two broadly defined routes to the implementation of welfare state policies. In some countries the Golden Age, saw the emergence of a social democratic consensus in favour of full employment, the welfare state, modernization and Keynesianism. In others a liberal capitalist restoration based on a more or less explicit suppression of radical elements in the labour movement was associated in time with the granting of similar reforms. (Keohane (1978), Katzenstein (1978), Goldthorpe (1984)).

The most obviously social democratic consensual systems have been those of the Nordic countries, especially Sweden, whose post war system

has its roots in the pre-war period. There collective bargaining was centralized between strongly organized employer and trade union federations, and based on an explicit recognition of the twin constraints of international competition and of the macroeconomic accumulation pattern. It included a conscious diffusion of settlements across different sectors of the economy and different classes of income recipient (Edgren, Faxen and Odhner (1973)).

In Germany a solution along the liberal capitalist restoration route emerged. Decentralized wage bargaining, and pattern making settlements in key sectors; the use of its occupational power status by the US to prevent the emergence of socialist industrial initiatives; a union movement organized on US initiative on sectoral lines, concerned more with codetermination and recovery rather than short term money wage gains; and the use of Marshall Aid to restore, via the banking system, the essentially pre war corporate structure, meant the development of a virtuous circle of high profit, high investment-led growth cycles (Kindleberger (1967), Shonfield (1968), Esping-Andersen and Korpi (1984), Hennings (1980), Faxen (1980), Markovits (1986)).

Fiscal Policy and the Expansion of the Public Sector

A second important aspect of public sector activity was state civilian expenditures (e.g. on health, education and other public good and service provision), which (with Japan as a notable exception) rose half as fast again as output in the OECD economies in the period 1950-70. This growth along with the even faster expansion of transfer payments meant a substantial increase in the share of overall public sector expenditure in GNP, notwithstanding a relatively stable share

of government investment expenditure and a declining share in GNP for expenditure on defence. (Delorme and Andre (1982)). Whereas public expenditure was around 28% of GNP in the OECD economies in the mid 50s, it was around 34% by the late sixties and 41% by the mid seventies (OECD (1979).

This increase was largely but not entirely financed by taxation. The increased fiscal leverage meant an increase in automatic stabilization over the cycle. The balanced budget multiplier and when not balanced the tendency for the average fiscal stance to be expansionary ensured that private sector effective demand was reinforced and sustained by public expenditure patterns (See chart 5). Whether based on explicitly Keynesian commitments to full employment demand management or not, public expenditures directly fostered and reinforced expectations of high and stable demand. Thus whilst private consumption and investment demand played the crucial dynamic role in the Golden Age without recourse to systematic public sector deficit financing, the fact that there was a growing perception that governments would run deficits if necessary, was an essential complement to that role. By the 1960s policy makers everywhere were claiming to be Keynesian, most significantly perhaps in the United States which until the 1960s had alone among the industrial nations persistently run its economy at below full capacity (Cornwall (1977) Maddison (1982)).

Credit Supply and Inflation

In the macroeconomic pattern which we have described, the growth in the volume of transactions is determined by capital accumulation and

productivity. Nominal prices and incomes are the outcomes of more or less formalised price and wage determination procedures. Given the velocity of circulation credit must be available to finance the resulting nominal value of total transactions. Credit creation to achieve this was possible in the Golden Age without the constraints imposed by adherence to national metallic currency standards, which proved so restrictive in earlier periods. This development of a pure credit money system at the national level was matched by the emergence at the international level of a dollar standard (see Section II.iv below). Adherence to fixed parities relative to the dollar in the Bretton Woods fixed exchange rate system obviously imposed limitations on the extent to which individual countries could vary their money supply for internal policy purposes. Nevertheless monetary policy operating under a typically hierarchical central bank/commercial bank system (Aglietta and Orlean (1982) Lipietz (1983)) was sufficiently malleable to form an important element in macroeconomic demand management (e.g. in the US and Germany in the 1960s); and the ability to create credit at the national level was an important facilitating condition for sustained growth of real incomes. The question remains however of the extent to which real growth was accompanied by a particular inflation rate.

The process of price and wage determination described earlier is consistent with any overall rate of price change. The macroeconomic pattern of the Golden Age involved a sharing out of the gains of productivity between firms and wage earners, the latter being the majority of customers. In principle this could be achieved by a stability in nominal wages, and a diffusion of the benefits of productivity in lower price direct to customers. However with

productivity bargaining in leading sectors this is not possible. Moreover to the extent that these bargains diffuse to other sectors an upward bias is imparted to prices elsewhere as they are marked up on wage costs. This effect can only be offset by reduced margins or improved productivity in the affected sectors. Without these forces leading to fully offsetting price and productivity changes, the net effect is that relative price changes were brought about at the cost of a chronic upward drift in the overall price level (Lipietz (1986) Morgan (1969) Streeten (1962)).

Given that in these circumstances some upward drift in inflation is inevitable what forces if any set an upper limit? What constrainted firms from improving margins, and unions in their claims for higher nominal wages?

As we have seen, the possibility of a profit push exerting an independent upward pressure on prices through rising monopoly power was not a feature of this period. Mark ups were therefore maintained rather than increased. Price responded instead to the pressures of cost changes via the mark up, though the cost changes of course embodied the effects of demand changes in the domestic and international economies (Brown (1984)). In a fixed exchange rate system, with the dollar as a reserve currency pegged to gold, inflation in the USA fixed the average rate around which the inflation rates of the other industrial countries had to move, if they were to avoid international payments imbalance, pressure on their currencies, and pressure to use domestic credit and fiscal policy management to deflate their economies. As long as US inflation, as determined by internal demand pressure and the upward drift required by relative price changes and productivity bargaining,

was relatively low, the system as a whole was stable at low inflation rates. Endogenous credit creation to validate changes in nominal values was correspondingly limited. Currency and credit expansions much below or above this range introduced as an aspect of domestic policy would be constrained by corresponding pressures on the exchange rate via the reserves and capital movements. Thus the fixed exchange rate system effectively constrained the extent to which countries could, in the medium to long term, pursue credit creation policies much different from those necessary to validate the real growth of output and a rate of price change of the same order of magnitude as that experienced in the USA.

II.4 International Order

The rules of coordination within each national economy functioned within and interacted with the international order. This comprised a coherent set of international monetary, financial and trading arrangements under which economic interchange, particularly between the industrial capitalist countries, could take place in a more orderly and mutually beneficial manner than in the interwar period.

The Evolution of the Post War International Economic Order

The 'new' international economic order which came into being after the war was not a spontaneous development. It was carefully planned, mainly by the governments of the US and the UK, while World War II was still in progress. It rested on the view that an expansion in the volume of international trade would be essential to the attainment of

full employment in the United States and elsewhere, to the preservation of private enterprise, and to the development of an international security system.

Moreover the international economic system would need effective leadership by the US if a liberal international economic order along these lines were to be established. (Penrose (1953) Gardner (1969) Maier (1978) Scammel (1983)). Action required would be along the following lines.

1. An international organisation for the maintenance of exchange stability and to deal with balance of payments problems.
2. An international organisation to deal with long-term international investment.
3. An international agreement on primary-commodity price control.
4. International measures for the reduction of trade barriers.
5. The international organisation of relief and reconstruction, and
6. International measures to maintain full employment.

This comprehensive programme of international economic planning was the basis of numerous initiatives following the end of the war (Scammel (1983), Milward (1984)). In the event the entire plan was never fulfilled. In particular items 3 and 6 were not embodied in a new institution, although some efforts in these directions were made. The first two points of the programme were implemented by the establishment of the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD).

There is a voluminous literature on the negotiations and considerations leading to the Bretton Woods agreement and the setting up

of the IMF.[10] As is well known, there were basically two plans for the proposed new monetary authority: the more liberal and expansionist Keynes plan put forward by the British side and the more orthodox White plan submitted by the United States. In the end, the US plan carried the day and the result is an international monetary authority which has inherent in it a deflationary bias in that it imposed most of the burden of adjustment on the deficit countries and relatively little or none on the surplus countries. The original Keynes plan envisaged a more equitable sharing of the burden of adjustment between the surplus and deficit countries; Keynes' conception of the IMF also involved an automatic mechanism for increasing international liquidity in accordance with the needs of world trade and world economic growth. These shortcomings in the actual institutional arrangements of the IMF became highly significant in the 1960s and 1970s as we shall see later.

The institution of an international trade organisation proved much more difficult. The Havana Charter and the International Trade Organisation, negotiated in 1947, were still-born. Instead a less ambitious General Agreement on Tariffs and Trade (GATT) became the central vehicle for the promotion of free trade. The central principle of GATT was non-discrimination, as embodied in the concept of the most favoured nation. This stipulated that:

> any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties.[11]

Over the years, the GATT has provided the main forum for multilateral negotiations to reduce trade barriers and tariffs between countries.

The international regulatory framework which emerged from the Anglo-US plans was the result of the interaction of domestic and foreign policy in both the economic and political spheres. In this process the US held the upper hand. It had emerged from the war with its relative economic power greatly enhanced. The US also owned nearly 60 per cent of the world's gold reserves and the other main rival economic power (the UK) was heavily in its debt. In 1946, the European countries had a balance of payment deficit of $5.8 billion with the rest of the world; in 1947, the deficit rose to $7.6 billion (in part as a result of rising US prices in the aftermath of the abolition of price controls (Fodor (1986)). West European reserves in 1948 amounted only to $6.7 billion. In contrast, the US surplus on goods and services was more than $7 billion in 1946 and $11 billion in 1947. These were the years of the dollar shortages.

The Dollar Shortage and the Marshall Plan

From the point of view of countries other than the United States a US surplus on current account and an accompanying dollar shortage became a serious problem when it implied either a restriction of their imports, unemployment in order to avoid a continual loss of reserves to the USA, or borrowing on terms that were either financially or politically expensive (Kahn 1950).

The dollar shortage also implied difficulties for the US since import restrictions by, or recession in, her trading partners threatened

her own activity levels. Hence the policy conclusion was drawn that maintenance of US export levels would require a large foreign aid programme since neither the infant IMF or IBRD were politically or financially up to the task of maintaining activity levels both in the US and Europe.

This perspective provided one basis for the Marshall Plan. However as Block (1977) notes the Marshall Plan was far more than an effort to finance the US export surplus for a few more years. It simultaneously attacked all the forces which were moving Western Europe away from the liberal, capitalist, multilateral, international, economic order desired by the US: the strength of the European lefts, the relative weakness of the European economies, and the pull from the Soviet Union. These political factors and the Cold War were decisive in the passage of the Marshall Plan legislation through the US Congress.

As Milward (1984, p. 466) puts it the US objective in facilitating the recovery programme in Europe (ERP) was "the total political reconstruction of Western Europe, not just its economic recovery". The goal was the integration of Western Europe into one common economic area before the end of ERP". An immediate US political interest in this process being the foreign policy objective of binding West Germany firmly into a Western alliance. Marshall Aid thus was part of a more general policy of isolating communist parties and trade unions as adversaries of production, and of ameliorating social conflict over distribution in favour of a consensus on growth (Maier (1978), Scammel (1983). As we have seen in our discussion of national aspects of the transition from reconstruction to the long boom, this side of the Marshall Aid programme played a critical part in the way the

subsequent national rules of coordination were to develop.[12]

Marshall aid was massive, amounting to around 1% of US GNP in each of the years 1948-52. (OEEC 1958 p. 22-3). It also involved a high degree of conditionality.[13] The most important economic objectives of the Marshall plan were: the restoration of multilateralism, price stability and recovery of production. In pursuit of these goals, under US encouragement and pressure, the European countries carried out major re-alignments of their currencies. In September 1949, sterling was devalued by nearly 30 per cent against the US dollar. This was followed by similar changes in the exchange rate in thirty other countries. These events were combined with deflationary policies between 1947 and 1949 in Italy, France, Germany and other countries. Wage increases were to be prevented from cutting into profits and expenditure on social services to be curtailed in order to promote industrial investment. The upshot in economic terms in the immediate period of Marshall Aid was to allow the continuation of the domestic programmes of recovery in the European economies with an income distribution tilted towards profits and investment. (Armstrong, Glyn and Harrison (1984)).

In the event the successful pursuit of national recovery programme in individual countries (itself facilitated by Marshall aid) and the foreign policy objectives of Britain and France thwarted rapid movement towards a widely based supra-national Western European union. Increased integration of a different kind did however emerge after 1950 via the European Payments union and the European Coal and Steel Community (ECSC). The formation of the latter was strongly supported by the United States and served the purpose of bringing about closer relations

between West Germany and France by resolving the historic conflict over the Saasr: it also provided an answer to the politically emotive issue of German rearmament (Block (1977) Camps (1966) Milward (1984)). In the circumstances US ambitions for a greater European union were ultimately transformed into support for a 'little' Europe of the six which was seen as a more practical alternative. (Camps (1966)).

The US interest in Little Europe's unity coincided with the aims of the Christian Democratic Parties in the leading European countries as well as those of certain European technocrats and intellectuals who had in various forms long pursued these objectives. The EEC was established with the signing of the treaty of Rome on 24 March.

The International Economy under US Leadership 1945-1968

In contrast to the post First World War period, a coherent institutional framework for international trade, finance and payments came into being under US leadership after 1945. By the end of the 1950s, most European countries had made their currencies convertible and the Bretton Woods system had come into its own. The European Community had been established. Under the auspices of GATT but with active US leadership, a number of so-called 'rounds' of multilateral tariff reductions took place in the 1950s and 1960s. By the mid 1960s, after the Kennedy Round reductions, tariffs on dutiable non-agricultural products were reduced to an average of 9.9 per cent in the U.S., 8.6 per cent in the six EEC countries, 10.8 per cent in the UK and 10.7 per cent in Japan. (Baldwin (1970,), p. 1). The establishment of this postwar international trading and financial system generated the enormous increase in world trade which we underlined in Section 1.

The crucial leadership function of the US in guiding the capitalist international economy and in managing the imbalances in the system in the two decades following the war cannot be overestimated. Apart from promoting currency re-alignments and monetary stability and other measures noted earlier, the US took several steps to facilitate adjustment. In the short term foreign aid and military expenditures helped offset the huge trade surpluses with Europe and Japan; the Bretton Woods goal of convetibility was abandoned; and trade discrimination by Europe and Japan against the United States accepted. The US supported the European Payments Union which also discriminated against the dollar. In the longer term aid to Europe and Japan, and the abolition of occupation controls in the defeated Axis countries, were aimed at rebuilding productive and export capacity in the expectation that this would ultimately widen the market for American exports. (Spiro (1977), p. 37)

As a consequence of these measures, and of the European and Japanese economic recovery, and also in part as a result of government spending overseas especially on the Korean war, after 1950 the US surplus on goods and services fell sharply and the country started to run overall deficits. The U.S. balance on goods and services fell from an average of over $6 billion in 1948-49 to an average of less than $2 billion per annum in the four years 1952 to 1955. The U.S. overall balance excluding net military expenditure but including government grants and capital transactions as well as private captial transactions was $1.0 billion in 1948, $0.2 billion in 1949, -$2.1 billion in 1953 and -$1.5 billion in 1954. (See Argy (1981) for full details of the U.S. balance of payments during this period.) European governments were

encouraged to use their corresponding surpluses to build up reserves. The resulting redistribution was considered to be highly desirable. Further, the US deficits were financed almost entirely by the creation of liabilities against herself. As Argy (1981) notes, between 1950 and 1958, the foreign exchange component of world reserves increased by nearly $7 billion; all of this took the form of U.S. dollars. Thus during this period, the dollar was the world's reserve currency and the US was the worlds' central bank. The overall outcome was an international trade and payments system that facilitated an unprecedented boom in the growth of trade and of national output and productivity. For the greater part of the period, the US authorities followed conservative economic policies and the US, and hence world rate of inflation, given relatively stable commodity prices, remained relative low by later standards.

However, as early as the beginning of the 1960s, the weaknesses of this international economic system were becoming manifest. The root cause of these difficulties was the continuing deterioration of the US balance of payments position. The US led international financial system was not truly multilateral and was not therefore capable of dealing with the imbalances caused by the US itself. By the 1960s the European countries were no longer willing to accept this situation without appropriate constraints on US economic policy. Thus the system of international order which complemented the national systems of production, macroeconomic structure and, rules of coordination was put under stress by the patterns of relative national performance to which they gave rise.

Comments on the logic of the whole

The interdependence of the system of production, the macroeconomic structure the rules of coordination and the international order makes it very difficult to identify the driving force behind growth. Explanations focussing on one aspect of the pattern of development such as export led growth (Beckerman 1962) dynamic economies of scale (Kaldor (1967)), reserves of surplus labour (Kindleberger (1967)) or Keynesian demand management (Boltho (1982)) tend to neglect these interrelationships. The system of production and rules of coordination underpins a certain macroeconomic structure. This in turn justifies the extension of the system of production and reinforcement of the institutional mechanisms. In fact, it is the right balance between these three factors and, more especially, a social consensus on the value of this pattern of development in its various forms which account for its success.

Thus in the Golden Age pattern of development the extension of Taylorist systems of working organisation, combined with rapidly deepening mechanisation, generated enormous productivity gains. These were particularly important in the mass-production consumer goods industries, especially durables. Problems of 'under consumptionism' or inadequate demand were avoided by the persistent increase in real wages, fast enough to provide a market but not fast enough to jeopardise the profit share. The extension of collective bargaining and of welfare state spending ensured this growth of demand and in turn reflected a degree of social consensus and secured the necessary degree of 'informal involvement' of workers at work. Anticipation of high profits and expanded markets justified the high rate of investment. The system

appeared to operate in a stable fashion against the background of a coherent world trade and payments system and with relatively marginal domestic regulation in terms of wages and credit policy. This stability however could obviously be threatened by difficulties in the system of production, the rules of coordination, the macroeconomic structure, or international order. For instance:

1. If productivity growth falters because of problems in the system of production, and is not sufficiently matched by a corresponding moderation of real wage growth or offset by revised systems of management and production, then pressures on profit margins and output capital ratios may threaten the macroeconomic structure.
2. Similar pressures arising from changed bargaining strengths or aspirations may threaten the rules of co-ordination framework within which the existing margins and distribution of income are accepted. These pressures could arise both from tightening labour markets as well as from increasing recognition by employees of international differences in living standards.
3. Raw material cost pressures in the international system (which for most of the Golden Age were slight because of stable or improving terms of trade with primary producers) could threaten real wage growth unless offset by higher productivity growth or squeezed margins, thus creating difficulties in the macroeconomic structure.
4. A weakening of US economic performances - higher inflation and cost or production problems - coupled with unwillingness in other industrial countries to accept a US deficit at fixed parities, could undermine the international order.

5. Historic cost based mark-up pricing behaviour, and incorrect anticipation of the pace and magnitude of wage increases in conditions of increasing inflationary pressure[14], may lead to a squeeze on margins, and threaten the macroeconomic pattern. As we shall see elements of each of these possibilities appear in the period of erosion of the Golden Age.

III The Erosion of the Golden Age 1968-79

It is clear in retrospect that 1973 marked the watershed between the Golden Age years of rapid growth and the stagnation which followed. What is more contentious is whether the golden age pattern of development was undermined by its own internal tensions or alternatively was derailed by relatively exogenous factors such as the OPEC oil price increases. We seek in this section to justify the former view.

Nineteen-sixty eight marks a symbolic starting point for the erosion of the Golden Age both internally, being for instance the year of the May events in France, and internationally as it marked the break up of the gold pool. Although the major decline in growth rates can be dated from 1973, we carry the story on. For it was during the next few years that it became obvious that the basis for a return to rapid growth would not be restored by a temporary recession and that the institutional and behavioural framework of the Golden Age proved incapable of containing the pressures deriving from deteriorating economic performance. With the appointment of Volker as Chairman of the US Federal Reserve committed to pre-World War II financial orthodoxy, 1979 can be taken as symbolic of a much broader recognition that the postwar economic regime had come to an end.

III.1. The macroeconomic structure

The first part of this section seeks to demonstrate that there was a rather general and widespread deterioration in key macroeconomic relations prior to 1974 which makes it quite implausible to attribute to OPEC I the main responsibility for the subsequent stagnation. We discuss the growth of labour productivity first, both in absolute terms

and in relation to the increase in capital intensity (the "productivity slowdown"). Then we discuss the relationship between the growth rates of real wages, real materials costs and labour productivity (the "profits squeeze"). These two relations in turn determine the trend in the profit rate and we assess the implications of the decline in the profit rate for capital accumulation.

(1) The productivity slowdown

Conventional wisdom dates the productivity slowdown from 1973[15]. This is an over simplification, as there are signs of labour productivity problems in some important countries well before 1973. And of equal significance there is widespread evidence of a deterioration of the trend of the output capital ratio indicating a tendency towards a decreasing effectiveness of investment in maintaining productivity growth.

Table (7) shows that in the three most important capitalist countries - the USA, Germany and Japan - there was a slippage in the growth rate of hourly labour productivity in business as a whole in the late sixties or early seventies. The same pattern shows up in manufacturing, except that in the USA productivity growth rebounded in the early seventies after a sharp decline in the late sixties. The slowdown is not universal - in the UK productivity growth rates were at their peak in the early seventies. Nevertheless the fact that productivity growth rates had slipped back in both the "leader" country, and its two key followers, must be regarded as of significance.

The pattern for the output-capital ratio (table 8) complements these conclusions in an important way. In none of the three major

countries (and French manufacturing) where the trend of labour productivity deteriorated in the late sixties or early seventies was this offset by an improvement in the trend of the output capital ratio (such as would be implied by a neoclassical explanation of declining productivity growth reflecting a slowing of capital intensification). Indeed the trend of the output capital ratio was at best maintained (German business), typically deteriorated (US, Japanese and German manufacturing) and sometimes deteriorated to record a value unprecedented in postwar experience (Japanese business, French manufacturing). It is striking that in both Germany and Japan output capital ratios were falling by 2-3% per year in the early seventies. A similar pattern of at best maintenance of the trend of the output capital ratio is observable in the other European countries, but in most cases (UK, French business, Italian manufacturing) any deterioration was at least partly counterbalanced by some improvement in labour productivity growth (see Sargent, (1982) for a neoclassical interpretation).

A way of summarising these comments is to compare the experience in the early seventies with what would have been expected on the basis of the achieved growth of fixed capital per worker. As compared to the early sixties the capital labour ratio grew faster in the biggest six countries over the early seventies. This "should", according to the relationship obtaining in the golden age already described, have led to hourly productivity growth increasing by around 0.5 per cent a year in business and manufacturing. In actual fact it declined by on average 0.5 per cent per year in business and by 0.1 per cent per year in manufacturing. So, relative to accumulation, there was a distinct decline in labour productivity growth. The trend of the output capital

ratio should have also deteriorated a little[16] but the failure to get the "expected" labour productivity improvement, means that the deterioration in the trend of the output capital ratio was that much worse.

Our conclusion is that there is some evidence of productivity problems in a number of the major countries prior to 1973. After 1973 the decline in productivity growth is not in contention. Table (9) shows a further deterioration over the period 1973-79 in the growth rates of hourly manufacturing labour productivity, which was very marked except in Germany and France. The pattern for the output capital ratio is more mixed with both Japan and Germany showing an improvement despite the slower growth of output. By 1973-79 the growth of labour productivity was unprecedentedly low by Golden Age standards in all countries other than the US and France. The trend of the output capital ratio was unprecedentedly bad in France and the UK. Only the US escaped having one or other indicators exceptionally unfavourable. The precedents for the US pattern (late fifties, late sixties) does not make the $1\frac{1}{4}$ per cent growth of manufacturing productivity (and similar decline in output per unit of capital) any less feeble.

(2) The Profit Squeeze

As summarised in table (10) the share of profits in net value added had, by 1973, declined by about one quarter in each of the three main blocs - USA, Japan and Europe, as compared to peak shares. This decline, whilst of remarkably common extent once the four major European countries are averaged, varied in intensity, being extended over three cycles in Europe, two in the USA and one in Japan.

Some indication of the factors underlying the profit squeeze can be gleaned from the analysis of manufacturing profitability shown in table 11 and 12. These tables present decompositions of the trend in the profit rate in manufacturing for the average of the biggest six countries (unweighted in table 11, weighted in table 12). Line (3) shows the real growth rate of wage and profit income combined which is permitted by the growth of hourly productivity after allowing for changes in the real cost of non-labour inputs. The wage share in value added rises or falls (line (5)), depending on whether the growth of product wages (wages deflated by the price of manufacturing output - line (4)) rises faster or slower than the growth of total factor incomes. Line (6) translates this growth rate of the wage share into a growth rate for the profit share (opposite in sign and greater in magnitude in proportion to the ratio of wages to profits). Also relevant to the interpretation are the memorandum items (a)-(c) which show the impact of changes in hours of work and of the price of consumer goods (relative to manufactured goods) on the growth rate of workers real wages[17].

Already in the early sixties the share of wages in value added was rising by 0.4 per cent per year as hourly product wages rose faster than what was available for distribution as real factor incomes (wages plus profits). Falling real cost of inputs of materials (and depreciation) halved the impact on the wage share of the excess of product wages growth over productivity growth.

The more severe profit squeeze of the early seventies reflected a reversal of the favourable input cost trend (reducing the growth rate of real factors incomes by 0.6 per cent per year) whilst product wages

growth increased a little. Whilst hours of work were declining faster in the early seventies, consumer prices grew hardly faster than manufacturing prices. This was in contrast to much faster relative growth of consumer prices in the early sixties and allowed real weekly wages (in terms of what workers could buy) to rise by 1½ per cent faster in the period[18].

These unweighted results show the "typical" position amongst the major countries. Developments in the USA dominate the differences between them and the weighted estimates (table 12). The weighted pattern is for profit squeeze to develop in the late sixties due to a slowdown in productivity, and to intensify in the early seventies due to the sharp increase in real input costs despite the recovery in productivity and a slight slowdown in product wage growth.

Any such "accounting" for the profit squeeze, does not establish causation. For example a slowing down of productivity growth, or adverse trend in real materials costs, only leads to profit squeeze if product wages do not absorb the deterioration. Maintenance of real markups would automatically offload on to workers a share of this reduction in the growth of real factor incomes and allow the profit share (of a more slowly growing total) to be maintained. That this did not happen suggests a combination of pressures on profit margins - firstly workers' bargaining position had been somehow strengthened which allowed them to maintain, and actually increase, the growth rate of the real wages they bargained for, despite the adverse movements in input costs and on occasions productivity; secondly some forces inhibited a full passing on of these cost pressures in the form of higher prices. Prices did accelerate - in the early seventies

manufacturing prices were rising at around 5 per cent per year as compared to 1 per cent per year in the early sixties - but not sufficiently to prevent the continuing and intensifying profit squeeze.

So in addition to the underlying factors of productivity and input costs the situation in both labour and product markets has to be considered. The tight labour markets established in the early sixties in Europe, mid-sixties in the USA and early seventies in Japan, undoubtedly strengthened labour's bargaining position as reserves of unemployed and underemployed labour were eroded.(19) The extent to which a regular growth of real wages had become etched into workers expectations was most dramatically manifested in the wage explosions of the late sixties. The behavioural and institutional background to these changes is discussed in Section III.3 below.

The failure of product wages to slow in line with real factor incomes had a positive effect on productivity. It forced the earlier scrapping of the less productive vintages of equipment. But such a pattern also reflected pressures preventing prices accelerating in line with money wages. A Keynesian explanation of such a peak to peak profit squeeze, in terms of lack of aggregate demand, could hardly be convincing since demand was very high at the cyclical peaks in the late sixties and early seventies. The lags in the application of markup rules could of themselves lead to reduced real profits as cost increases accelerated. No doubt an important role in inhibiting faster adjustment of markups was played by competition from new vintages of equipment, and especially international competition as tariff barriers fell and international trade between the advanced countries expanded rapidly (see Section III.3 below)(20).

Our eclectic summary of influences on the profit squeeze prior to 1973 would emphasis productivity slowdown, rising real input costs, tighter labour markets which had lead to a secular increase in workers' bargaining position, and intensified competition, especially across national boundaries, as contributory factors. Attempting to attribute relative importance to these would be a very tricky counter-factual exercise. It is one we can sidestep by noting that the dominant forces in this process were clearly not of a temporary character.

In the years up to 1979 the profit squeeze continued at a rather similar rate to that of the early seventies (tables 11 and 12). Productivity growth slowed markedly and there was a much faster rise in the real cost of inputs (both materials and depreciation) than in the early seventies. So despite a halving of the growth rate of product wages they were still increasing by more than 1 per cent faster than real factor incomes. The squeeze on profits was at its most intensive over the recession years of 1974 and 1975 - the profit share in manufacturing halving in Japan and nearly halving in Europe (the falls in business were much less dramatic - Armstrong and Glyn (1986)). The growth of productivity was slowest, and the rise in materials costs steepest, in those two years of oil crisis induced recession. But the recovery after 1975 neither returned the growth of productivity to its pre-1973 rate nor wholly relaxed the continuing pressure from materials costs. So although product wages continued to grow much more moderately than prior to 1973 the recovery in the profit share only made up for part of the ground lost during 1973-75. By 1979 the profit share was typically around two thirds of its peak level (half for Japanese manufacturing, see table 13).

(3) The Profit Rate and Investment

As shown earlier the movement of the profit rate can be decomposed into movements in the profit share and in the output capital ratio. Whilst the fall in the profit share dominates the pre-1974 pattern (table 10), declines in the output capital ratio of the order of one tenth contributed to the fall in the profit rate in each of the major blocks.(21)

By 1973 the profit rate had declined by about one third in North America, Western Europe and Japan, and in both manufacturing and business. The output capital ratio declined sharply in 1974/5, reflecting mainly excess capacity. Although there was some recovery by 1979, the ratio was still below the 1973 level and so contributed, along with the fall in the profit share after 1973, to the further decline in the rate. By 1979 the profit rate in both business and manufacturing was around half or less of the peak rate in each of the major blocks (table 13).

Such a substantial fall in the profit rate, even before 1974, establishes rather clearly that the golden age pattern was being eroded. But just what were the implications of this fall in profitability, in particular for the rate of accumulation which was the motor of the whole process?

Contrary to earlier work(22) recent econometric analysis has supported the importance of profitability in explaining investment trends (see Lindbeck (1983), Weisskopf (1985) and Bruno (1986)). Following this approach we explored the relationship between the growth rate of the capital stock and profitability using data on business and manufacturing for the ACCs (see Armstrong and Glyn (1986)). We report

the results in table 14 using the lagged profit share as our profitability indicator (see Chapter 3). With lagged capital stock growth also included the profit share is significant everywhere except France (where it is not far from significant). Whilst we have not carried out fully specified tests of alternative hypotheses it is noteworthy that experiments with other specifications including the addition of lagged output growth left profitability significant more often than not, and more often than lagged output. These experiments (not reported here) suggest that profitability is not just proxying for accelerator terms[23].

Table 15 presents some pooled regressions for the seven countries, using the profit rate rather than the profit share. For the period up to 1973 the lagged profit rate explains 42% of the variance (across countries and time) of the manufacturing accumulation rate and 59% of the variance of the business accumulation rate. Applying the estimated coefficients to the fall in profit rates would imply a fall in the rate of accumulation in business of about 1½ per in Europe, 2 per cent in USA and 4 per cent in Japan between the years after peak profit rates (1960, 1966 and 1970 respectively) and 1974. The actual outcomes were very close to the predictions for Europe and Japan, ($1\frac{1}{4}$ per cent and 4 per cent respectively), but with very little fall in the USA. The patterns for manufacturing are rather similar, except that there was a rather bigger actual decline in the accumulation rate in Europe and a small decline in the USA.[24]

In the absence of a more fully articulated explanation of the determinants of profitability and accumulation, and the links between the two, these results are suggestive. They indicate that by 1974 the

pressures which had driven profit rates down had made a definite dent in the accumulation rate, especially in Japan and Europe. Of course causality need not run from a decline in profits to a decline in investment. It is quite possible, as Chapter 4 argues, that it was the decline in the output: capital ratio which drove the rate of growth of the capital stock downward. Had profit margins been maintained the increase in investment per unit of profit might have offset the decrease in the output: capital ratio. In the event, the failure of profitability to recover in Europe and Japan in the years up to 1979 was reflected in a further slippage in the accumulation rate. By 1980 the growth rate of the capital stock in European business was 3.8 per cent, as compared to peak rates of 5.8 per cent in the early sixties; in Japan the fall was to 6.7 per cent, just under half the peak reached in 1970. In manufacturing accumulation rates were about one third of peak rates in Europe and Japan. Only in the USA was the decline in profitability without a strong impact on investment; accumulation maintained its rather limping path.

(4) Internationalisation

We have characterised the Golden Age structure of growth as being primarily focussed on the internal market. International trade grew rapidly, but from a very low starting point, and although the volume of exports grew more rapidly than GDP or manufacturing production the faster productivity growth of exporting sectors prevented the share of exports in the value of production rising. The end of the sixties saw an important change. Between 1965 and 1973 the increase in the volume of exports was so strong in both Europe and the USA (rising by more than

one third as a ratio to GDP) that the current price ratio increased as well (see table 2a). It was only Japan, where output growth as a whole was so enormous over this period, that the ratio rose in neither current or constant price terms. Japan was also unique in having a share of imported manufactures in supplies of manufacturers far below its pre First World War level (5% in 1971 as against 34% in 1913) whereas the UK and Germany regained hhistorical levels of import penetration rates and the USA was for the first time importing substantial volumes of manufactures.

This growing internationalisation was paralleled by capital flows - direct, portfolio, and banking. As already noted it played a role in cementing the pressure on wages from tight labour markets and militant unions into a decisive squeeze on profits. The most important sense in which this contributed to the erosion of the golden age, however, was that it weakened the ability of individual countries to regulate their macro economies through demand and exchange rate management.

(5) Inflation

The modest inflation rates of the Golden Age reflected the pattern of wage bargaining, price setting, credit creation and international relations as described earlier. The real pressures on the Golden Age macroeconomic structure which we have identified - tendency to declining productivity growth, increasing cost of imported inputs - put pressure on inflation rates as well, as did the erosion of the reserves of labour and the consolidation of trade union organisation. Increasing real costs of production coincided with increased capacity for organised labour to press its claims. Whilst increased international competition acted as a constraint on price increases the incapacity of the

international monetary system to absorb the strains resulting from this increased competition led to the breakdown of fixed exchange rates, and the limitation that imposed on inflation rates. The combination of these pressures, and in particular the oil price increase of 1973 had pushed the inflation rate up from 3 per cent in 1965 to over 15 per cent by 1974. Slower growth thereafter only provided some remission, with the inflation rate stuck at around 8 per cent throughout the rest of the seventies.

III.2 The System of Production.

The writing was already on the wall for the Fordist system of production in the 1970's. As three Harvard Business School Professors commented of the US automobile industry:

> "Having in the most deliberate manner possible committed themselves to standardization, managers usually believed they had no alternative to sticking with it to the bitter end. As events have shown the end has been bitter indeed."
> Abernathy, Clark and Kantrow (1983 p. 18.

By the early eighties it was 'officially' pronounced outmoded in an authoritative article in the Harvard Business Review:

> At the heart of this traditional model is the wish to establish order, exercise control and achieve efficiency in the application of the workforce .. the model's real father is F.W. Taylor .. Recently, however, changing expectations among workers have prompted a growing disillusionment with the apparatus of control. At the same time of course, an intensified challenge from abroad has made the competitive obsolescence of this strategy clear ... Especially in a high wage country like the United States, market success depends on a superior level of performance, a level that, in return requires the deep commitment, not merely the obedience - if you could obtain it - of workers. And as painful experience shows, this commitment cannot flourish in a workplace dominated by the familiar model of control. (Walton (1985) pp. 77-78).

The search for a way out of productivity problems seems to express a fundamental weakness in the golden age system of production. On the

one hand the mass of unskilled workers are systematically and in principle excluded from the search for new technologies. The design of these, and the work patterns required to implement them, is carried out exclusively by specialist departments (R and D, industrial relations and so forth). And yet the effective functioning of the new machinery does require workers' involvement in the process of production. This is in order to guarantee the smooth running of the process in the face of hiccups in the supply of components, mechanical malfunctioning or breakdowns(25).

That such informal involvement (Linhart and Linhart (1985)) is assumed by management is demonstrated most clearly by the fact that the "work-to-rule" is a weapon in the hands of workers' rather than representing their ultimate compliance with Taylorist norms. Workers' experience and ingenuity was systematically disregarded in the design of new technologies but implicitly relied on in their implementation. Drawing on workers experience could become increasingly necessary if the possibilities of generalising existing techniques of production began to slacken and/or if returns from specialised R and D activity began to weaken. Equally implementation of new technologies might become problematic if increasingly sophisticated processes and products began to rely more on the informal involvement of workers, thus cutting against the grain of formal organisation of work and incentive structures. Similar tensions could arise if improved security and bargaining position on the shop floor reduced the pressure on workers to display such an unrecognised commitment to what they were doing. Some combination of these pressures seems the most plausible way of understanding the factors underlying the slowdown in productivity growth and the search for a new system of production which emerged in the seventies.

What further light can be shed on this through examination of productivity patterns in more detail? Mainstream accounting for the slowdown of productivity growth after 1973 centres on the slower increase in the capital labour ratio, resource allocation effects and the observed positive relationship between manufacturing output growth and productivity growth - the Verdoorn effect. According to Maddison's survey (1984), quite substantial unexplained residual slowdowns remain, though these would be much smaller if more weight was placed on capital accumulation.(12) The much slower overall growth after 1973 makes it especially difficult to disentangle the source of productivity problems. From this point of view the period prior to 1973 is particularly interesting and assembled as comprehensive as possible a disaggregated industrial data set on productivity.

The automobile industry is generally seen as epitomising the Golden Age system of production. The US industry did suffer a disastrous period during 1966-69, with labour productivity growth declining to 1 per cent per year, and the output capital ratio falling; but in common with the rest of manufacturing the 1969-73 cycle saw a rebound in both variables, with productivity growing at nearly 4 per cent per year. Table 16 also shows very sharp declines in labour productivity growth in the transport equipment sectors in all the other major countries except France (the Japanese case may be affected by the inclusion of shipbuilding). In Italy and Japan there were sharp deteriorations in the output capital ratio trend in the early seventies, and this was also true in France. The level of labour productivity in transport equipment varied from around one fifth the US level in the UK

(table 17) to one third in Germany; this strongly suggests that the difficulties in maintaining the momentum of productivity growth must stem more from social rather than technical limits.

Non-electrical machinery sometimes shares the slowdowns detected in transport equipment (Japan, Italy and France) but not elsewhere. The "heavy" sectors - chemicals and metal manufacture - showed exceptionally poor productivity growth only in Germany (a world leader in chemicals and the most important European steel producer). Textiles productivity growth was exceptionally poor only in the USA. Indeed it is striking that in the USA, with easily the highest level of productivity in all these sectors (table 17), and thus presumably more susceptible to any impending exhaustion of existing technologies, several important industries show productivity growth as fast (chemicals, non-electrical machinery) or faster (clothing, paper, wood) in the early seventies as over any previous cycle.

Construction productivity declines in the US, and does poorly in Japan and the UK, but not elsewhere. Mining - a barometer industry for industrial relations - shows productivity slowing down typically to half its previous rate (table 16); by contrast agriculture and energy show peak productivity growth rates.

Hours of work typically fell around ½ per cent per year faster in the early seventies than in the late sixties; in some countries (France and Italy) this was an unprecedented reduction by post-war standards, whilst in Japan and Germany it was rather a reversion to previous trends (OECD 1985c). This might suggest a stronger position for workers on the shopfloor which could extend to work practices as well; there seems outside Japan, however to have been a trend towards increasing shift

work typically covering an additional 1/4 to 1/2 per cent of manufacturing employment each year (Prais (1981), Barou (1979), Cette and Jolly (1984)).

This brief survey of our disaggregated productivity data falls short of a definitive conclusion. In the great majority of cases either labour productivity or output per unit of capital decelerate in the early seventies (or late sixties) whilst the trend in the other variable is at best maintained. The more adverse cases include Japanese business, French manufacturing, and a rather large number of transport equipment and machinery sectors.

As far as the US is concerned, the deterioration in productivity performance generally pushed growth rates back down to the level of the fifties. In the main industries typical of the Golden Age model productivity rebounded in the early seventies (the problem industries were mining and construction). There was still a very wide productivity gap in the mid 1960s between other countries and the US (at least according to some of the available estimates - see note to table 17). This makes it hard to credit "catch-up" with the US (or limits to the further generalisation of existing technologies) as the main explanation for slowdowns outside the US. On the other hand the fact that the trends in the early seventies were generally less unfavourable in Italy, France and the UK, where class conflict was of exceptional severity from the mid sixties, suggests that traditional systems of production could be effectively strengthened and tightened under some circumstances. Whilst the widespread nature of productivity problems is confirmed, the lack of a clear pattern leads us back to the rejection by employers of the Golden Age system of organising work, as the strongest confirmation that these problems reflected fundamental difficulties in obtaining the necessary degree of labour commitment.

III.3 The Rules of Coordination in the Period of Erosion

That costs and prices rose steadily during the Golden Age reflected the interaction of the system of wage settlements with mark up pricing behaviour. The persistence of inflation had some important feedbacks on government policy which affected the nature of this interaction. Moreover the tendency of the system to produce a drift of income share away from profits towards wages led management to take bargaining initiatives.

III.3a Pressures on the growth of real wages.

Where governments were committed to maintaining a fixed international parity, inflation much out of line with international trends implied a weakening balance of payments. Attempts to control inflation in these circumstances took the form of deflation and/or controls over wages and prices.(26) Both of these developments threatened the steady expansion of real wages. Increasing government involvement also led to some shift in those countries with decentralized systems of collective bargaining towards a more centralised approach. This pressure on grass roots autonomy was reinforced by developments in management strategies. The growth of divisionalized management structures and the associated imposition of company wide bargaining procedures in diversified conglomerate firms threatened the independence of plant and enterprise level bargaining(27). At the same time there was, as we have seen, a general tendency for the intensification of job evaluation and measurement systems. The incorporation of work norms into the machines themselves, further challenged plant level control

over the labour process. There was a growing perception of the costs in terms of autonomy and control of Taylorist scientific management and productivity bargaining (McKersie and Hunter (1973) OECD (1979)).

In the tightening European labour market of the late 1960s the response to interrupted real wage growth, and the erosion of locally based negotiating procedures and work practices was, a wave of predominantly unofficial, plant led strikes, and an acceleration of money wage growth. A similar but more drawn out process of growing labour unrest occurred in the United States. Only Japan with less severe labour market pressures escaped relatively unscathed (Crouch and Pizzorno (1978) Sabel (1982)).

In the 1970s in the aftermath of these developments, and in the light of the steady rise in inflation, the explicit indexation of money wages to cost of living changes became much more widespread. There was also a tendency everywhere for collective bargaining to include industry or company specific schemes covering such issues as job protection, pension provision and working hours.

The growth of indexation, in conjunction with historic cost mark up pricing, meant that the potential for profit squeeze was significantly increased. The impact was particularly noticeable in the early 1970s as major raw material and primary commodity price changes fed into the system. These reflected high pressure of demand, natural crop failures and diminished US raw material and agricultural stock piles (which were deliberately run down in the 60s) as well as the erosion of the colonial and semi-colonial status of oil and other primary commodity producers (Maddison (1982)).

In the 1970s, then, the increasing pace of input cost and money wage pressures combined with mark up pricing contributed to a squeeze on profits as firms failed to anticipate inflation correctly and were unable to recoup lost ground (Flemming, Price and Ingram (1976) Martin (1981) Lipietz (1983)). This compounded the problems arising from competitive pressures which were being maintained or intensified in the 1970s.

III.3b The Pressure of Competition

In this period slower economic growth was associated with a reversal of the upward shift in the concentration of domestic production which had characterized the Golden Age. The major wave of mergers which marked the turn of the decade served to maintain rather than further increase aggregate concentration levels, at least in the UK and USA. In both of these economies, as well as Japan and Germany, concentration in aggregate was stable or fell over the seventies (OECD (1984)). Further, a study of over 200 European product markets in the period 1970-79 showed that there was a tendency for single firm dominance to weaken and be replaced by more oligopolistic structures. Part of this was undoubtedly the result of international integration (EEC (1982)).

Between 1969 and 1978 the ratio of manufactured imports to GNP continued to rise in each of the major industrial economies[28]. The rate of growth of direct investment, although slackening from the early 1970s, also held up much better than domestic capital formation, and was increasingly multidirectional, both into and out of the USA and the major European economies as well as outward from Japan, (OECD (1981)).

It is not surprising therefore that competitive pressures limited attempts by firms to recoup margins by raising prices more frequently or by greater amounts than cost changes could justify. Prices rose but by not enough to match costs. So inflation was combined with a profits squeeze.

III.3c. Income Maintenance and the Welfare State

Meanwhile, state provision for income maintenance and employment protection was steadily advancing. As table 18 shows the share of household transfers in OECD current price GDP, which averaged 7.5% in the period 1955-7, and 10.5% in the period 1967-9 rose to 13.9% by 1974-6.

In Europe in particular these financial developments were associated with extended arrangements guaranteeing higher levels of job protection, safeguards against unfair dismissal and providing for greater degrees of consultation prior to, and compensation after redundancy (OECD (1979)). This, along with the company based non-wage elements in collective bargaining discussed earlier, led to the emergence of an increasingly dual labour market. Employers sought to maintain a flexible margin of workers whose length and terms of employment left them unable to qualify for state and company benefits open to those in more permanent jobs (Doeringer and Piore (1971)). Whilst the income maintenance expenditures helped maintain demand, the emergence of a fringe of workers outside the central safety net threatened the comprehensiveness of the system which had been a hallmark of the Golden Age. Moreover, as the problem of unemployment worsened, the long term unemployed posed problems for systems designed for relatively short periods of interrupted employment[29].

Nevertheless the overall impact of public expenditure patterns was supportive of demand maintenance. As Chart 5 shows the steady progress of public expenditure as a percentage of GDP was accelerated in the mid 1970s. With tax revenues lagging there were big increases in government deficits.

In this sense the fiscal and public expenditure patterns of the period of erosion were similar to the period of the Golden Age itself. Thus the main feature of the period of explicit erosion of the Golden Age (roughly speaking, the inter oil shock period 1974-79) is the stability of the rules of coordination. President Nixon was right in stating, in 1971 "we are all Keynesians now".

There was an explicit attempt to manage effective demand so as to maintain growth and moderate inflation. This was both the result of the mainstream confidence in Keynesian anti-crisis devices, and of the pressure of the political left and trade-unions.

Real wages increase slowed down in the seventies and became more and more disconnected from gains in productivity. But there was generally no question that real wages should decrease. The indexation of wages to price was explicitly or implicitly strengthened and dominated the movement of nominal incomes.

Keynesian policies of recovery, through deficit financing became the general rule. The expansion of credit through the national banking systems was permitted by an easy money policy by central banks. The real dollar rate of interest on the dollar was close to zero in the intershock period, so that the international central banker too was playing its part.

III.3.d Summary

This "Keynesian" period in the crisis after 1973 had many positive aspects. The greater importance granted to the "security net" of the welfare state helped prevented a spiral of depression in the mid seventies. Credit creation and bank financing smoothed the difficulties of firms in the face of decreasing profitability, and of the worsening world trade and payments position.

All of this could not conceal underlying problems. Increased welfare state provision meant increased taxes and contributions. And if the real post tax income of the active population was not to decrease, then the profit share had to bear the burden. Resistance by workers or employers to these forces exacerbated inflation. This problem was heightened by worsening productivity performance. Finally the rising indebtedness of nations, public sectors and corporations gave rise to concerns about the quality of the debt held by creditors.

Thus the institutional and behavioural framework was fraying at the edges. These problems of inflation, the funding of rising public sector deficits and expenditures and persistent unemployment were superimposed upon underlying problems in the organization of the system of production, and in the macroeconomic structure. The policies applied were not sufficient to reverse the increase in unemployment after the first oil shock; even so the growth of real wages did not sufficiently lag behind productivity growth to allow a recovery of profitability. Neither in terms of restored confidence in high and stable demand growth, nor in terms of restored profitability were the conditions recreated in Europe and Japan for renewed accumulation at the rates achieved in the Golden Age. The second oil shock thus hit the system at

a critical period and led to the final unhinging of the coordinating and rules upon which the Golden Age had been based.

III.4. The Collapse of Bretton Wood: and the Unravelling of the Post War International Order

III.4.a From Dollar Shortage to Dollar Glut: the Evolution of International Competitiveness among Industrial Countries

The dollar shortage of the early 1950s became a dollar glut in the following decade. By then, the European countries had started to shift the composition of their reserves towards gold. With the persistent US payments deficit, this became a serious systemic problem as gold outflows replaced official liability financing. The 'gold pool' was created, appeals were made to European countries not to change their official dollars into gold (and accepted by most countries except France) and other measures were taken. Nevertheless whereas US official liabilities in 1959 were only half the size of her gold reserves by 1967, they were one and half times larger than them.

Moreover, between 1960 and 1965 there was an enormous outflow of long term capital from the US (mainly to Europe) and this more than offset improvements in the current account balance occurring in that period. Low interest policies designed to combat recession at home encouraged large short term capital outflows from the US into newly convertible overseas currencies . Expenditures on the government account (military expenditure and foreign aid) also contributed to the payments deficit. Finally, there was a sharp decline in the US trade balance by the late 1960s. From an average annual surplus of $5 billion

during 1961-65 the US trade account deteriorated to a bare balance by 1968-69.

In view of the USA's strategic and military posture in the world as well as its commitment to currency convertibility and free capital markets, the sharp deterioration in the trade balance provided evidence of a 'fundamental disequilibrium' in the US economy. The principal symptoms of this were major declines in consumer goods and automobiles trade balances (not compensated for by a capital goods surplus benefiting from tied military aid). The US lead in high technology goods was also shrinking. The time it took other countries to duplicate an American innovation became shorter with each passing year (Block (1977)).

More fundamentally the main reason for the weakening trade position of the US (and for that matter the UK over a similar period) was the uneven development of the world economy which inevitably meant an underlying adjustment problem in a fixed parity system. Uneven development was reflected in the different rates of growth of manufacturing production, productivity and competitiveness of the leading OECD countries. The relative rate of growth of manufacturing productivity is one of the best dynamic indicators of an economy's international competitiveness. As table 19 shows, during the second half of 1960s the US and UK had the poorest record on this criterion. Since these were also the two reserve currency countries, this had serious systemic implications for payments imbalances in the international economy.

The implications for domestic policy of these developments and the associated payments imbalances to which they gave rise were equally

serious. The feasibility of a persistent US deficit depended on the ability to defend the parity against speculative capital flows. This was only viable so long as other countries were willing to accumulate dollars and resist the urge to convert them into gold. There were other forces militating against this outcome.

The US Multinational Investment and the European Reaction

After the postwar recovery and the restoration of currency convertibility there was an upsurge of private US Long term capital flows and multinational investment in Europe. By 1966, there were nearly 9000 American subsidiaries in Western Europe, over 3 times the number in 1957 (Spiro (1977)).

As we have seen this US direct foreign investment contributed significantly to the deterioration in the US Balance of payments, particularly in the first half of the 1960s. It also generated other tensions, for the growth rate of American subsidiaries in Europe was considerably greater than that of the European companies (although because of the relatively slow post war growth of the United States economy, the growth rates of the American parent companies were in fact lower than those of their European counterparts (Rowthorn and Hymer (1971)).

The European response was to seek a reduction in the US payments deficit so as to limit the perceived American take-over of European industry (Bell (1982)). Hence the French decision to ignore the US appeals to not convert their surplus dollars into gold.

In response to European pressures, in 1963 and again in 1965, the US introduced certain measures to stem capital flows (Argy (1981)).

However, these restrictions did not seriously slow down the growth of US Multinational investment abroad which was increasingly financed out of borrowings abroad and reinvested profits.

Increasing Interdependence of the Industrial Economies

The GATT rounds of tariff reductions, the enormous increase in international trade and the growth of multinational investment led to increasing interdependence among the industrial countries. Moreover, one paradoxical consequence of the US restriction on capital flows in the middle 1960s was to encourage the development of the Euro-dollar market and thus greater financial integration in the world economy. Over the decade 1965 to 1975, the Euro currency market grew at a rate three to four times that of world money supply, adding enormously to international liquidity.

The growing economic and financial integration of the OECD countries meant that there was a increasingly large impact of economic policy changes in one country, particularly in the leading countries, on other economies. Deflationary (as well as reflationary) impulses arising from attempts to adjust imbalances at fixed parities were more pervasive and destabilising in their effects. There was also an increasing synchronisation of economic expansions. Thus in the late sixties the US was reluctant to restrict demand, and Japan was in the middle of sustained expansion. In these circumstances Germany's first post war use of deficit financing in 1967/8 and a similar shift in policy stance in France in 1968, produced (in terms of the size of the initial impact) one of the largest recorded swings in the stance of fiscal policy in the OECD (Llewellyn et al. (1985)). Such episodes of

simultaneous fiscal or monetary expansion, whether brought about by accident or design, had serious repercussions for commodity prices, inflation and payment imbalances in the system as a whole.

The Bretton Woods System can be regarded as having broken down in August 1969 when President Nixon suspended the convertibility of dollars into gold[30]. The dollar remained however the key currency in the system. And in August 1971 when the US formally closed the gold window, the world moved to a fully fledged dollar standard. The US then also entered into negotiations which culminated in the Smithsonian Agreement of December 1971. In these negotiations, the US, until then still in favour of fixed exchange rates, demanded of its allies currency appreciation relative to the dollar.

This agreement however did not last long. Under the pressure of massive capital flows, the UK floated its currency in 1972. Subsequently, other European countries floated their currencies and by 1973 all the major currencies were floating. The world had moved from a system of fixed exchange rates to that of managed floats. As a consequence of the floating rates the US announced the elimination of all capital control in January 1974.

Was the breakdown of Bretton Woods inevitable? The mainstream view accepts its inevitability and is perhaps best embodied in the so-called 'Triffin Dilemma'. Triffin had argued that the system was flawed since it had no mechanism for automatic growth of international liquidity to meet the requirements of expanding world trade and economic activity. Under the Bretton Woods arrangements, as practised, the main source of such liquidity was the payments deficit of the US Over the longer term,

this had serious implications since it was bound to lead eventually to a loss of confidence in the reserve currency. If, however, the US payments deficit was eliminated, this would reduce world liquidity and hence the world level of activity. To deal with this dilemma, many proposals for reform were mooted which culminated in the agreement to create SDRs in the mid-1960s. However, the so-called problem of international liquidity lost its urgency with the enormous growth of the eurodollar market in the late 1960s and in the 1970s.

In our view the system was flawed for more fundamental reasons, namely the decline in US dominance due to the uneven development of the productive potential, and hence, the economic and political power of the leading industrial countries. As Block (1977) put it:

> "The fundamental contradiction was that the United States had created an international monetary order that worked only when American political and economic dominance in the capitalist world was absolute. That absolute dominance disappeared as a result of the reconstruction of Western Europe and Japan, on the one hand, and the accumulated domestic costs of the global extension of US power, on the other. With the fading of the absolute dominance, the international monetary order began to crumble. The US deficit was simply the most dramatic symptom of the terminal disease that plagued the postwar international monetary order."

From early 1968 the U.S.attitude to its balance of payments deficit and to other problems of the international system had noticeably changed. It became more unilateral and overtly nationalistic. A prominent view (see Kindleberger (1965), Krause (1970)) argued for a passive US approach to its balance of payments problem , a policy of 'benign neglect'. In effect this analysis amounted to an argument for flexible exchange rates as a way of freeing US economic policy from international constraints.

The International Order with Floating Exchange Rates

The collapse of the Bretton Woods system, and its replacement by floating rates, had serious implications for economic activity, employment and policy in the OECD countries. First, the abandonment of fixed parities and dollar/gold convertibility and the reduction in gold's role in the international monetary system, reduced the constraints of the US freedom of domestic and international policy manoeuvre. The US payments deficit and the position of the dollar remained, however, matters of concern to the US policy makers. Some extreme proponents of the new regime had indeed thought that with floating rates, the market would ensure balance of payments equilibria for all countries thus allowing each country autonomy in its monetary and fiscal policies.(31) The balance of payments disequilibria following the first oil shock in the 1974 soon proved this view to be incorrect. Since the dollar remained the major reserve currency, its standing on the international currency markets was clearly a matter of international concern.

Secondly, and more importantly, at the international level the floating system has serious shortcomings. Although the US is still the largest economy, the global economic system is no longer being controlled and supervised by a single all-powerful nation as it was in the 1950s. Thus the floating rate system of international regulation lacks coherence. In particular, the post Bretton Woods trading and payments system is no longer capable of dealing with the imbalances in the system in such a way as to ensure a world level of aggregate demand, and its distribution among countries, which would be compatible with full employment in the OECD economies. The international regime, under

US hegemonic control, performed this task with outstanding success in the 1950s, and despite many difficulties with still considerable success for most of the 1960s. The inability or unwillingness of the US to provide the leadership necessary to re-establish an effective system of international regulation is central to the failure of the new regime. No effective collective or a cooperative leadership among the OECD countries has been able to emerge to replace the former US role. Kindleberger (1985) is perhaps right in arguing that historically a collective leadership of the international economic system has been problematical; successful systems have invariably required leadership by a single hegemonic power.

As an example of the relative effectiveness of the pre and post 1971 regimes we may analyse how successfully the floating exchange rate regime coped with the huge payments imbalances generated by the first oil shock. Table 20 shows the huge magnitude of the payments disequilibria which emanated from the oil shock of 1973. OPEC's current surplus rose fifteen fold to $60 billion from 1973-1974, whilst the OECD countries' current balance deteriorated to around $37 billion. The 1975 recession, the sharpest until then in the postwar period, helped to restore the current balances in the OECD countries and to reduce the OPEC surplus. Over the next three years, with an enormous increase in OPEC imports, the OPEC surplus had more or less disappeared.

How efficient was this adjustment. There are several points which deserve attention in this connection. First, the OECD economies had to undergo a severe deflation in 1975 to reduce their current deficits. The floating exchange rates thus did not eliminate the balance of payments constraint for the industrial countries. As a proportion of

world GDP, the OPEC surpluses were of much the same order of magnitude as the US surpluses during the immediate post-war years. The latter were gradually eliminated in the 1950s without impeding reconstruction and economic growth in Europe. This did not happen after 1973.

Suppose the world monetary system had been under similar strong US hegemonic control in the 1970s as it was in the 1950s, what would have been the best way of dealing with the increase in the price of an essential raw material (oil) produced only by one group of countries (OPEC) in the system? It is not difficult to see that the optimal course would have been to maintain as far as possible the previous trend rate of growth of the world economy and to divert a somewhat greater proportion of this growing output to the OPEC countries without causing socially unacceptable rates of inflation in the non-OPEC economies. There would have been some adverse supply side effects in the short-term because of the sharp changes in the relative prices of different kinds of fuels and of fuels and other commodities. However, as long as oil and other fuels were available in the necessary quantities albeit at higher prices and such prices were expected to prevail also in the future, there should have been a once for all supply side impact of the oil price rise, with relatively little effect on the long-term trend rate of economic growth.(32) Second the achievement of this optimal solution in terms of world economic growth and its distribution would only have been achieved if the following conditions had been satisfied (Corden (1977) Feinstein and Reddaway (1983)).

1. The non-OPEC countries would need to run current account deficits for some years if world economic growth was to be maintained; and an outflow of OPEC capital would need to finance them.

2. To be able eventually to service the debt accumulated, and to offset the fall in the world propensity to consume arising from low OPEC absorptive capacity, it would have been desirable to increase non-OPEC investment (particularly in fuel saving and in the development of alternative sources of energy) and to offset the fall in the world propensity to consume arising from low OPEC absorptive capacity.

3. The national rules of coordination in the non-OPEC countries would have needed to ensure a reduction in the rate of growth of real wages and other incomes in line with the deterioration in the non-OPEC terms of trade. Feinstein and Reddaway (1983) argue that: "This should not in principle have been a difficult operation. The loss of real incomes caused by the initial worsening of the terms of trade was a non-recurring phenomenon and was less than the normal gain from one year's rise in productivity. All that would have been required was thus a brief pause in the normal advance of real wages."

In view of the erosion of the national regulatory regimes discussed earlier it was, however, extremely difficult for the industrial countries to fulfil the last condition. Moreover, in a world of nation states, of enormous short-term capital movements and widely fluctuating exchange rates, where no single state was in hegemonic control of the international trading and payments system, it was also far from easy to meet these first two conditions even <u>in principle</u>. This is because if each non-OPEC nation acted in its own national economic interest, rather than that of the world economy as a whole, it would be concerned not with the overall deficit between non-OPEC and OPEC, but with its own deficit with all other countries. Any single non-OPEC country could cover its deficit with OPEC by increasing its surpluses with the other

non-OPEC countries. If all non-OPEC countries attempted to reduce their deficit in this manner (e.g. by deflation), the result would be a vicious circle of competitive deflation rather than economic expansion of the kind envisaged under condition (2) above.

At the beginning of the oil crisis, international organisations such as the OECD exhorted the non-OPEC countries to take a cooperative approach to reducing their deficit with the OPEC countries and to maintain their pace of economic activity. Not all countries acted on this advice and those who did so (e.g. the UK and some small European countries) soon found themselves with large current account deficits. Thus the problem of oil shock was not simply one of non-OPEC deficits with the OPEC, but it soon became one of large payments imbalances among the OECD countries themselves. As table 20 shows, W. Germany and Japan ran sizeable surpluses in mid 1970s, Japan's surplus in 1978 was a huge $16.5 billion and that of W. Germany $13.4 billion.

Moreover, although by 1978 the aggregate OPEC current account surplus was small, this was due to the deficits of the high absorbers (e.g. Nigeria) while the six main low absorbers (e.g. Saudi Arabia) were still running significant surpluses. (See Table 21). The surpluses of the low absorbers were as much a source of disequilibrium in the international payments system as those of Japan and West Germany.

The difficulties facing the US under the new regime also became apparent in this period. In 1977 and 1978, the first two years of President Carter's new administration, the US economy grew quickly. This boosted employment and also provided a significant stimulus to the world economy. The US rate of unemployment fell from 8.3 percent in 1975 to 5.9 percent in 1978. The US economy was running close to, if not

faster than, its productive potential. However in the rest of the OECD, the unemployment rates over this period either remained steady or rose as the rate of growth of demand and output was considerably below the productive potential. (Oppenheimer and Posner (1983). Not surprisingly the net result of these policies was a huge deterioration in the US current balance: from a surplus of $21.2 billion in 1975, to a deficit of $11.6 billion in 1978 (table 20). US inflation which had been falling in the mid seventies rose to 7.4 per cent in 1978. The value of the dollar thus fell sharply on the financial markets. By November 1978, it had fallen by 20% compared to its value a year earlier and had depreciated by 50 per cent against other major currencies compared with its value in 1973.

In view of the overwhelming significance of the dollar in world trade and capital flows, its continuing depreciation became a subject of wide international concern. Further in the second half of 1978 foreign dollar balances in the US (excluding foreign holdings of liquid assets) exceeded $200 bn; there were similar amounts of dollar claims held by non-US residents in the Euro-banks (Oppenheimer and Posner (1983). The US authorities as well as the foreign finance ministries thus became seriously concerned by the prospect that with the perceived weakness of the dollar, many holders of it might wish to switch out at whatever the rate.

These developments led to the US authorities to urge surplus countries Japan and West Germany to expand their economies. At the Bonn economic summit in 1978 it was agreed that in order to restore payments equilibrium among the OECD countries, the US should deflate and that Japan and West Germany should take reflationary measures. On the basis

of the preparatory work for the summit by the OECD and IMF (the so-called locomotive and convoy theories), detailed economic measures were accepted by the summit countries. West Germany undertook to launch within six weeks fiscal expansion equivalent to about one per cent of GNP. Japan agreed to achieve a real growth target in fiscal 1978 1.5 per cent higher than in fiscal 1977; it also promised to keep the volume of Japanese exports for fiscal 1978 at or below the level of fiscal 1977 (Llewellyn et al (1985)).

It is controversial the extent to which the pledges of the Bonn summit were actually implemented, but soon the summit decisions were overtaken by the second oil shock. To reduce inflation, to correct the current deficit and to improve the exchange rate of the dollar (all inter-related objectives), the US authorities had already adopted restrictive monetary policies at the end of 1978. With the second oil price increase, these policies were reinforced in 1979 and the US moved to a close approximation to pure monetarism: adoption of money supply ranges and the quantitative targetting by Federal Reserve of the commercial bank reserves (Nordhaus (1982)). The extremely restrictive monetary targets led to a sharp deflation of demand as well as high and widely fluctuating nominal and real interest rates. With similar immediate objectives of containing inflation and current account deficits emanating from the second oil shock, the other industrial countries also put into effect restrictive monetary and fiscal policies. Thus unlike after the first oil shock, there was not even any attempt by the industrial economies in 1979 to counteract the deflationary consequences of the oil price increase itself.

The Less Developed Economies and the Newly Industrialising Countries (NICS)

A significant feature of the intershock period was the much better growth performance of the less developed countries (LDCS) relative to the OECD. As table 22 shows, the first oil shock appears to have had little impact on the long-term trend rate of growth of g.d.p. in the developing countries. Between 1960 and 1970, LDC rate of growth of g.d.p. was 5.6 per cent p.a; over the period 1974-80, it fell slightly to 5.4 per cent p.a. In contrast, in the OECD countries (the middle part of table 22) there was a significant trend decline of the rate of growth of g.d.p. from 5.2 per cent p.a. to 3.2 per cent p.a.

Similarly manufacturing production in the LDCs rose at a rate of 5.9 per cent p.a. between 1960-70 and at a slightly higher rate of 6 per cent p.a. during the inter-shock period 1974-80.[33] In the OECD countries, the trend rate of growth of manufacturing production was nearly halved between 1974-80 relative to that recorded during 1960-70. Consequently, the Third World's share of world manufacturing production - which had remained more or less constant during the 1960s - increased appreciably during the inter-shock period: from 6.9 percent in 1960 to 7.6 per cent in 1970; and to more than 10 per cent by 1980. Its share in world exports of manufactures also rose from 3.9 per cent in 1960 to just over 5.0 per cent in 1970; and to 9.0 per cent in 1980 (UNCTAD (1981)). As table 22 shows, during 1974-80, the volume of manufactured exports from the third world countries increased at a phenomenal rate of 13 per cent per annum whilst those from the OECD countries grew by 5 per cent per annum. During the 1970s, third world imports into the OECD increased at about twice the rate of imports from other sources. These

developments led to concern about de-industrialisation in the OECD countries on account of cheap labour imports from the LDCs.(34)

The third world's economic performance during the inter-shock period is particularly remarkable in view of the huge payments deficits which the oil price increase had caused in the non-oil LDCs. As percentage of g.d.p. the current account deficit of the average middle-income oil importing country increased from one per cent in 1973 to 5 per cent in 1975; for the average low income economy, the deficit increased from 2.4 per cent in 1973 to 3.9 per cent in 1975. These deficits were mainly financed by an enormous increase in commercial loans, particularly in the case of middle income countries. (World Bank (1981)).

The total outstanding public long term debt of these countries increased three fold between 1973 to 1979. Although the rapid increase of third world exports meant that the debt to exports ratio of IDCs changed very little during the 1970s: the other debt indicators reported in Table 23 do show a deterioration in third world's debt situation in that period.

The increased third world indebtedness in the mid-1970s was in line with market signals. Between 1974 and 1978, the average real interest rate (measured as the difference between the London Inter Bank Offer Rate (LIBOR) on three-month US dollar deposits and the US g.d.p. deflator) was only 0.5 per cent, and was on occasion (e.g. 1978), negative. By and large the LDCs used these loans to increase domestic savings and investment (IMF (1983) Avramovitch (1982)).

In conclusion, superficially the floating exchange rate regime had coped with the huge world imbalances generated by the first oil shock reasonably well. Owing to a large increase in imports by the 'high

absorber' OPEC countries, as well as deterioration in their terms of trade, by 1978, the aggregate OPEC surplus had disappeared. Moreover, private banking systems had managed to recycle funds to the balance of payments constrained third world economies thus enabling them to maintain their growth momentum. However, even before the second oil shock of 1979, the system was subject to serious financial and exchange rate disequilibria among the OECD countries themselves. Even to the extent that the financial disequilibria of the oil shock had been accommodated, a heavy price had been paid by the industrial countries. The peak to peak growth rate of the OECD countries 1973-79 was only 1.9 per cent per annum compared with the corresponding growth rates of 4.8 per cent between 1966-69 and 4.6 per cent between 1969-73. [(Llewellyn et al. (1985).] As far as the third world countries were concerned, notwithstanding their good growth record during the inter-shock period, they had large current account deficits and many countries were fast approaching their borrowing limits. In terms of the overall performance of the world economy, the post-Smithsonian system of international regulation was significantly less efficient in coping with international imbalances during the period 1973-78 than was the post-war system of international regulation under pax Americana in the decade following the end of the war.

IV Conclusion and Prospects for the World Economy

This essay has argued that the erosion of the Golden Age economic regime began well before 1973 and that even without the exogenous shocks it would have been difficult to sustain. Our account of the pre-1973 period thus differs significantly from the best known mainstream writing on the subject. First of all we have emphasised the productivity problems prior to 1973, manifested in terms of slackening rates of labour productivity growth, faster reductions in hours of work and declines in the underlying output capital ratios. Neither Bruno and Sachs (1985), Lindbeck (1983) nor Maddison (1982) mention these latter two aspects in any detail. In relation to labour productivity, Maddison assumes that there was no significant deterioration before 1973, Lindbeck asserts that there was 'hardly any general slowdown of productivity among developed countries' before 'approximately 1972-74', and Bruno and Sachs play down the significance of pre-1973 productivity problems.

Secondly we have placed strong emphasis on declines in profits prior to 1973. This is not mentioned in Maddison's account, and plays little or no role for Lindbeck (although he places great importance on the fall in profitability after 1973 in explaining the reduced rate of accumulation and productivity growth). Bruno and Sachs are rather the exception, pointing out that a 'soft landing' (after 1973) from the 'burden of inherited inflation and a growing profit squeeze' would have been difficult to manage even without the commodity and oil price explosion. They see 'real labour costs' manifested in their 'wage gap' (essentially a cyclically adjusted profit share) as a second supply factor of importance (in addition that is to commodity prices) affecting

particularly Europe and Japan. They say 'even before the oil shocks, therefore, many OECD countries faced a major problem of declining profitability and slowing growth' (p. 167). They do not, however, examine this slowing growth (and particularly slackening of accumulation) in any detail. So in terms of the internal tensions there is more emphasis in our account on profitability and productivity.

Thirdly, we have emphasised the inevitability of the breakdown of the postwar system of international regulation (the Bretton Woods regime) as a consequence of the differential development and the varied evolution of competitive capacities of the leading industrial economies. The new system of international regulation (the floating exchange rate regime) which came into force after 1973 was not subject to hegemonic control by a single powerful nation; nor had a cooperative leadership emerged to replace the former US role. In an increasingly interdependent world economy, the new system was therefore not capable of resolving global financial disequilibria in such a way as to ensure a full employment level of world aggregate demand and its appropriate distribution among countries.

Fourthly, in view of the close interconnections between balance of payment disequilibria, exchange rate changes, inflation and the level of activity, we have stressed throughout the important interactions between national co-ordinating rules and international order. The fragility of the world economy in 1973 is demonstrated by the deep and long lasting stagnation triggered by the oil shocks.

During the period between the two oil shocks, the floating exchange rate system and national Keynesian policies led to a transitory period with some suggestion of stability between 1975 and 1979. However the

overall economic performance was much inferior to that of the Golden Age itself (see table 6). Moreover, the erosion of the institutional and behavioural framework of the Golden Age interacting with the severe tensions (e.g. the payments imbalances and currency movements) of the international regulatory regime made the new system extremely vulnerable.

The second oil shock saw the final abandonment of what we have termed in section I the Golden Age regime. It is beyond the scope of this essay to provide a proper discussion of such patterns as may be emerging in the post 1979 period. However, we briefly note that at the international level, as seen earlier, instead of attempting to compensate for the deflationary effects of the 1979 oil price rise, restrictive monetary and fiscal policies were strongly reinforced in the US and adopted by other main industrial countries. In an international economy, ever more closely linked by 'free' and gigantic capital movements, this resulted in the early 1980s in a beggar-my-neighbour competitive deflation and a prolonged recession. After 1983 the expansionary impacts of US policy benefited European, Japanese and NIC export growth. But from 1985 onwards the combined impact of the US trade and public sector deficits meant that the US was less and less able to play the role of an independent engine of growth in the international system.

At the national level, the assault on the existing domestic rules of coordination within the individual countries has inevitably taken on a differentiated and uneven character. Nevertheless a number of common features can be discerned:

(a) The golden age presumption that workers should bargain collectively to protect wages against inflation and to collect a share of the fruits of productivity growth was challenged. Norms of indexation were repudiated (Italy), and attempts made to weaken trade unions by legislation (UK - secondary picketing, Germany - social security payments for strikers) and increasingly collective bargains involved the giving up of previously established gains.

(b) Demands for wage flexibility have been paralleled by demands for employment flexibility - the right to hire and fire through rolling back employment protection legislation (UK, France).

(c) Attempts to reduce the coverage and value of welfare state benefits have been general.

(d) There has been an explicit abandonment of full employment policy embodied in the adoption of rules about monetary growth and public sector deficits.

(e) There has been a general trend towards extending market pressures - privatisation of nationalised industries (UK, France, Japan), cuts in government subsidies to loss making firms and industries (Germany).

Viewed from the standpoint of governing economic circles in the leading OECD countries, this emerging new economic regime has already been 'successful' in some important directions. First, there has been a major change in the balance of power both internationally and internally. Internationally, the collapse of commodity prices, the extremely high real interest rates, and the reduction of capital flows (all directly attributable to the economic policies of the advanced countries - Singh (1987a Lipietz (1985)) have greatly weakened the

economic and political power of third world countries. In the mid-1970s these countries were vociferously demanding a new international economic order, today most of them (particularly in Africa and Latin America) are severely balance of payments constrained, heavily in debt and in the position of supplicants before the IMF and the World Bank. The latter two institutions are only willing to provide the much needed foreign exchange if these countries carry out so-called 'structural reforms', which usually follow the same pattern of de-nationalisation, de-regulation, internal and external liberalisation of markets which are the hallmark of changes in the advanced countries. Similarly in the latter, the bargaining position of the trade unions and of the working class in general have been weakened at both the work place and macroeconomic level.

The second main success of the emerging new systems has been an improvement at least in terms of inflationary performance compared with the mid-1970s. Instead of the stagflation (low growth and high inflation) of those years the 1980s have been characterised by low growth and low inflation. This of course has been directly related to the weakened bargaining power of the unions and the fall in commodity prices that accompanied the changing internal and international balance of power to which we have just referred.

There are however, important weaknesses in the 1980s record. First, although unemployment rates may benefit in the mid-1990s as the rate of growth of the labour force declines due to demographic factors, they look set to remain exceptionally high in most OECD countries. Only a trend increase in the rate of growth of world economic activity can offer the prospect of substantial improvement.

Secondly, despite five years of IMF management by means such as austerity programmes and debt rescheduling, there is still no solution to the third world debt problem in sight. The debtor countries have suffered enormous economic losses during this period without being anywhere near to recovering their credit worthiness or their pre-1980 long term growth rates. A wide range of observers believe that for many countries the debt problem is no longer one of 'liquidity' but is one of 'insolvency' (See Cline (1985), Singh (1987(a), Lipietz (1985)).

Thirdly, there are extremely large payments imbalances in the international economy which have become a source of major instability on the world's currency and stock markets.

Nevertheless, as long as high unemployment rates in the advanced countries are politically acceptable, the balance of advantage (from the standpoint of conservative governments in the leading countries) lies in continuing with the current macroeconomic pattern of low growth and low inflation. For if expansionary policies were followed and the world rate of economic growth rose on a sustained basis to anywhere near its Golden Age level, it will again lead to an increase in the power of unions as well as a sharp rise in commodity prices, including oil. This in turn will rekindle a conflict over distribution threatening to push up inflation. For conservative policy makers the only perceived benefit of a trend increase in the rate of growth of the world economy will be that it will greatly help towards a solution of the third world debt problem. However they fear that this will be at the expense of rising commodity prices, inflation and adverse changes in economic and political balance of power. Since there are a variety of other ways of addressing the debt problem (some write offs, interest capping etc.), it

is unlikely that the leading OECD countries will seek to expand the world economy for this purpose alone. They may however respond to US pressure to boost activity as a way of softening the impact of reductions in its budget and trade deficits.

To be sure there is a great deal of discussion about policy coordination among the leading industrial countries to revive the world economy. However, it is important to note that the central objective of the policy coordination is not to bring about an overall increase in the rate of growth of world demand, but rather to redistribute the current level of demand among the leading countries in a way which will reduce their huge payments imbalances and thus help restore stability in the currency and financial markets.

The foreseeable prospect for the OECD countries (and hence for the world economy) must be at best one of continued slow growth. This perspective assumes that the policy coordination which is currently being pursued by the leading OECD countries is wholly successful; if it is not, the world economy is likely to grow at a still slower rate and even the possibility of a serious slump in the short term cannot be ruled out.

Finally, there are circumstances which could lead to much higher rates of growth in the OECD countries. For example, if the current high unemployment rates become politically unacceptable again in the leading countries, their governments will be obliged to seek a higher rate of growth of world demand. Secondly, if the Glasnost policies in the Soviet Union show spectacular success leading to a much higher rate of growth of productivity in that country, ideological and military reasons will compell the Western countries to improve their own economic

performance. However this will require the abandonment of the fledgling 1980s economic regime. Growth rates approaching the Golden Age levels will only be feasible and sustainable with low inflation, on the basis of new domestic rules of co-ordination and a rather different international order.

Footnotes

Section 0

(1) For compatibility with OECD series our data set for profitability, capital accommodation and state spending covers the "big seven" (i.e. including Canada - see Armstrong and Glyn (1986)). We refer to this data as covering the ACCs. In the text we also on occasion refer to data for the OECD as a whole.

(2) For the West European economies trade between themselves accounted for a growing proportion of the total, 66% in 1969 compared with 56% in 1955 (United Nations (1972), p. 31). This general approach has been developed by the so-called Regulation School of French economists (see Aglietta (1976), Boyer and Mistral (1978), Lipietz (1979, 1983, 1985), Boyer (1986)). What we have termed Macroeconomic Structure and Rules of Co-ordination correspond to what is sometimes translated literally as Regime of Accumulation and Mode of Regulation. The golden age pattern as a whole is described by these writers as 'Fordism'. The details of, and emphasis within, our analysis of the Golden Age differ in many respects from this work (which in turn contains many nuances of interpretation); we draw also on other analyses in a broadly comparable tradition (Armstrong, Glyn and Harrison (1984), Bowles, Gordon and Weisskopf (1983) and Rowthorn (1980) in particular).

Section I

(3) This section draws on a background of industrial country experience based on Angus Maddison's seminal contribution. (Maddison (1982)).

(4) For the "Big Seven" exports of manufactures between them rose as a percentage of total exports from 41% in 1950 to 62% in 1971, Batchelor et al. (1980) Table 2.4.

Section II

(5) This estimate was derived from a pooled regression of the growth of hourly labour productivity on the growth rate of the per worker fixed stock of capital for the big seven capitalist countries (excluding France) for three periods 1870-1913, 1913-1950 and 1950-73, using data from Appendices C and D of Maddison (1982). A pooled regression for growth rates of the two variables over successive cycles during the years 1950-73 for the big seven countries yields an almost identical coefficient. Lindbeck (1983) reports similar regression coefficients. Such regression results could be interepreted within the 'growth accounting' framework as suggesting that differences in rates of technical progress across countries and time generated nearly proportional differences in rates of capital accumulation. The kernel of truth in the growth accounting approach is that the impact of capital accumulation on productivity cannot be understood independently of the technology and work organisation which accompanies it; its basic weakness lies in the implication that new technology and work organisation can be incorporated in the production process without investment.

(6) This is based on the simple decomposition of the profit rate (P/K) into P/K = P/Y x Y/K where P is profits, Y is output and K is the capital stock. We present a fuller decomposition in Section III.1 below.

(7) The history of the spread of Taylorism throughout Europe and Japan during the inter-war period, and its implicit or explicit acceptance by much of the Labour Movement at that time has been extensively studied. In the USA, Germany, France and Italy the main battles over these principles began just before or after the First World War. Reformist elements in the Trade Union movement had accepted the "bargain" as early as the 1920s. The pro-communist "red international" of Trade Unions did so in the 1930s. None of this of course put an end to resistance at the shopfloor level. (See e.g. de Montmollin and Pastre (1984)). It is worth emphasizing that the importation of scientific management technique was a prominent part of the Japanese strategy of importing advanced technology in the post 2nd World War period (see for example Caves and Uekusa (1976) and the references therein).

(8) The original behavioural evidence behind the theory of the kinked demand curve - suggesting that producers try to avoid destabilizing short term price warfare (especially in capital intensive industries), prefer to maintain stable long term supplier/customer relationships, and more readily accept as 'fair' price changes based on actual or anticipated common cost increases, all predates the post war Golden Age period (Hall and Hitch (1939), Sweezy (1939) Means (1940)). The structural basis for this behaviour, in markets where rivalry takes place between relatively few

interdependent producers, was as we document below reinforced in these years.

(9) The pace of these developments and the levels of cover provided varied between countries with the USA lagging behind Europe, and Japan providing the least social protection of all. Flora and Alber (1981), Kudrle and Marmor (1981) Boltho (1975)

(10) In Japan the growth in transfer payments was by contrast very small from 3.7% of GNP in the mid fifties to 4.5% by the early 1970s (Boltho (1975)).

(11) See Gardner (1969); Van Dormael (1978); Horsefield (1969); Harrod (1951). Milward (1984).

(12) Future customs unions and free trade associations were, however, under Article 24 of GATT specifically excluded from this general rule of equal treatment provided that they did not involve any overall increase in trade barriers against countries outside the union.

(13) A number of US scholars (e.g. Kindleberger (1987)) emphasise the altruism of the Marshall Plan. That may well have been the main motivation of some of the economic architects of the Plan in the State Department, but as noted above, it was not that of others. However, by the time the Plan was approved by the US Congress, the US interest and the broader aims of US foreign economic policy were squarely in the forefront.

(14) Recipient countries were required to sign pledges promising a range of economic actions, including the stabilisation of currency and reduction of trade barriers, which were in many respects more stringent than under IMF conditions developing countries. See Block (1977).

(15) Full cost pricing does not guarantee fixed income shares unless firms can vary the timing of their price increases to account for unanticipated wage increases and include in their mark up an element to cover the gap between price increases and expected wage increases which otherwise will have to be met (at the going cost of finance) by borrowing (see e.g. Tarling and Wilkinson (1985) Godley and Cripps (1983)).

Section III

(16) For example Lindbeck (1983) and Matthews (1982). The fact that Bruno and Sachs (1985) play down the suggestion of a slowdown in productivity growth before 1974 is the more surprising since they actually find that in half the countries they examine the most significant break in the manufacturing productivity trend occurs before 1973 and they do not test whether in other cases (e.g. Japan) there was a break before 1973 though less severe than after 1973.

(17) This is because the golden age relationship shows every 1 per cent faster growth in the capital labour ratio increasing labour productivity by around 0.7 per cent (and thus increasing the growth of the output capital ratio by 0.3 per cent). The regression coefficients are 0.76 for business and 0.68 for manufacturing. The smaller (unweighted) average decline in manufacturing productivity growth than business is largely accounted for by the United States where manufacturing productivity rebounded in the early seventies, whilst business productivity growth remained at a low rate (see table 7). For Japan the comparison is between the

early seventies and late sixties which was the period of most rapid productivity growth.

(18) Such exercises to disentangle component influences of the profit share and rate were developed by Weisskopf (1979) and elaborated in Weisskopf (1985). The version used here differs from his in defining product wages in terms of output rather than value added prices which allow more explicit account to be taken of input costs. Appendix A describes our decomposition more formally.

(19) Looking at five periods of intensification of profit squeeze at the end of the sixties (US, Italy) or early seventies (in the UK there were no such intensification) gives a rather different result. Productivity slowed down on average by 1.5 per cent, real input costs deteriorated by 1.1 per cent per year whilst product wages growth was unchanged (and real wage growth accelerated by 1.0 per cent per year). The pattern in the early seventies in US manufacturing where productivity recovered, a slowdown in product wages absorbed the rise in real input costs, is included in the early seventies data in the text. This blurs the typical profit squeeze pattern where productivity slowdown was important. Common to these various analyses is the fact that product wages did not accelerate, although real wages did. It should be noted also that the failure of product wages to slow down when real input costs were accelerating means that total real direct costs of production do rise faster in the early seventies (line (d)).

(20) Unemployment rates were generally lower after the mid 1960s (Table 6) but had edged up a little in the EEC and USA by 1973. Vacancy statistics however suggest that strains in the labour market may have peaked rather later than registered unemployment, in 1970 and 1973 in Germany and Japan respectively. This is confirmed by data for agricultural employment which show a maximum rate of decline in the early 1970s in France, Germany and especially Japan.

(21) Both the Chan-Lee and Sutch (1985) and Weisskopf (1985) studies of profitability find that indicators of international competition (relative unit labour costs and import penetration respectively) contributed to profit squeezes in some countries. The role of international competition in squeezing profits is a factor not analysed in the theoretical chapters in this volume.

(22) Since the profit share is defined in terms of net value added it is the trend in the current price net value added to net capital stock ratio which determines the profit rate. This differs from the trend in the constant price ratio of output to gross capital stock because of:

(a) changes in the price of value added relative to gross output; as already discussed the late sixties and seventies saw a rise in real materials and depreciation costs which further depressed the ratio of current price value added to the capital stock.

(b) changes in the price of gross output relative to the cost of capital goods; over the sixties and early seventies the prices of capital goods rose on average around 1 per cent per year faster than the price of manufacturing output, further reducing the output capital ratio in current prices. There does not appear to have

been any tendency for the relative price of capital goods to accelerate prior to 1973 and the calculations in tables 11 and 12 (line (e)) suggest some deceleration after 1973. For the typical major country the average decline in the output capital ratio was about 2 per cent per year in the early seventies. This fall was about equally comprised of a fall in the real ratio, a decline in value added prices relative to output and of rises in relative capital goods prices (lines (7)-(9) and (e) of table 11).

(23) See for example Helliwell (1976).

(24) It should be noted that our profit variables are pre-tax. In the UK in particular more generous tax treatment of investment meant that the post-tax profit rate fell much less than the pre-tax rate (see Flemming et al (1976)). This does not seem to hvae happened everywhere else.

(25) Predictions, based on lagged profit rate decline, are 3.3 per cent fall in the growth rate of the manufacturing capital stock in the USA, 1.9 per cent for Europe and 3.2 per cent for Japan; actual figures were 0.9 per cent, 2.8 per cent and 4.6 per cent respectively. We are not suggesting that the fall in the accumulation rate by 1974 in Japan and Europe only reflected the direct effect of the decline in profit rate recorded up to 1973. A regression including only the profit rate obviously incorporates the effect of variables - such as the growth rate - which may affect both profitability and investment directly. Moreover the accumulation rate in 1974 must have been affected to some extent by the lack of confidence flowing from the oil crisis. It is striking however that in the manufacturing sectors of Europe and Japan

around three quarters of the decline up to 1974 in accumulation from peak rates had occurred by 1973.

(26) It is interesting to note that the ability of Japanese management systems to obtain the commitment and cooperation of the labour force in precisely the area, of maintaining smooth continuous production, has been identified as the key to the 'just-in-time' or Kanban system. The economies in inventory holdings, which this system yields, depends critically on the ability to keep the production system going. The Japanese success in the 1960s and 1970s in dealing with this contradiction in the Fordist pursuit of smooth continuous production at lowest cost had the added advantage of minimizing the cost of redundant inventory when style or quality changes were introduced in final products. This reduced somewhat the emphasis on long standardized production runs. Thus the competitive challenge they could mount was based both on cost and on flexibility of product quality and design (e.g. Abernathy, Clark and Kantrow (1983)). Aoki (this volume). For further discussion of these issues see Marglin (1987) and Noble (1984).

(27) As argued earlier conventional growth accounting gives a relatively small weight to capital accumulation. Using our estimate of the elasticity of hourly productivity with respect to the capital labour ratio of 0.75 (see footnote 25) the decline in the rate of accumulation would explain on average half of the productivity slowdown after 1973 in six major countries (and a little bit more if some allowance is made for premature scrapping of capital equipment due to energy price increases (data from Maddison (1984) tables 2.1 and 2.3)).

(28) Statutory controls were attempted, for instance, in the UK in the period 1966-70 and later in the period 1972-4 and were in force throughout the 1960s in the Netherlands. In the US statutory control in 1971-4 followed government inspired voluntary restraint in the mid 1960s (Blyth (1979)).

(29) Thus it has been argued that in the UK the spread of the multidivisional firm and the reorganization of industrial relations procedure following merger have been part of a management strategy to control wage costs and alter bargaining strength (Marginson (1985)).

(30) Rising from 3.4% to 4.5% in the USA, 8.0% to 14.2% in the UK, and 10.1% to 15.8% in the rest of the EEC, with Japan recording a rise from 2.2% to 3.0% in 1973 before falling back to 2.4% in 1978 (CEPG (1979)). A number of studies which adjust concentration ratios quantitatively or qualitatively for international trade and other changes in the corporate environment in this period conclude that competitive pressures were maintained or intensified (the latter especially in the case of the USA and UK) EEC (1982) Shepherd (1983) Utton and Morgan (1983)

(31) Thus whilst unemployment compensation expenditure rose fairly rapidly from 1960-75, after that the growth rate fell as more stringent eligibility criteria were introduced, and the unemployed became increasingly long term and more heavily dominated by those on the outside of the dual market especially the young and married women (OECD (1985a))

(32) Earlier, in March 1968, the US had already announced that it would no longer be prepared to convert privately held dollars into gold;

nor would it support the price of gold at $35 an ounce in the free market. This led to a two-tier gold market, with official transactions at $35 an ounce and the free market allowed to reach its own level.

(33) Thus the mainstream of the economics profession was overwhelmingly in favour of the floating rate regime in the early 1970s [Llewellyn, et. al. (1985)].

(34) Dennison (1979) has estimated that this supply side effect explained a fall of perhaps 0.3 per cent p.a. in the rate of growth of US potential output after the first oil shock, out of a total decline of about 1.5 per cent p.a.

(35) Since the second oil shock affected the LDCs much more severely, the relative economic performance of these countries over the period 1974-78 is even better than suggested by the data in table 62. Similarly it should be borne in mind that not all parts of the third world did well in the intershock period; the economies of sub-Saharan African countries suffered a significant set-back after 1973.

(36) A wide range of systematic studies have shown these suggestions of third world exports have not caused de-industrialisation in the North, the rate of growth of manufactured imports in the Southern Countries was also very high, and most non-oil LDCs remained balance-of-payments constrained. Evidence shows that the North's intra-trade (e.g. with Japan) was far more de-stabilising for Northern economies than their manufacturing trade with the South. For a full discussion of these issues, see Singh (1981), OECD (1979).

APPENDIX A

Decomposition of Changes in the Profit Rate

Tables 11 and 12 are based on the following decomposition:

(1) Profit Rate

$$\text{Profit rate } (r) = \frac{PROF}{NY} \cdot \frac{NY}{NK}$$

where PROF is net operating surplus (after adjustment for self-employment)
NY is net value added at current prices (net of capital consumption)
NK is net capital stock at current prices

So growth rate of profit rate = growth rate of profit share + growth rate of net output/capital ratio

(2) Profit Share

$$\text{Profit share } \frac{PROF}{NY} = 1 - \frac{W}{NY}$$

where W is gross wage and salary bill (adjusted for self-employment)

So growth rate of profit share = $\frac{W}{PROF}$ x growth rate of wage share

$$\text{Wage share } \frac{W}{NY} = \frac{W}{P_q \cdot E} \cdot \frac{P_y \cdot E}{Y} \cdot \frac{Y}{NY} \cdot \frac{P_q}{P_y}$$

where P_q is price index of gross output

E is employment

P_y is price index for value added

Y is gross value added at current prices

So growth rate of wage share =

$$\dot{w} - [\dot{LP} - \dot{\frac{Y}{NY}} = (\dot{\frac{DEP}{Y}}) - (\dot{\frac{P_q}{P_y}})]$$

where w is product wage per head (money wages deflated by gross output prices)
LP is labour productivity (real value added per head)
DEP is capital consumption at current prices
$\dot{}$ indicates the growth rate of the relevant variable

So growth rate of wage share is excess of growth of product wages over growth of real factor incomes (the final three terms). The growth rate of real factor incomes depends on the growth of productivity, the changing weight of depreciation and of other input costs (reflected in different growth rates of output prices and value added prices). In the tables the latter two terms are counted as the effect of input costs.

(3) Net output/capital ratio

$$\frac{NY}{NK} = \frac{Ny}{Nk} \cdot \frac{P_y}{P_k}$$

where N_y is net value added at constant prices
Nk is net capital stock at constant prices
P_k is price index for capital stock

$$= \frac{q}{k} \cdot \frac{P_q}{P_k} \cdot \frac{y}{q} \cdot \frac{P_y}{P_q} \cdot \frac{k}{Nk} \cdot \frac{Ny}{y}$$

where q is gross output at constant prices
k is gross capital stock at constant prices
y is gross value at constant prices

So growth rate of net output/capital ratio =

$$\left(\frac{\dot{q}}{k}\right) + \left(\frac{\dot{y}}{q}\right) \left(\frac{\dot{P_q}}{P_k}\right) + \left(\frac{\dot{P_y}}{P_q}\right) + \left(\frac{\dot{k}}{Nk}\right) + \left(\frac{\dot{Ny}}{y}\right)$$

So the growth rate of the net output/capital ratio is the sum of the growth rate of the gross output/gross capital stock ratio, the growth rate of value added relative to gross output (assumed to be zero since 'materials productivity' is assumed unchanged) and the effect of capital costs (the last four terms). The effect of capital costs includes relative price effects - the relative price of capital goods to gross output, and gross output to value added - the changing weight of capital consumption in value added (again including a real and relative price component) and the ratio of net to gross capital stock (reflecting the growth rate of the capital stock).

Chart 1. ACC production, capital stock, productivity and employment 1955-80.

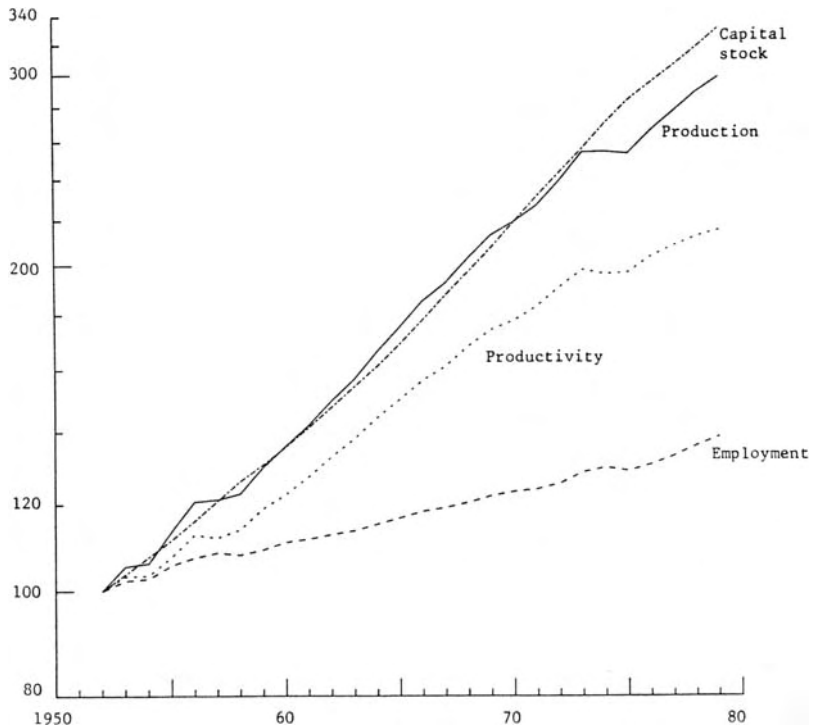


Chart 2. ACC business mechanization and output capital ratio, 1955-80.

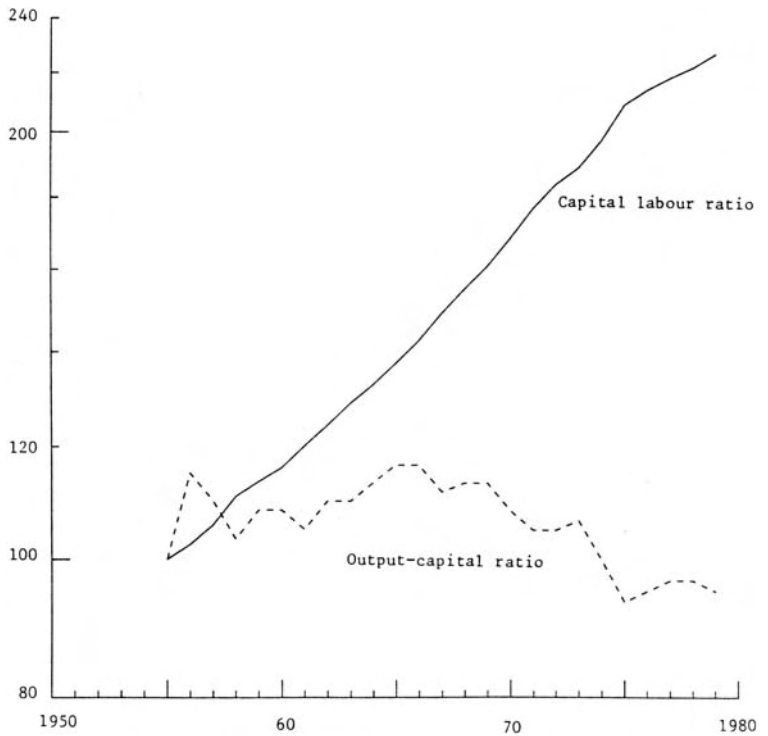


Chart 3. ACC business productivity and product wages, 1955-80.

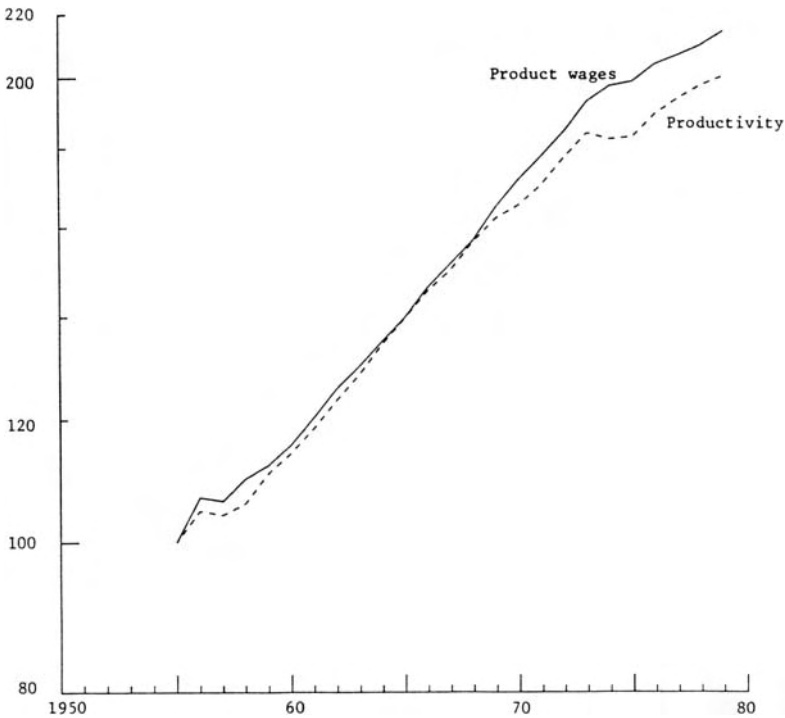


Chart 4. ACC profit rates, 1955-80

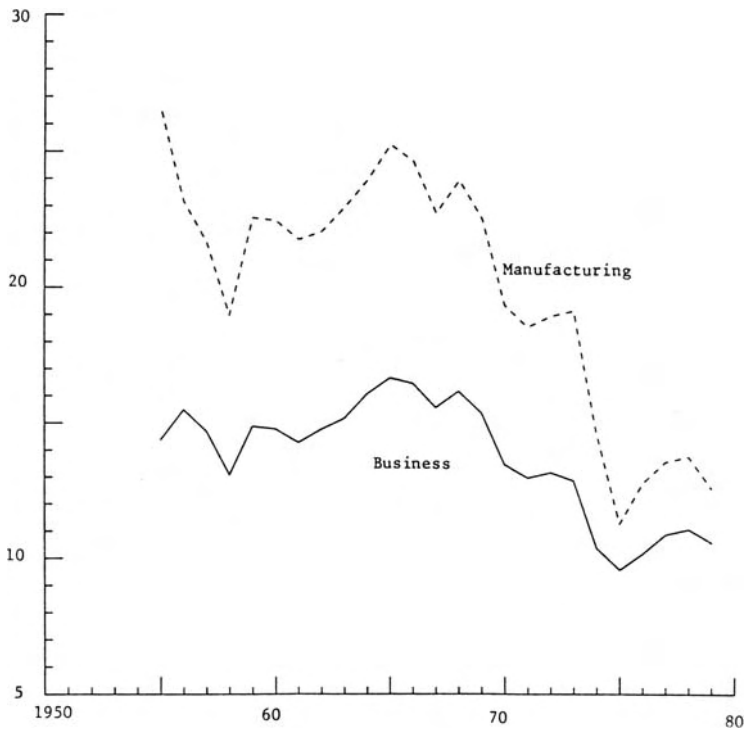
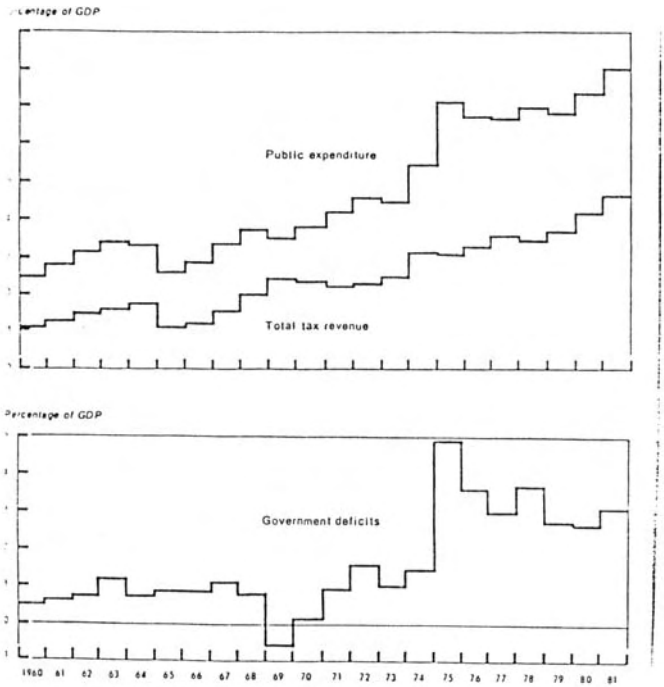


Chart 5
PUBLIC EXPENDITURE, TOTAL TAX REVENUE AND GOVERNMENT DEFICITS
AS A PERCENTAGE OF GDP
1960-1981

(Unweighted average for the seven major OECD countries)



a. Averages for 1960-64 exclude Japan.

Source: OECD (1985)

Table 1. Growth Characteristics of Different Phases, 1820-1979
(Arithmetic average of figures for the individual countries).

Phases	GDP	GDP per head of population	Tangible reproducible non-residential fixed capital stock	Volume of exports
	(Annual average compound growth rates)			
I (1820-70	2.2[a]	1.0[a]	(n.a.)	4.0[b]
(1870-1913	2.5	1.4	2.9	3.9
II 1913-50	1.9	1.2	1.7	1.0
III 1950-73	4.9	3.8	5.5	8.6
IV 1973-9	2.5	2.0	4.4[c]	4.8

a Average for 13 countries

b Average for 10 countries

c 1973-78.

Source: Maddison (1982).

Table 2.

2a. Export Shares of GDP 1950-1984 and proportion of production of manufacturers exported, 1899-1959

(a) Export shares

	1950	1955	1960	1965	1973	1979	1984
OECD TOTAL							
current prices	10.3	11.8	13.1	12.1	14.6	19	21.2
constant prices	9	9.8	11.6	12.4	16.8	19.3	21.3
OECD EUROPE							
current prices	22.3	20.9	21.8	21	25.4	28.3	31.7
constant prices	12.7	14.8	16.7	18.1	25.6	28.3	32
JAPAN							
current prices	11.9	10.7	10.8	10.5	10.3	-	15.2
constant prices	7	7	8.7	10.9	9	-	17.9
USA							
current prices	4.3	4.4	4.8	5.1	6.9	-	7.5
constant prices	4.3	4.6	5.4	5.8	7.9	-	8.2

Source: OECD National Accounts 1950-68 and 1960-84.
Constant prices are 1980 prices and exchange rates linked to 1963 prices and exchange rates.

(b) Proportion of manufactures exported

1955 constant prices — percentage

	1899	1913	1929	1937	1950	1955	1959
France	33	26	25	12	23	18	18
Germany	31	31	27	15	..	..	..
West Germany	-	-	-	17	13	19	23
United Kingdom	42	45	37	21	23	19	19
Other Western Europe	17	18	23	21	17	18	21
United States	5	5	6	5	5	4	4
Japan	25	40	29	40	29	26	23
TOTAL	19	18	15	12	10	10	11

Source: Maizels (1963) p. 223.

Table 3. Productivity Growth and Employment Structure: Employment by Sector as a Percentage of Total Employment and growth of output per employee 1870-1981.

		Employment Shares				Output Growth of GDP per employee		
		1870	1960	1973	1981	1870-1950	1950-73	1973-81
France	A	49.2	21.4	11.0	8.3	1.4	5.6	3.5
	I	27.8	36.2	38.6	34.3	1.4	5.2	3.2
	S	23.0	42.4	50.3	57.4	0.7	3.0	1.6
Germany	A	49.5	13.8	7.3	5.8	0.2	6.3	3.9
	I	28.7	48.2	46.6	43.4	1.3	5.6	2.6
	S	21.8	38.0	46.1	50.8	0.7	3.0	1.6
Japan	A	72.6	30.2	13.4	10.0	0.7	7.3	1.1
	I	-	28.5	37.2	35.3	1.7	9.5	4.7
	S	-	41.3	49.3	54.7	0.5	3.6	1.9
United Kingdom	A	22.7	4.1	2.9	2.8	1.4	4.7	2.8
	I	42.3	47.8	42.0	35.8	1.2	2.9	1.8
	S	35.0	48.1	55.1	61.4	0.2	1.6	0.7
United States	A	50.0	8.0	4.1	3.4	1.3	5.5	1.6
	I	24.4	32.3	32.3	29.5	1.6	2.4	-0.2
	S	25.6	59.7	62.4	67.1	1.1	1.8	0.1

Key: A = Agriculture
I = Industry
S = Services

Source: Maddison (1984).

Table 4. Cyclical Characteristics of Different Phases, 1820-1979
(Arithmetic average of figures for individual countries)

Phases	Maximum peak-to-trough fall (or smallest rise) annual	Maximum peak-to-trough fall in export volume	Average unemployment rate (percentage of labour force)	Average annual rise in consumer prices
I (1820-73	-6.7[a]	-21.7[b]	(n.a.)	0.2[b]
(1970-1913	-6.1	-18.2	4.5[c]	0.4
II 1920-38	-11.9	-36.5	7.3	-0.7[d]
III 1950-73	+0.4	-7.0	3.0	4.1
IV 1973-9	-1.3	-6.4	4.1	9.5

a Denmark, France and UK only.

b France, Germany, Sweden, UK and USA only

c UK and USA 1900-13

d 1924-38 for Austria and Germany 1921-38 for Belgium

Source: Maddison (1982).

Table 5. Productivity Levels per Man Hour Relative to USA (=100)

	1870	1913	1950	1973	1979	1981
USA	100	100	100	100	100	100
UK	114	81	56	64	66	78.2
France	60	54	44	76	86	95.5
Germany	61	57	33	71	84	95.5
Italy	63	43	32	66	70	-
Japan	24	22	14	46	53	58.5

Source: A. Maddison (1982) (1984).

Table 6. Post War Economic Performance in 6 Major Industrial Countries

	Average Unemployment				Consumer prices			Real GDP			Real GDP per Man Hour	
	1952 -64	1965 -73	1973 -79	1980 -83	1950 -73	1973 -79	1979 -83	1950 -73	1973 -79	1979 -83	1950 -73	1973 -81
USA	5.0	4.5	6.5	8.4	2.7	8.2	8.2	2.2	1.9	0.7	2.6	1.1
UK	2.5	3.2	4.6	9.0	4.6	15.4	10.7	2.5	1.3	0.4	3.1	2.9
France	1.7	2.4	4.2	7.6	5.0	10.7	12.1	4.1	2.6	1.1	5.1	3.0
Germany	2.7	0.8	3.1	5.7	2.7	4.7	5.1	5.0	2.6	0.5	6.0	3.7
Italy	5.9	3.4	6.0	8.6	3.9	16.3	17.5	4.8	2.0	0.6	5.8	2.5*
Japan	1.9	1.3	1.8	2.3	5.2	10.0	4.3	8.4	3.0	3.9	8.0	3.1

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	Non Residential Fixed Capital Stock**		Non Residential Fixed Capital Stock Per Man Hour		Volume of Exports		
	1950-73	1973-9	1950-1973	1973-1978	1950-73	1973-79	1979-83
USA	4.0	3.0	2.9	1.8	6.3	4.9	-1.6
UK	3.9	3.2	4.0	4.3	3.9	4.7	-0.1
France	4.5	4.5	4.5	5.3	8.2	6.1	2.3
Germany	6.1	4.1	6.1	6.3	12.4	4.7	4.1
Italy	5.1**	4.2***	5.4	6.3	11.7	7.1	1.2
Japan	9.2+	6.2+	7.6	6.8	15.4	7.6	10.2

Sources: Maddison (1982), (1984), OECD (1984), Matthews et al. 1982)
Notes: * 1973-79
** Averaged gross and net except where stated
*** Gross Stock Only
+ Average of gross stock for whole economy and net stock for private sector only.

Table 7

HOURLY PRODUCTIVITY GROWTH
Average annual percentage growth rates

	50's		Early 60's	Late 60's	Early 70's
USA[a]					
Business	4.1	2.9	3.9	2.1	2.3
Manufact	3.3	1.8	3.9	1.6	4.2
JAPAN[b]					
Business		7.7	9.9	10.7	7.8
Manufact		9.0	8.6	11.4	9.5
GERMANY[c]					
Business		(6.6)	5.8	6.3	5.4
Manufact		6.8	6.8	6.2	5.0
UK[d]					
Business		1.9	2.4	3.0	3.3
Manufact		2.9	3.4	4.1	5.1
FRANCE[e]					
Business		4.9	5.5	5.6	6.3
Manufact		5.5	6.5	7.6	6.1
ITALY[f]					
Business		5.8	7.3	6.9	7.0
Manufact		5.8	8.1	7.3	8.6

Sources:

Manufacturing Data adjusted and updated from US Bureau of Labor Statistics Underlying Data for Indices of Output per Hour (1984). Business data main sources as indicated below. Dating is cyclical peaks

a. 1948-53, 1953-60, 1960-66, 1966-69, 1969-73. Kendrick and Grossman (1980).
b. 1954-61, 1961-64, 1964-70, 1970-73. Dennison and Chung (1976).
c. 1952-61, 1961-65, 1965-69, 1969-73. Volkswirtschaftliche Gesamtrechungen.
d. 1950-60, 1960-65, 1965-69, 1969-73. National Income and Expenditure.
e. 1951-60, 1960-66, 1966-70, 1970-73. DMS disaggregated data set
f. 1951-61, 1961-66, 1966-70, 1970-73. Annuario di Contabilita.

Table 8
OUTPUT CAPITAL RATIOS
Average annual percentage growth rates

	50's	Early 60's	Late 60's	Early 70's
USA				
Business	0.4	2.6	0.4	0.9
Manufacturing	-1.5	4.5	-1.6	1.3
" (adj cap ut)	0.4	1.6	-0.1	1.4
" (adj cu hrs)				
JAPAN				
Business	4.6	-0.3	0.2	-3.4
Manufacturing	5.0	-3.4	0.5	-2.4
" (adj cap ut)	3.5	-1.1	-0.4	0.1
" (adj cu hrs)	4.5	-2.4	1.5	-1.4
GERMANY				
Business	0.4	-2.6	-1.8	-2.3
Manufacturing	0.3	-1.6	-0.3	-2.1
" (adj cap ut)	0.3	-1.6	-0.3	-1.5
" (adj ut hrs)	1.3	-0.8	-0.3	-1.2
UK				
Business	-0.2	0.4	-1.5	-0.7
Manufacturing	-1.3	-0.1	-0.4	-0.7
" (adj cap ut)	-1.2	0.4	-0.2	-1.1
" (adj cu hrs)	-1.2	0.6	0.1	0.3
FRANCE				
Business	(2.0)	1.6	0.2	0.1
Manufacturing		2.3	1.7	0
" (adj cap ut)		1.7	1.3	0.8
" (adj cu hrs)		1.7	2.1	0.3
ITALY				
Business	1.8	-0.1	2.4	-1.2
Manufacturing	0.3	-0.2	4.1	0.3
" (adj cap ut)	0.4	0.7	2.5	0.3
" (adj cu hrs)	0.4	1.3	5.2	3.6

Sources: As table 7 plus Artus (1977) for capacity utilisation. For each country Line (3) adjusts for estimated changes in capacity utilization. Line (4) in addition adjusts for hours of work.

Table 9

PRODUCTIVITY AND OUTPUT-CAPITAL RATIOS MANUFACTURING 1969-85

	Late 60's	1973-79	1979-85
	per cent per annum		
USA			
Hourly Labour Productivity	4.2	1.3	3.4
Output Capital Ratio	1.3	-1.6	-0.7
JAPAN			
Hourly Labour Productivity	9.5	5.6	6.2
Output Capital Ratio	-2.4	-0.8	2.8
GERMANY			
Hourly Labour Productivity	5	4.3	3.1
Output Capital Ratio	-2.1	-0.4	-0.3
FRANCE			
Hourly Labour Productivity	6.1	4.9	3.5
Output Capital Ratio	0	-1.1	-3.8
UK			
Hourly Labour Productivity	5.1	1.2	3.9
Output Capital Ratio	-0.7	-3.1	-1.7
ITALY			
Hourly Labour Productivity	8.6	3.3	3.3
Output Capital Ratio	0.3	0	-1

Sources: Table 7 plus OECD Economic Outlook December 1985 table 18, December 1987 table 20.

Table 10

PROFIT RATES 1960-73

Percentages

	ACC	USA	EUROPE	JAPAN
Business				
Peak year[1]	16.2	19.8	16.5	32.0
1973	12.9	13.1	11.3	19.6
1973 ÷ peak year	0.80	0.66	0.68	0.61
Manufacturing				
Peak year[1]	24.1	35.5	20.7	46.8
1973	19.4	21.8	12.9	33.5
1973 ÷ peak year	0.80	0.61	0.62	0.72
PROFIT SHARES 1960-73				
Business				
Peak year[1]	23.5	22.5	25.2	38.4
1973	20.0	16.7	18.9	30.4
1973 ÷ peak year	0.85	0.74	0.75	0.79
Manufacturing				
Peak year[1]	23.7	23.0	25.0	40.7
1973	20.4	17.4	17.9	32.9
1973 ÷ peak year	0.86	0.76	0.72	0.81
OUTPUT TO CAPITAL RATIOS 1960-73				
Business				
Peak year[1]	0.69	0.88	0.66	0.83
1973	0.64	0.78	0.6	0.64
1973 ÷ peak year	0.93	0.89	0.91	0.77
Manufacturing				
Peak year[1]	1.01	1.54	0.83	1.15
1973	0.95	1.26	0.72	1.02
1973 ÷ peak year	0.94	0.82	0.87	0.89

1 Year before sustained decline in profitability, which is ACC - 1968; USA - 1966; EUROPE - 1960; JAPAN - 1970.

SOURCE *Armstrong/Glyn background tables*

Table 11

ACC's MANUFACTURING (unweighted) PROFIT SHARES AND RATES

% change per annum		Early 60's	late 60's	early 70's	1973-75	1975-79
(1) Hourly productivity		6.2	6.4	6.4	2.3	4.5
(2) Effect of input costs		0.4	0.4	-0.2	-3.3	-0.2
(3) Real factor incomes = (1)+(2)		6.6	6.8	6.2	-1.0	4.3
(4) Product wages		7.0	7.1	7.3	4.2	3.4
(5) Wage Share = (3)-(4)		0.4	0.3	1.1	5.2	-0.8
(6) Profit share		-1.1	-1.0	-3.9	-24.4	6.0
(7) Real output/cap ratio		0.2	0.6	-0.6	-7.2	1.9
(8) Effect of capital costs		0.0	0.1	-1.6	-1.2	-0.9
(9) Current price O/K = (7)+(8)		0.2	0.7	-2.2	-8.3	1.0
(10) Profit rate = (6)+(9)		-1.0	-0.4	-6.1	-30.5	7.5
Memorandum Items						
(a) Weekly hours worked		-0.7	-0.6	-1.2	-2.6	0.4
(b) Relative consumer price		2.4	1.3	0.3	-1.1	1.0
(c) Real weekly wages = (5)+(a)-(b)		4.8	5.6	6.3	3.1	2.9
(d) Real direct costs		4.1	3.9	4.5	3.8	2.4
(e) Relative cap prices		0.8	0.8	0.9	0.4	0.2
(f) Output prices		1.4	2.5	6.2	15.5	8.4
End of period levels	late 50's					
(g) Profit Share (%)	25.8	24.2	23.1	20.1	11.5	14.5
(h) Profit Rate (%)	23.4	22.2	21.8	17.6	8.5	11.2
(i) Output/Capital ratio	0.91	0.92	0.95	0.88	0.74	0.77

Notes

Sources: Armstrong and Glyn [1986] and national sources. ACC's are biggest six OECD countries; unweighted averages. of cycle averages covering periods shown in ratio to table 7.

(1) Real value added per work hour
(2) Effect of relative price of inputs (materials etc) and of weight of capital consumption in reducing the growth rate of wages and profit (in terms of manufacturing output) see Appendix
(4) Money wages per hour deflated by gross output prices
(5) Income from employment adjusted for self-employment as % of net value added
(6),(g) Net operating surplus (adjusted for self-employment) as % of NVA
(7) Real value added divided by real gross fixed capital stock
(8) Effect of relative prices of capital stock and output (see Appendix
(9),(i) Net value added divided by net capital stock (current prices)
(10),(h) Net operating surplus divided by net capital stock
(b) relative price of consumer goods and manufacturing output
(d) Weighted average (60%, 40%) of product wages and real input prices - the latter calculated from output prices and value added prices assuming output is 2/3 value added, 1/3 inputs.
(e) Relative prices of capital stock and manufacturing output.
(f) Manufacturing output prices - wholesale prices.

Table 12
ACC's MANUFACTURING (weighted) PROFIT SHARES AND RATES

% change per annum		Early 60's	late 60's	early 70's	1973-75	1975-79
(1)	Hourly productivity	5.4	4.7	5.6	1.6	3.7
(2)	Effect of input costs	0.3	0.3	-1.3	-3.4	-0.3
(3)	Real factor incomes = (1)+(2)	5.7	5.1	4.3	-1.7	3.4
(4)	Product wages	5.5	5.7	5.2	2.0	3.0
(5)	Wage Share = (3)-(4)	-0.2	0.6	0.9	3.7	-0.4
(6)	Profit share	0.7	-2.1	-3.4	-16.4	2.1
(7)	Real output/cap ratio	1.7	-0.4	0.0	-8.1	2.1
(8)	Effect of capital costs	0.3	-1.0	-2.1	-0.1	-1.5
(9)	Current price O/K = (7)+(8)	2.0	-1.4	-2.1	-8.2	0.6
(10)	Profit rate = (6)+(9)	2.6	-3.4	-5.3	-23.6	2.6
(a)	Weekly hours worked	-0.2	-0.6	-0.7	-2.1	0.4
(b)	Relative consumer price	1.9	1.6	0.4	-1.6	0.9
(c)	Real weekly wages =(4)+(a)-(b)	4.1	4.0	4.6	1.7	2.7
(d)	Real direct costs	3.3	3.2	4.1	2.7	2.0
(e)	Relative cap prices	1.0	1.4	0.7	-0.1	0.1
(f)	Output prices	1.1	2.4	5.4	14.2	7.4
End of period levels late 50's						
(g)	Profit Share 23.7	24.7	22.5	19.9	13.9	15.1
(h)	Profit Rate 24.7	28.8	24.7	20.4	11.9	13.2
(i)	Output/Capital 1.04	1.17	1.10	1.02	0.86	0.88

Sources: Armstrong and Glyn [1986] and national sources ACC's are biggest six OECD countries; weighted (by 1965 GDP's) averages of cycle averages covering the periods shown in Table 7.

(1) Real value added per work hour
(2) Effect of relative price of inputs (materials etc) and of weight of capital consumption in reducing the growth rate of wages and profit (in terms of manufacturing output) see Appendix
(4) Money wages per hour deflated by gross output prices
(5) Income from employment adjusted for self-employment as % of net value added
(6),(g) Net operating surplus (adjusted for self-employment) as % of NVA
(7) Real value added divided by real gross fixed capital stock
(8) Effect of relative prices of capital stock and output (see Appendix
(9),(i) Net value added divided by net capital stock (current prices)
(10),(h) Net operating surplus divided by net capital stock
(b) relative price of consumer goods and manufacturing output
(d) Weighted average (60%, 40%) of product wages and real input prices - the latter calculated from output prices and value added prices assuming output is 2/3 value added, 1/3 inputs.
(e) Relative prices of capital stock and manufacturing output.

Table 13

PROFIT RATES 1973-79

Percentages

	ACC	USA	EUROPE	JAPAN
Business				
1973	12.9	13.1	11.3	19.6
1979	10.6	10.7	9.4	14.7
1979 ÷ peak year[1]	0.63	0.54	0.57	0.46
Manufacturing				
1973	19.2	21.8	12.9	33.5
1979	12.7	15.5	9.6	14.2
1979 ÷ peak year[1]	0.53	0.44	0.46	0.36

PROFIT SHARES 1973-79

Business				
1973	20.0	16.7	18.9	30.4
1979	18.4	15.7	16.7	26.6
1979 ÷ peak year[1]	0.78	0.7	0.67	0.66
Manufacturing				
1973	20.4	17.4	17.9	32.9
1979	15.6	15.1	13.3	19.2
1979 ÷ peak year[1]	0.66	0.66	0.53	0.47

OUTPUT CAPITAL RATIOS 1973-79

Business				
1973	0.64	0.78	0.59	0.64
1979	0.57	0.68	0.56	0.55
1979 ÷ peak year[1]	0.83	0.77	0.85	0.66
Manufacturing				
1973	0.95	1.26	0.71	1.02
1979	0.81	1.03	0.72	0.74
1979 ÷ peak year[1]	0.80	0.67	0.87	0.64

1 Year before sustained decline in profitability, which is ACC - 1968; USA - 1966; EUROPE - 1960; JAPAN - 1970.

SOURCE Armstrong/Glyn background tables

Table 14

PROFIT SHARE REGRESSIONS

dependent variable - growth rate of gross stock of fixed capital (K)

1952-82

	Const	K(-1)	PS(-1)	R2	Durbins t stat	Chows F stat
JAPAN	-3.54	0.67	0.2	0.84	0.5	1.2
Business	(2.02)	(6.6)	(2.9)			
Manufact	-2.28	0.36	0.29	0.73	1.3	0.6
	(1.2)	(1.7)	(2.6)			
GERMANY	-1.65	0.54	0.17	0.92	1.6	2.1
Business	(3.3)	(5.6)	(5.0)			
Manufact	-2.74	0.57	0.22	0.96	3.3	2.6
	(5.2)	(6.6)	(5.7)			
USA	-0.41	0.71	0.08	0.53	1	2.2
Business	(0.5)	(5.5)	(2.1)			
Manufact	-1.31	0.72	0.12	0.58	1.7	11.8
	(1.4)	(6.0)	(2.6)			
France	-0.19	0.88	0.04	0.87	-2.9	12.7
Business	(0.3)	(14.1)	(1.4)			
Manufact	-0.08	0.9	0.03	0.83	0.5	6.1
	(0.2)	(12.1)	(1.4)			
UK	0.09	0.81	0.03	0.72	0.4	0.2
Business	(0.2)	(8.4)	(1.8)			
Manufact	0.87	0.27	0.07	0.46	0.4	0.5
	(1.8)	(1.5)	(3.2)			
ITALY	-0.5	0.71	0.11	0.85	1.2	4.6
Business	(1.1)	(7.5)	(3.7)			
Manufact	-1.17	0.84	0.12	0.75	1.4	6
	(1.3)	(8.3)	(2.1)			

Notes: t values in brackets (5% confidence interval t=1.7, 1% t=2.5)
R2 is adjusted for degrees of freedom
K(-1) is lagged growth rate of the capital stock
PS(-1) is the lagged net profit share
Durbin's t: autocorrelation (with lagged dependent variable)
Chow's F: structural break at 1973 (2.7, 5% confidence)

Table 15. Pooled Regressions.

dependent variable - growth rate of gross stock of fixed capital (K)

	const	K(-1)	PR(-1)	R2
			1952-82	
BUSINESS	0.71		0.33	0.6
	(2.6)		(17.7)	
			1952-73	
	0.13		0.36	0.59
	(0.3)		(14.1)	
MANUFACTURING			1952-82	
	0.7		0.24	0.49
	(2.0)		(14.2)	
			1952-73	
	0.73		0.24	0.42
	(1.3)		(10.1)	

Notes: t values in brackets (5% confidence interval t=1.7, 1% t=2.3)
R2 is adjusted for degree of freedom
K(-1) is the lagged growth rate of the capital stock
PR(-1) is the lagged net profit rate
Countries covered: as Table 14 plus Canada

Table 16

CARS AND MINING LABOUR PRODUCTIVITY
Annual average percentage increases

	50's	Early 60's	Late 60's	Early 70's
Transport equipment				
USA (hrly)	3.7	4.4	0.9	3.8
Japan	12.4	14.0	10.3	2.3
Germany (hrly)		6.1	5.3	3.9
UK (hrly)	6.1	2.9	2.6	0.5
Italy	10.0	7.5	4.0	-0.2
France		6.7	4.5	5.5
Mining				
USA (hrly)	3.5	4.8	3.2	-1.0
Japan	8.8	15.2	6.8	3.3
Germany	4.3	6.3	6.3	3.9
UK	0.4	3.7	4.6	1.6
Italy	9.7	2.3	8.4	2.4

Sources as table 7.

Table 17

COMPARATIVE PRODUCTIVITY LEVELS IN 1967

US Level = 100	France	Germany	UK	Japan
Construction Materials	45	50	30	50
Metal Manufacture	45	60	40	55
Textiles	45	60	40	55
Wood/Paper	40	55	40	35
Mechanical Engineering	45	55	25	45
Electrical Engineering	40	40	35	45
Transport Equipment	25	35	20	30
Chemicals	65	55	45	35
Food	50	45	50	35
TOTAL MANUFACTURING	45	50	35	45

Source: Calculated from Guinchard [1984] tables 1 and 2.

Note: Figures are heavily rounded to emphasise the necessarily very approximate nature of calculations.

Table 18 Unweighted Average Shares of Public Expenditure in GDP in Current Prices by Economic Category in the OECD Economies 1955-76

	Total Public Expenditure	Final Consumption	of which Defence	Transfers and Subsidies	of which to:		Interest on Public Debt	Investment
					Households	Producers		
	%	%	%	%	%	%	%	%
1955-7	28.5	13.0	4.0	8.8	7.5	1.3	1.7	4.0
1967-9	34.5	15.3	3.4	12.2	10.5	1.6	1.8	4.7
1974-6	41.4	18.0	2.7	16.1	13.9	2.1	2.3	4.5

Source: OECD (1978)

Table 19 Manufacturing Production, Productivity and Indicators of Competitiveness Six Leading Industrial Countries 1964-70

Average annual growth rates, per cent

	U.S.	Japan	Germany	France	Italy	U.K.
1. Output	4.6	14.6	6.1	6.1	6.9	2.5
2. Output per man hour	3.4	12.3	4.9	6.9	3.8	3.5
3. Wage costs per unit of output in national currencies	1.4	1.9	2.9	1.6	4.2	4.8
4. in US dollars	1.4	2.2	4.5	-0.5	4.2	2.2
5. Export Unit values of manufactures (in U.S. dollars)	3.5	2.2	2.5	1.6	1.0	1.91
6. Shares in 'World' Exports of Manufactures (per cent)						
1964	21.5	8.1	19.3	8.7	6.3	14.4
1970	18.5	11.7	19.8	8.7	7.2	10.8

Source:

Table 20. Summary of Payments Balances on Current Account, 1973-79 (in billions of US dollars).

	1973	1974	1975	1976	1977	1978	1979
Industrial countries	20.3	-10.8	19.8	0.5	-2.2	32.7	-5.6
Canada	-	-1.6	-4.7	-3.9	-4.0	-4.0	-4.3
United States	9.1	7.6	21.2	7.5	-11.3	-11.6	3.1
Japan	0.1	-4.5	-0.4	3.9	11.1	16.8	-8.0
France	2.1	-2.8	3.8	-2.4	1.0	8.5	6.9
Germany, Fed. Rep. of	7.0	13.0	7.6	7.7	8.5	13.4	-
Italy	-2.2	-7.6	-0.1	-2.6	3.1	7.9	6.4
United Kingdom	-1.3	-6.9	-2.6	-0.2	1.9	5.2	2.6
Other industrial countries	5.5	-8.1	-5.1	-9.6	-12.6	-3.5	-12.3
Developing countries							
Oil exporting countries	6.7	68.3	35.4	40.3	30.2	2.2	68.6
Non-oil developing countries[2]	-11.3	-37.0	-46.3	-32.6	-28.9	-41.3	-61.0
By analytical group							
Net oil exporters[3]	-2.6	-5.1	-9.9	-7.7	-6.4	-7.9	-8.5
Net oil importers[3]	-8.8	-31.9	-36.4	-24.9	-23.6	-32.7	-51.0
Major exporters of manufactures	-3.6	-18.8	-19.1	-12.2	-7.9	-9.8	-21.7
Low income countries[3]	-4.1	-7.5	-7.6	-4.3	-3.7	-8.2	-10.4
Other net oil importers[4]	-1.1	-5.6	-9.7	-8.3	-12.0	-14.7	-18.9
By area							
Africa[5]	-1.9	-3.2	-6.6	-6.1	-6.6	-9.4	-9.9
Asia[3]	-2.6	-9.9	-8.9	-2.7	-1.7	-6.5	-13.2
Europe	0.6	-4.4	-4.9	-4.7	-8.4	-6.7	-9.9
Middle East	-2.6	-4.5	-6.9	-5.4	-5.1	-6.2	-8.5
Western Hemisphere	-4.7	-13.5	-16.3	-11.8	-8.5	-13.3	-21.4
Total	15.7	20.5	8.9	8.2	-0.9	-6.4	2.0

Notes

1 On goods, services and private transfers.
2 Figures are rounded to the nearest $0.5 billion.
3 The People's Republic of China, which is classified as a low-income country but is also a net oil exporter, is included in the total (from 1977 onward) but not in the subgroups.
4 Middle-income countries that, in general export mainly primary commodities.
5 Excluding South Africa.
6 Reflects errors, omissions, and asymmetries in reported balance of payments statistics on current account, plus balance of listed groups with other countries (mainly the U.S.S.R. and other nonmember countries of Eastern Europe and, for years prior to 1977, the People's Republic of China).

Table 21 Oil Exporting Countries: Balance of Payments on Current Account, 1973-83 (In billions of US dollars).

	1973	1974	1975	1976
Exports (f.o.b.)	39.0	117.9	109.6	133.2
Oil exports	35.0	112.3	103.7	126.2
Other exports	4.0	5.6	5.9	7.1
Imports (f.o.b.)	-20.2	-35.8	-56.2	-68.1
Balance on merchandise trade	18.8	82.2	53.4	65.1
Net services and private transfers	-12.2	-13.9	-18.0	-24.8
Receipts	4.3	8.8	12.1	14.6
Payments	-16.4	-22.7	-30.1	-39.4
Balance on current account	6.7	68.3	35.4	40.3
Of which				
Six "surplus" countries[2]	6.8	43.8	31.2	36.6
Other oil exporters[3]	-0.1	24.5	4.1	3.7

[2] Defined to include the six countries that had a current account surplus each year Libyan Arab Jamajiriya, Qatar, Saudi Arabia, and the United Emirates.

[3] Algeria, Indonesia, the Islamic Republic of Iran, Nigeria, Oman and Venezuela.

Source: IMF (1983)

Table 22. A Comparison of growth rates for GDP, Manufacturing value added (MVA) and exports of manufactures 1960-1980.

(Percentages)

Indicator	1960-1970	1970-1974	1974-1980	1970-1980
Developing countries				
GDP, in current dollars	7.8	20.7	16.8	18.3
GDP, in constant dollars	5.6	6.9	5.4	6.0
Total exports in current dollars	7.1	40.4	16.4	26.2
Total exports; volume index/constant dollars	6.9/7.3	4.3/7.3	2.3/4.4	1.5/4.4
MVA, in current dollars	8.7	20.9	15.2	17.5
MVA, production index/ constant dollars	5.9/7.1	9.1/8.8	6.0/6.0	6.9/6.9
Manufactured exports, in current dollars	13.7	36.3	23.0	26.6
Manufactured exports, quantum index	...	...	...	...
Developed market economies				
GDP, in current dollars	8.4	14.4	13.2	13.7
GDP, in constant dollars	5.1	4.3	3.2	3.2
Total exports in current dollars	10.0	25.2	15.7	18.9
Total exports; volume index/ constant dollars	8.5/8.0	9.6/8.6	5.3/5.6	6.1/6.2
MVA, in current dollars	8.1	15.1	12.2	12.5
MVA, production index/ constant dollars	6.1/6.3	5.5/5.5	3.1/3.3	3.0/3.3
Manufactured exports, in current dollars	11.5	24.8	15.7	19.0
Manufactured exports, quantum index	10.0	9.6	5.3	6.5
Centrally planned economies				
NMP, in constant dollars	6.7	6.6	4.4	5.4
Total exports in current dollars	9.8	22.3	16.0	18.6
Index of industrial production	9.0	8.9	6.2	7.5
Manufactured exports, in current dollars	10.0	20.4	14.7	17.0

[a] SITC 5-8 less 68
[b] 1975-1980

Source

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