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The Golden Age of Capitalism

*Reinterpreting the Postwar
Experience*

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The Rise and Fall of the Golden Age

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I. 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 per cent p.a. in the medium term, this had been revised upwards to 4.6 per cent by the mid 1960s and to 5.1 per cent by the early 1970s (McCracken *et al.*, 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 per cent OECD output growth in the medium term is currently forecast to grow at less than 3 per cent 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 chapter to throw some light on this vitally important question by adopting a historical approach to the pattern of post-war development across the advanced capitalist countries

(ACCs). This approach is designed to examine the factors which lay behind the emergence of the period of rapid and sustained post-war 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 symbolized 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 increase by conventional demand management. It finally ended attempts to breathe life back into the golden age economic regime.

The chapter begins with a short outline of the principal macroeconomic characteristics of the golden age in the biggest six ACCs, (the US, the UK, Japan, Germany, Italy, and France).¹ The length, steadiness, speed, and spread of the post-war 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 organized our analysis of the functioning and emergence of the golden age in Section III in terms of a fourfold division of the principal characteristics of this pattern.

We discuss first the *macroeconomic structure*, which summarizes 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 organization of work, most typical of a particular period. Such an excursion beyond what is conventionally regarded as economics into the spheres of industrial organization and sociology is, we believe, essential to a rounded account of patterns of growth.

Our third area of analysis is of the *rules of co-ordination* which produce 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 co-ordinating 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 synchronization. The way in which this occurred is analysed in Section IV, 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 chapter will demonstrate that our approach is a valuable way of interpreting economic history.² We hope that it helps to 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.

II. 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 p.a., accelerating from 2 per cent in the 1950s to 3.4 per cent 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 industrialization (World Bank 1978). In

Table 2.1. Growth characteristics of different phases, 1820–1979 (arithmetic average of figures for 16 individual countries)

| Phases | Annual average compound growth rates | | | |
|-------------|--------------------------------------|----------------------------|---|-------------------|
| | GDP | GDP per head of population | Tangible reproducible non-residential fixed capital stock | Volume of exports |
| I 1820–70 | 2.2 ^a | 1.0 ^a | (na) | 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 ACC's.

^b Average for 10 ACC's.

^c 1973–8.

Source: Maddison (1982).

the developed countries themselves Table 2.1 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 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 2.1). Trade among 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 1950s and the early 1970s, 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 inter-war Depression of a historically low proportion of manufactures exported and a low level of trade in manufactures (Table 2.2*b*). 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

Table 2.2. Export shares of GDP 1950–1984 and proportion of production of manufactures exported, 1899–1959

| (a) Export shares | | | | | | | |
|------------------------------|------|------|------|------|------|------|------|
| | 1950 | 1955 | 1960 | 1965 | 1973 | 1979 | 1984 |
| <i>OECD Total</i> | | | | | | | |
| Current prices | 10.3 | 11.8 | 13.1 | 13.1 | 16.1 | 19.0 | 21.2 |
| Constant prices ^a | 9.0 | 9.8 | 11.6 | 12.4 | 16.8 | 19.3 | 21.3 |
| <i>OECD Europe</i> | | | | | | | |
| Current prices | 22.3 | 20.9 | 21.8 | 21.0 | 25.4 | 28.3 | 31.7 |
| Constant prices | 12.7 | 14.8 | 16.7 | 18.1 | 25.6 | 28.3 | 32.0 |
| <i>Japan</i> | | | | | | | |
| Current prices | 12.7 | 10.7 | 10.8 | 10.5 | 10.0 | 11.6 | 15.2 |
| Constant prices | 4.7 | 3.9 | 5.6 | 6.9 | 9.0 | 12.2 | 17.1 |
| <i>US</i> | | | | | | | |
| Current prices | 4.3 | 4.4 | 5.1 | 5.1 | 6.9 | 9.1 | 7.5 |
| Constant prices | 4.3 | 4.6 | 5.6 | 5.8 | 7.9 | 9.4 | 8.2 |

Note: Constant prices are 1980 prices and exchange rates linked to 1963 prices and exchange rates.

Source: OECD National Accounts 1950–68 and 1960–84.

(b) Proportion of manufactures exported (%)

| | 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 |
| UK | 42 | 45 | 37 | 21 | 23 | 19 | 19 |
| <i>Other Western Europe</i> | | | | | | | |
| Europe | 17 | 18 | 23 | 21 | 17 | 18 | 21 |
| US | 5 | 5 | 6 | 5 | 5 | 4 | 4 |
| Japan | 25 | 40 | 29 | 40 | 29 | 26 | 23 |
| TOTAL | 19 | 18 | 15 | 12 | 10 | 10 | 11 |

Note: 1955 constant prices.

Source: Maizels (1963), p. 223.

transformation in employment away from agriculture towards industry and then services (Rowthorn and Wells 1987; Singh 1977, 1987). In this period the principal employment shift was towards services, with the industrial share peaking and then falling between 1960 and 1981 (Table 2.3). 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.

Table 2.3. 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 per employee (% p.a.) | | | | |
|----------------|-----------------------|------|------|------|------|-------------------------------------|---------|---------|---------|---------|
| | 1870 | 1960 | 1973 | 1981 | 1981 | 1870-1950 | 1950-73 | 1973-81 | 1973-81 | 1973-81 |
| France | A | 49.2 | 21.4 | 11.0 | 8.3 | 1.4 | 5.6 | 3.5 | 3.5 | 3.5 |
| | I | 27.8 | 36.2 | 38.6 | 34.3 | 1.4 | 5.2 | 3.2 | 3.2 | 3.2 |
| | S | 23.0 | 42.4 | 50.3 | 57.4 | 0.7 | 3.0 | 1.6 | 1.6 | 1.6 |
| Germany | A | 49.5 | 13.8 | 7.3 | 5.8 | 0.2 | 6.3 | 3.9 | 3.9 | 3.9 |
| | I | 28.7 | 48.2 | 46.6 | 43.4 | 1.3 | 5.6 | 2.6 | 2.6 | 2.6 |
| | S | 21.8 | 38.0 | 46.1 | 50.8 | 0.7 | 3.0 | 1.6 | 1.6 | 1.6 |
| Japan | A | 72.6 | 30.2 | 13.4 | 10.0 | 0.7 | 7.3 | 1.1 | 1.1 | 1.1 |
| | I | — | 28.5 | 37.2 | 35.3 | 1.7 | 9.5 | 4.7 | 4.7 | 4.7 |
| | S | — | 41.3 | 49.3 | 54.7 | 0.5 | 3.6 | 1.9 | 1.9 | 1.9 |
| United Kingdom | A | 22.7 | 4.1 | 2.9 | 2.8 | 1.4 | 4.7 | 2.8 | 2.8 | 2.8 |
| | I | 42.3 | 47.8 | 42.0 | 35.8 | 1.2 | 2.9 | 1.8 | 1.8 | 1.8 |
| | S | 35.0 | 48.1 | 55.1 | 61.4 | 0.2 | 1.6 | 0.7 | 0.7 | 0.7 |
| United States | A | 50.0 | 8.0 | 4.1 | 3.4 | 1.3 | 5.5 | 1.6 | 1.6 | 1.6 |
| | I | 24.4 | 32.3 | 32.3 | 29.5 | 1.6 | 2.4 | -0.2 | -0.2 | -0.2 |
| | S | 25.6 | 59.7 | 62.4 | 67.1 | 1.1 | 1.8 | 0.1 | 0.1 | 0.1 |

Key: A = Agriculture; I = Industry; S = Services.

Source: Maddison (1984).

Table 2.4. Cyclical characteristics of different phases (ACC's), 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 (% of labour force) | Average annual rise in consumer prices |
|-------------|---|--|---|--|
| I 1820-73 | -6.7 ^a | -21.7 ^b | (na) | 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 US only.^c UK and US, 1900-13.^d 1924-38 for Austria and Germany, 1921-38 for Belgium.

Source: Maddison (1982).

The years 1950-73 were also characterized by a marked improvement in stability. Table 2.4 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 cent p.a., 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 2.1 and 2.4), 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 2.6). Thus the US 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

Table 2.5. Productivity levels per man-hour relative to US (US=100)

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

Sources: Maddison (1982).

the rate of productivity growth in the US to match the acceleration experienced elsewhere. The growth of output per hour worked in the US remained around 2.5 per cent 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 US in the golden age (Maddison 1982; Freeman *et al.* 1982). As Table 2.5 shows, between 1870 and 1913 technical leadership, as proxied by relative levels of output per hour worked, passed from the UK to the US. In 1950 only the UK of the major industrial countries had a productivity level over half that of the US. 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 2.6 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.

III. 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 post-war reconstruction.

III.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

Table 2.6. Post-war economic performance in six major industrial countries (average annual percentage growth rates)

| | Average unemployment (% rates) | | | | | | Consumer prices | | | | | | Real GDP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------------|-----|---------|---------|------------------|------------------|-----------------|-----|---------|---------|------------------|-------|----------|-----|---------|---------|---------|------------------|---------|-----|---------|---------|---------|-------|-----|-----|-----|-----|-----|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|------|
| | 1952-64 | | 1965-73 | | 1973-79 | | 1980-83 | | 1950-73 | | 1973-79 | | 1979-83 | | 1950-73 | | 1973-79 | | 1979-83 | | 1950-73 | | 1973-81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | US | UK | France | Germany | Italy | Japan | US | UK | France | Germany | Italy | Japan | US | UK | France | Germany | Italy | Japan | US | UK | France | Germany | Italy | Japan | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5.0 | 2.5 | 1.7 | 2.7 | 5.9 | 1.9 | 4.5 | 3.2 | 2.4 | 0.8 | 3.4 | 1.9 | 6.5 | 4.6 | 4.2 | 6.0 | 1.8 | 2.7 | 4.6 | 5.7 | 3.9 | 5.2 | 2.3 | 8.4 | 9.0 | 7.6 | 5.0 | 4.1 | 4.7 | 16.3 | 10.0 | 4.3 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* | | |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4.5 | 4.1 | 6.1 | 6.3 | 6.3 | 10.0 | 10.0 | 5.2 | 8.4 | 2.2 | 2.5 | 5.0 | 4.8 | 2.0 | 3.0 | 2.6 | 2.6 | 5.8 | 8.0 | 3.1 | 1.1 | 2.9 | 3.0 | 3.7 | 2.5* |
| | 4.0 | 3.9 | 4.5 | 6.1 | 5.1 ^b | 9.2 ^d | 3.0 | 3.2 | 4.5 | 4.1 | 6.2 ^d | 3.0 | 4.6 | 4.5 | 6.1 | 5.4 | 6.0 | 6.2 ^d | 2.9 | 4.0 | 6.1 | 5.4 | 7.6 | 3.0 | 3.0 | 3.2 | 4 | | | | | | | | | | | | | | | | | | | | | | | | |

stock per worker; and (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 US 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 emphasized 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) (Fig. 2.1). Based on the generalization of mass-production systems (see Section III.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 2.5 per cent p.a. 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 1.5 per cent p.a. to almost 4.5 per cent p.a.) in productivity growth actually observed. This point deserves emphasis because of the continued popularity of neoclassical growth accounting 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 over-simplification inasmuch as other factors such as hours of work and relative rates of productivity growth in consumption and capital goods sectors are involved; nevertheless, taking the average of the ACCs, the

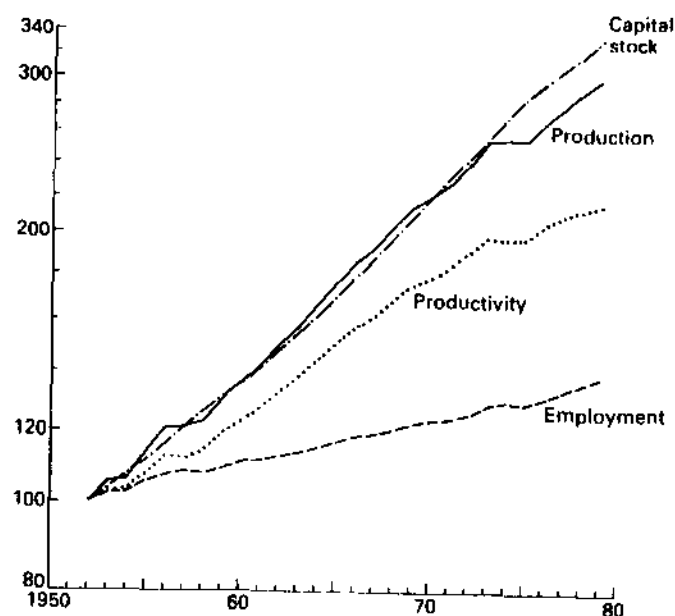


FIG. 2.1 ACC production, capital stock, productivity, and employment, 1955–1980. Source: Armstrong and Glyn (1986)

ratio of net output to net business capital stock hardly varied between the early 1950s and the late 1960s (Fig. 2.2).

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. Fig. 2.3 shows that these constituents of the profit share grew in parallel. Together with a stable capital/output ratio this contributed to the rough constancy in the profit rate (Fig. 2.4).

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 p.a. 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

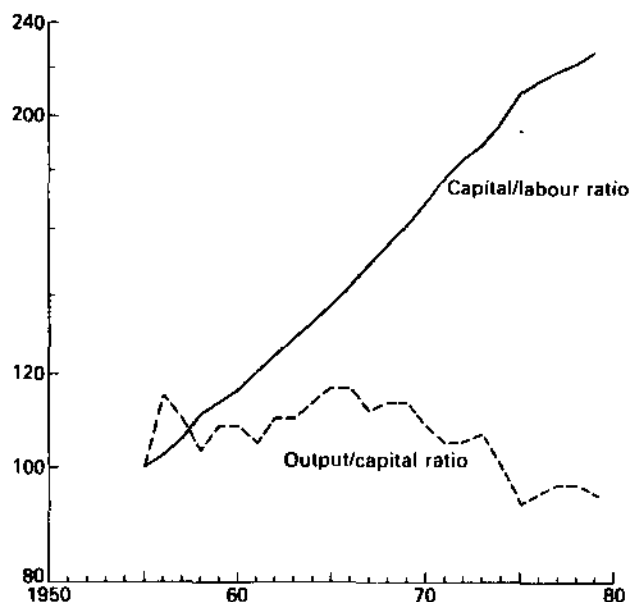


FIG. 2.2 ACC business mechanization and output/capital ratio, 1955–80. Source: Armstrong and Glyn (1986)

III.2) 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 per cent to 12.4 per cent between 1950 and 1965 and then accelerated to reach 16.8 per cent in 1973. Exports of manufactures also grew faster

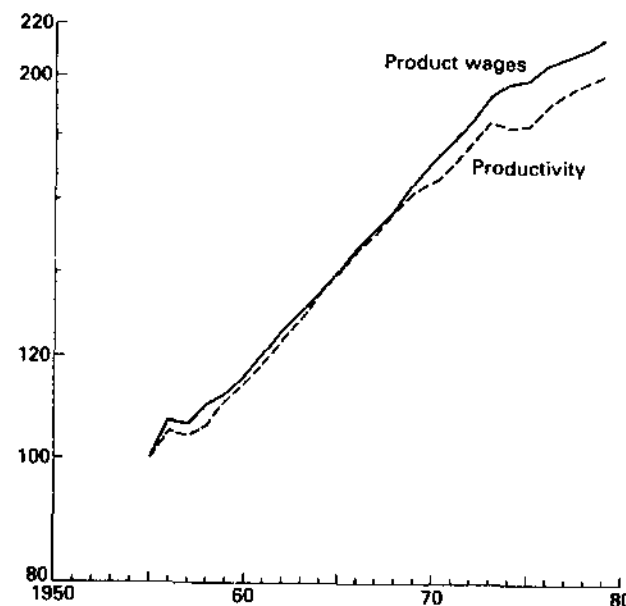


FIG. 2.3 ACC business productivity and product wages, 1955–80. Source: Armstrong and Glyn (1986)

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 1960s as productivity growth in the export sectors was relatively fast (see Table 2.2a). Moreover, whilst the proportions of imports in supplies of manufactures rose steadily in the European countries, by the early 1960s 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.

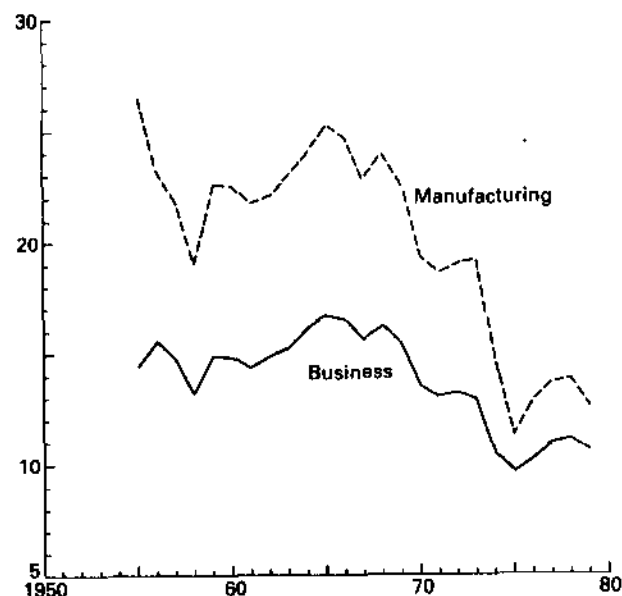


FIG. 2.4 ACC profit rates, 1955-80. Source: Armstrong and Glyn (1986)

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 (idealized) 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 III.3 and III.4 below. Here we note that inflation was moderate at around 4 per cent p.a. between 1952 and 1968 in the advanced countries, slower in sectors where productivity growth was particularly rapid (exports, manufactures).

Our description of the macroeconomic 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 post-war recovery; quite a complex and differentiated process was involved.

In the US the business capital stock grew at around 4 per cent p.a. from the end of the war up to the mid 1950s (this was double the average inter-war 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 post-war 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 2.5 per cent at the end of the 1950s until it was revived by the Kennedy-Johnson fiscal expansion, associated with social programmes and then Vietnam War spending. Post-war 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 utilization of capacity (and thus realize the potential full-employment profit rate). The US only experienced a brief period of exceptional accumulation (growth rate of the capital stock of nearly 5 per cent) in the latter part of the 1960s. 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 1960s (mid 1950s in Germany). The 1950s, therefore, saw an enormous investment boom. In Europe the rate of accumulation doubled after the late 1940s to reach some 5.5 per cent in the early 1960s; in Japan the acceleration was even more spectacular, a quadrupling of the growth rate of the capital stock to 12 per cent. This levered up productivity growth and allowed output to continue to grow 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 per cent to 13 per cent in Europe between 1952 and 1961 and from 13 per cent to 24 per cent 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 per cent of GDP in Europe and 16 per cent 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 1950s, before the slow downward trend set in (see Section IV.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 1950s (Armstrong *et al.* 1984, Chart 6.4; Armstrong and Glyn 1986).

This high level of profitability was a necessary condition for the investment boom of the 1950s (and in Japan in particular was further increased by that boom—(Armstrong *et al.* 1984, ch. 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 *et al.* 1984, chs. 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 W. 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 per cent. 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, an 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 interrelationships, rather than as a precise description of the course of development within individual countries.

III.2 The System of Production

The golden age saw the consolidation and extension of the Taylorist principles of work organization (Braverman 1974; Coriat 1978):

- (i) Rigorous standardization 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 generalization 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. Mechanization 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 mechanization.

The spread of best-practice American technologies and systems of work organization 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 organized opposition of workers to rationalization which was the precondition for the introduction of such technologies. It was not until the late 1940s 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 reorganize production. Common to all were productivity missions sent to the US 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'.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).

III.3 Rules of Co-ordination

Our interpretation of the golden age has emphasized a macroeconomic 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 out-

put. 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 co-ordination which led decisions by economic agents—firms, groups of workers—into paths consistent with those macroeconomic 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 interrelationships between price and wage formation, productivity growth and profits; and second the role of the state in macro- and micro-economic 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, *et al.* 1974; Turner and Jackson 1970; OEEC 1961; OECD 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'. This implied an upward drift in prices but also that the general rise in productivity would be reflected in a general rise in consumer purchasing power. Since business expectations came to reflect this, the overall effect was a general encouragement to capacity-expanding investment. There was also a particular encouragement for leading firms because the most efficient producers were able to squeeze the margins of their less efficient competitors by forcing up their wage costs. They 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 US 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 US (Hughes and Singh 1980; Lieberman 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, was 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 countries⁹ (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 per cent in 1955–7 to around 12 per cent by the late 1960s and around 16 per cent by the mid 1970s whilst the share of income maintenance expenditures rose from 8.3 per cent in 1962 to 11.4 per cent in 1972 (Sawyer 1982).¹⁰

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 1984; 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 macro-economic accumulation pattern. It included a conscious diffusion of settlements across different sectors of the economy and different classes of income recipient (Edgren *et al.* 1973).

In Germany a solution along the liberal capitalist restoration route emerged. Its elements included 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 co-determination 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. The result was 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 André 1982). Whereas public expenditure was around 28 per cent of GNP in the OECD economies in the mid 1950s, it was around 34 per cent by the late 1960s and 41 per cent by the mid 1970s (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 Fig. 2.5). Whether based on explicitly Keynesian commitments to full-employment de-

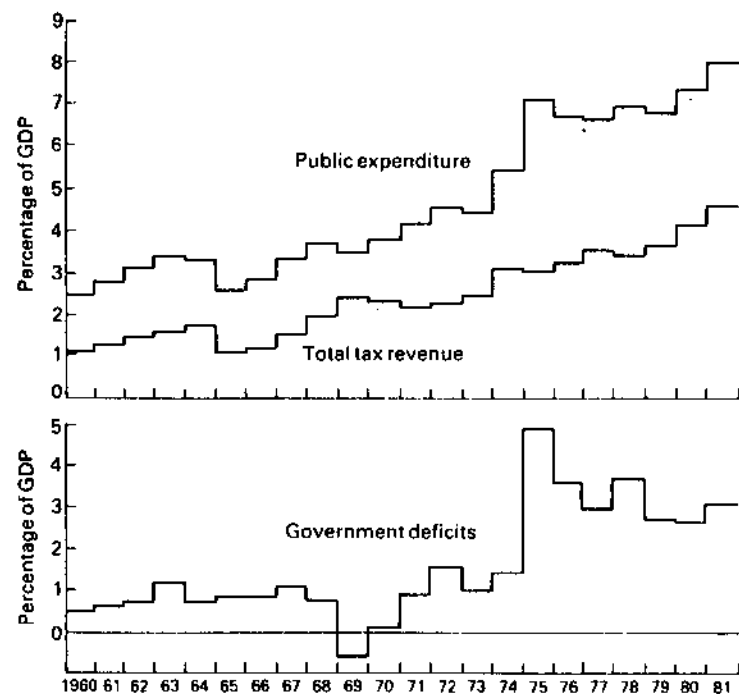


FIG. 2.5 Public expenditure, total tax revenue, and government deficits as a percentage of GDP, 1960–1981. Source: OECD (1985b) (unweighted average for seven major OECD countries); averages for 1960–4 exclude Japan.

mand 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 formalized 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 III.4 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 Orléan 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 prices 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 1966; Streeten 1962).

Given that in these circumstances some upward drift in inflation is inevitable what forces if any set an upper limit? What constrained 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 US 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.

III.4 International Order

The rules of co-ordination in 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 inter-war 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 US 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; Scammell 1983). Action required would include the following:

1. An international organization for the maintenance of exchange stability and to deal with balance-of-payments problems.
2. An international organization 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 organization of relief and reconstruction
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 (Scammell 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 (see Gardner 1969; Van Dormael 1978; Horsefield 1969; Harrod 1951; Milward 1984). As is well known, there were basically two plans for the proposed new monetary authority: the more 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's 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 organization proved much more difficult. The Havana Charter and the International Trade Organization, negotiated in 1947, were stillborn. 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-payments deficit of \$5.8bn. with the rest of the world; in 1947, the deficit rose to \$7.6bn., 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 to only \$6.7 bn. In contrast, the US surplus on goods and services was more than \$7bn. in 1946 and \$11bn. 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 Left, 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 co-ordination were to develop.¹²

Marshall aid was massive, amounting to around 1 per cent of US GNP in each of the years 1948 to 1952 (OEEC 1958, pp. 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 realignments of their curren-

cies. 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 *et al.* 1984).

In the event the successful pursuit of a 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 historical conflict over the Saar. 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 1957.

The International Economy under US Leadership 1945–1968

In contrast to the post World War I 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 US, 8.6 per cent in the six EEC countries, 10.8 per cent in the UK, and 10.7 per cent in Japan. The establishment of this post-war international trading and financial system generated the enormous increase in world trade which we underlined in Section II.

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 realignments 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 to offset the huge trade surpluses with Europe and Japan; the Bretton Woods goal of convertibility 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. (Spero 1977, p. 37)

As a consequence of these measures, and of the European and Japanese economic recoveries, 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 US balance on goods and services fell from an average of over \$6bn. in 1948–9 to an average of less than \$2bn. per annum in the four years 1952 to 1955. The US overall balance excluding net military expenditure but including government grants and capital transactions as well as private capital transactions was \$1.0bn. in 1948, \$0.2bn. in 1949, –\$2.1bn. in 1953, and –\$1.5bn. in 1954. (See Argy (1981) for full details of the US 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 \$7bn.; all of this took the form of US dollars. Thus during this period, the dollar was the world's reserve currency and the US was the world's 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 the world rate of inflation—given relatively stable commodity prices—remained relatively 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 co-ordination 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 co-ordination, and the international order make it very difficult to identify *the* driving-force behind growth. Explanations focusing 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 co-ordination 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 organization, combined with rapidly deepening mechanization, 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 jeopardize 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 co-ordination, 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 the 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 performance—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. Historical 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.

IV. THE EROSION OF THE GOLDEN AGE 1968–1979

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 must carry the story on into the late 1970s. For it was during the years after 1973 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. The appointment of Volcker as Chairman of the US Federal Reserve indicated commitment to pre-World War II financial orthodoxy. Thus 1979 can be taken as symbolic of a much broader recognition that the post-war economic regime had come to an end.

IV.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 slow-down'). 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.

The Productivity Slow-down

Conventional wisdom dates the productivity slow-down 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 2.7 shows that in the three most important capitalist countries—the US, Germany, and Japan—there was a slippage in the growth rate of hourly labour productivity in business as a whole in the late 1960s or early 1970s. The same pattern shows up in manufacturing, except that in the USA productivity growth rebounded in the early 1970s after a sharp decline in the late 1960s. The slow-down is not universal—in the UK productivity growth rates were at their peak in the early 1970s. 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 2.8) 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 1960s, or early 1970s, 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 post-war experience (Japanese business, French manufacturing). It is striking that in both Germany and Japan output/capital ratios were falling by 2–3 per cent p.a. in the early 1970s. 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 summarizing these comments is to compare the experi-