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**Full Employment in Western Europe and the Regulatory Regime: An
Institutional and Historical Analysis Together with a Commentary
on Government as an Entrepreneur**

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1) Introduction

A serious blemish of the present economic era is the high rates of unemployment which currently afflict developed countries. Unemployment has reached high levels in several European countries as the following figures suggest. It is nearly 10% of the labour force in France, 24.5% in Greece, 15.3% in Ireland, 10.8% in Italy, 25.2% in Spain, 16.4% in Portugal, 8.1% in Sweden, 8.2% in the UK, and 8.2% in USA. The average OECD unemployment increased from 6.8% in 2005, and 6.2% in 2006 to 8.2% in 2011 and 8.2% in 2012.¹ In addition there is further unemployment due to factors such as the discouraged worker effect and the high incidence of involuntary part-time work.

These unemployment rates together with the corresponding growth rates may be compared with those of the period 1950-1973, the so-called Golden Age, when Western Europe managed very high rates of growth of wages, shorter hours of work and full employment (see table 1 and 2). The average annual rate of unemployment in Germany between 1963-1973 was about 1%. Most people will accept that if this rate is corrected for normal frictional unemployment it would represent the full employment rate. Indeed it can be argued that in France and Germany there was over full employment in the sense that not only the domestic labour force was more or less fully employed, almost 10% of the employed labour force came from abroad. It is the overarching record of employment, output and productivity growth during the third quarter of the 20th Century which leads economic historians to regard

¹ The source of these figures is OECD (2013)

this period as the golden age of capitalism. During this duration leading industrial countries expanded at a rate of nearly 5% per annum which is almost twice the rate of expansion they had experienced over any comparable period in the previous two hundred years (see table 3). How did this come about? If it can provide full employment, why cannot such a regime be instituted today? How and why did it come to an end?

To answer such big questions, the appropriate methodology would necessarily involve a historical and institutional approach to these issues.

The main purpose of this paper is to discuss the nature of the regulatory regime which made possible the outstanding economic success of the Golden Age period. A second issue which will be commented upon here, albeit briefly, is the question of entrepreneurship. The role of government as an entrepreneur will be discussed in this section of the paper. The whole paper will thus cover the two main themes of this conference – regulations and entrepreneurship. Moreover, contrary to first impressions, the present paper combines micro- and macro-economic analysis in reaching its conclusions - it is not based on a macro-economic investigation alone. The paper argues inter alia that for a macro-economic growth path to be perpetuated, it needs to be compatible with the behaviour of millions of individual agents at a micro-economic level. Other relevant characteristics of the Golden Age will be commented upon below.

1) The Golden Age regulatory regime

The story of the Golden Age in factual terms is quite straightforward. The West European economies grew at their fastest rate ever during the Golden Age. In

the last two centuries (since 1820), there has been no comparable period with a higher growth rate. However, since the Golden Age European economic performance has declined. During the last twenty years it has been less strong than the American economic record. Before the world economic crisis which began in 2008 with the demise of Lehman Brothers, it used to be common for American commentators to argue that Europe needs serious reform in the sense of adopting American-type economic institutions, if it is to restore its full growth potential. This conclusion is also accepted by some leading European economists (Alesina and Giavazzi, 2006; Carlin 2007).

As the exposition of this paper takes a somewhat unconventional course, it may be useful at this point to summarise the main theses of the paper:

- a) Due to the length, breadth, and depth, of The Golden Age economic boom, it cannot be explained simply as a product of a chance combination of favourable circumstances.
- b) It was the outcome of a unique regulatory regime (explained in detail below), very different from that prevailing in the inter-war period as well as that adopted in the 1990s and 2000s by West European countries.
- c) The regulatory regime reflected in part a carefully designed strategy and involved gigantic institutional innovations by leading industrial countries at both national and international levels.
- d) Its demise occurred because the institutional framework was overtaken by events. For the Golden Age to continue some of the extant institutions would have had to adapt to the new situation. Fresh institutions would also have been needed.

e) An analytical and historical examination of this period has important policy lessons for the restoration of full employment in Western Europe.²

In the context of this Conference, this paper will argue that the superior economic record of the Golden Age was due to the regulatory and institutional framework which was adopted by these countries during this period.

At the simplest level, it may be argued that the success of the Golden Age in Europe, was entirely due to the fact that the Europeans had greater destruction on account of World War 2 than other regions. Reconstruction could ostensibly create a huge demand for goods and services and hence lead to a faster rate of growth. Although this theory is plausible, it is not accurate. It took European countries a remarkably short time to reach their pre-WW2 production levels, in particular, to reach the 1938 level of production. As Crafts and Toniolo (1996) suggest, although the destruction during the Second World War was quite severe in many countries, the speed of recovery throughout Europe was also exceptional. They write - "In five years, at most, development covered the ground lost relative to the highest pre-War income level." (p.3)

Another seemingly plausible theory which does not fit the facts is that the Golden Age boom was a product of Keynesian demand management policies. In an important paper, Matthews (1968) pointed out that there was little deficit spending in post-WW2 UK. The country generally speaking enjoyed

² The analysis of this paper is based on Glyn, Hughes, Lipietz and Singh (1990), Singh (1990) and Singh (2008). It also updates the last two papers.

fiscal surpluses rather than implement deficit financing in order to maintain the level of demand. The Golden Age boom was a creation of the private sector.³

Glyn et al (1990) provide a comprehensive analysis of the rise and fall of the Golden Age. It is pedagogically useful to follow them in their four-fold classification of the analysis of the various aspects of the Golden Age. They distinguish between a macro-economic pattern which summarises the main characteristics of the growth path. The authors place special emphasis here on the profits – investments – productivity – wages – profits nexus. In the second place, they provide an analysis of the system of production which brings out the main characteristics of the application of modern assembly line production techniques from the US to Europe. Further there was a similar transfer of the Taylorist principles of scientific management from the US to the European industry. In the third area of analysis, the four authors concentrate on the institutional and behavioural framework which produces compatibility between individual behaviour and macro-economic patterns. The last element in their description of the Golden Age pattern of development is international regulation which has to be compatible with internal regulation in order to achieve optimal economic performance.

2) International regulation

It may be useful to elaborate first on the question of international regulation. The new international economic order which came into being after the Second

³ Maddison (2001) however provides a somewhat different interpretation of the Golden Age boom. He suggests that it was a fundamentally Keynesian phenomenon in that the private sector knew that the government will not let a deficiency of aggregate demand to occur and therefore, corporations could invest with much less risk than would otherwise be the case.

World War was not a spontaneous development. It was carefully planned, mainly by the governments of the US and the UK while World War 2 was still in progress. The motivation underlying this development was the conviction of Cordell Hull (US Secretary of State at the time) that the peace and security of the US were best guaranteed by the establishment after the war of a liberal capitalist regime in all parts of the world. Hull attributed the Great Depression to protectionist policies followed in the pre-depression period. These policies, in his view, not only led to mass unemployment but also to war.

There was general agreement among the Allies that the leadership of the new post-War system will have to be assumed by the US as the UK was made much weaker by the war. The Bretton Woods Conference resulted from these ideas and established the outlines of a new post-War international economic order. This required the establishment of a number of international organisations (listed below) for the smooth functioning of the world economy.

- 1) An international organisation for 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.
- 6) International measures to maintain full employment.

In the event, after the war only about half of these organisations were established but they were nevertheless sufficient to provide a solid international backing to international trade and investment between

countries. One of the most important events of this period, particularly from the European perspective, was the American implementation of the Marshall Plan. GHLS (1990) observe that the magnitude of Marshall Aid was very large and amounted to 1% of US GDP for each of the four years 1948-52. Its important objectives were restoration of multilateralism, price stability and recovery of production and it involved heavy conditionality for the European countries. As a result of the Plan there was, for example, a major realignment of European currencies. European countries were also encouraged to collaborate with each other in economic terms. It is generally agreed that the Marshall Plan was a great success economically as well as politically, both from the American and European points of view. As Spiro (1977) noted in relation to the US gains from the Plan:

‘In the short term the US dealt with its own huge balance of trade surplus and the European and Japanese deficits by foreign aid and military expenditure ... In addition the US encouraged European and Japanese trade protectionism and discrimination against the dollar To encourage long term adjustment the US promoted European and Japanese trade competitiveness. Policies for economic controls on the defeated Axis countries were scrapped. Aid to Europe and Japan was designed to rebuild productive and export capacity. In the long run it was expected that such European and Japanese recovery would benefit the US by widening markets for American exports.’

In addition to international regulation as outlined above, the Golden Age also involved institutional and behavioural regulations, which produced compatibility between individual behaviour and macro-economic pattern. This involved the wage-price system, the distribution between profits and wages and the state fiscal and credit policies to guarantee incomes and maintain demand. To take a simple example, productivity wage bargaining in Europe became a core feature of industrial relations in the period after the war. This arose partly from the political economy of the post-World War 2 period and

the presence of well- established communist parties in many countries. At the end of World War 2, the Soviet Union had a great deal going for it. It had just won a war against a super-industrial power, Germany. The crimes of the Stalin period had not yet been made public. Thus, despite the split between communist and Catholic trade unions, the West European ruling circles were obliged to make genuine concessions to the workers. This is how productivity-based bargaining came to be accepted with the fundamental idea that the workers had a right to equitable sharing of the fruits of economic progress. This brought into being a social market economy with representation by workers on supervisory boards of corporations. Germany is the best example of this evolution. See further GHLS (1990) and Eichengreen (2007).

Turning now to the macro-economic path followed by advanced countries during the Golden Age, its central features may be summarised as follows:

- (i) Rapid and parallel growth of productivity and capital stock per worker;
- (ii) The parallel growth of real wages and productivity.

The significance of these two relations is that they guarantee both a roughly constant profit rate and roughly equal growth rates of consumption and production, thus ratifying the rapid rate of accumulation. Simple econometric estimates based on the experience of capitalist countries for the last hundred years suggest that for every 1% faster growth of capital stock per worker employed, hourly labour productivity rose by 0.75%. GHLS note that on average capital stock per worker grew around 2.5% 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 1.5% to almost 4.5%) in the productivity growth actually observed.

To complement the above figures, it may also be useful to note that investment as a proportion of GDP rose in leading industrial countries during the Golden Age. In France, gross fixed investment as a share of GDP excluding housing investment rose from 12% in the 1920s and 1930s to 14% in the 1950s and 17% in the 1960s; the corresponding figures for Germany show an increase from 11% to 17% in the 1950s and 18% in the 1960s. In the UK gross fixed non-housing investment as a proportion of GDP rose from 6% in the 1920s and 1930s to 12% in the 1950s and 15% in the 1960s (Eichengreen 2007).

This Golden Age growth inevitably took place at very different rates in different countries (fastest in Japan, slowest in the US and UK and continental European countries somewhere in between). There was also a rapid increase of international trade between advanced countries during this time-span. However the starting point of this trade was very low as the inter-war period was marked by widespread trade protection, currency instability and general depression in much of the developed world.

3) Alternative explanations for the rise of the Golden Age

As Matthews and Bowen remarked, whereas there are many theories for the fall of the Golden Age, there are hardly any for its rise. Golden Age was a totally unexpected phenomenon. Most economists had expected the post-WWII period to be marked by high unemployment and low aggregate demand. Many of the explanations provided for the unexpected strong performance of the post-WWII tend to be monocausal and therefore easily dismissed. A

comprehensive institutional analysis similar to that of GHLS (1990) and Singh (2008) is a comparatively recent one by Eichengreen (2007). The theoretical basis for his analysis lies in cooperative dynamic game theory (see Van der Ploeg 1987 and Grout 1984). This, Eichengreen suggests, was made possible by institutional solutions which were adopted by European countries to remedy (a) co-ordination problems both internally and externally and (b) time consistency problems.

Following Van der Ploeg and Grout, Eichengreen suggests that welfare is maximized when workers moderate their wage claims in order to make profits available to enterprise. Capitalists restrain dividend pay-outs in order to re-invest. Investment stimulates growth, raising the future incomes of both capitalists and workers. In the co-operative equilibrium in which both workers and capitalists exercise restraint, the costs of foregoing current consumption are dominated by benefits of future increase in incomes accruing to both.

Where Eichengreen (2007) differs from GHLS (2007) and Singh (2008) is his suggestion that the most important motivation for the new post World War 2 institutional arrangements was the experience of the Great Depression of the 1930s, which exposed widespread coordination failure of the market economy. He suggests that corporatist solutions were a part of the European tradition since at least Bismarck. His analysis differs not only from GHLS and Singh (op.cit.) both of whom, as seen above, emphasize the post World War 2 European conjecture in the rise of new institutions but also from that of Olsen (1982, 1996). Olsen's argument, which has been widely influential, is that the destruction of the old institutions and vested interests connected with them leads to fast economic growth. On the contrary, Eichengreen (2007) analysis

emphasizes the continuity of the old and new corporatist institutions rather than the demise of the old to explain the rise of the Golden Age.

4) The fall of the golden Age

Unlike the rise of the Golden Age, there are many more theories and hypotheses concerning its fall. A leading cause of the failure of the Golden Age was the long-term trend decline in the rate of growth of productivity, beginning in the late 1960s. In addition, there was increased militancy among workers after 20 years of full employment. This was reflected in the May 1968 events in France and the increased strike activity in European countries. Workers abandoned wage moderation, leading to a breakdown of the basic Golden Age consensus over profits and wages. This also resulted in a profit squeeze and lower investment by employers. Further, the international economic system suffered a huge shock with the end of the gold convertibility of the US Dollar and the virtual demise of the Bretton Woods system. This also could be expected to lower the propensity to invest.

In summary, analysis and evidence point to three proximate economic causes of the fall of the Golden Age: (a) productivity slow down due to exogenous factors as well as reduced scope for catch-up as the European economies developed; (b) the unravelling of the Golden Age consensus over wages and profits and (c) the breakdown or at least a big question mark over the international framework for trade and capital flows with the end of the Bretton Woods system. The latter can be ascribed in part to the success of the Golden Age itself and that of the US policies to strengthen the economies of its allies in Western Europe and Japan. This resulted in varied evolution of competitive

capacities of the leading industrial economies. Thus, over the two decades 1950 to 1970, the US share of the world exports of manufactures declined from 27.3% to 18.5%. Over the same period, the West German share showed a matching improvement from 7.3% in 1950 to 19.8% in 1970. Similarly, during these twenty years, the UK's share of world manufacturing exports declined from 25.5% to 10.8% whilst that of Japan improved from 3.4% to 11.7%. The relatively poor trading performance of the reserve currency countries, namely the US and the UK, contributed to the difficulties of the Bretton Woods system. In relation to the breakdown of the consensus on wages and profits, Kalecki (1943) in a famous paper had suggested that full employment capitalism was not a viable proposition because employers need to have the power of the sack to discipline workers. In fact, what actually happened in the demise of the Golden Age were the excessive wage demands of workers rather than the capitalists prevailing on the government to keep a reserve army of the unemployed.

5) Summing Up the Golden Age

The foregoing analytical narrative raises the question of what lessons can be drawn from the rise and fall of the Golden Age for achieving and maintaining full employment in advanced countries.

The main lessons from the Golden Age may be summarised as follows:

A cooperative economic regime at the national and international level, based on appropriate institutions, can deliver outstanding

economic success, including full employment, fast growth of productivity and real wages in the North as well as rapid industrialisation in the South in a positive sum game. At the national level the appropriate institutions were those of a social market economy committed to fast economic growth, full employment and equitable distribution of the fruits of economic progress. At the international level it required inter alia institutional arrangements that permit balance of payments disequilibrium between countries to be resolved with higher rates of growth, real world demand, as well as national demand and output. It may be noted that the latter arrangements represent a solution to the problem articulated by Keynes in the following terms:

‘The problem of maintaining equilibrium in the balance of payments between countries has never been solved ...the failure to solve this problem has been a major cause of impoverishment and social discontent and even of wars and revolutions...to suppose that there exists some smoothly functioning automatic mechanism of adjustment which preserves equilibrium if only we trust to matters of laissez faire is a doctrinaire delusion which disregards the lessons of historical experience without having behind it the support of sound theory.’⁴

The essential point here is that the balance of payments will always balance subject to rounding errors. The important economic policy issue here is at what rate of economic growth will this balance occur.

⁴ Moggridge (1980, pp.21-22)

In step with the national institutions, the international institutions during the Golden Age were also committed to fast growth and full employment. Thus, for example, in the very first clause of the Preamble to the General Agreement on Tariffs and Trade (GATT) it is stated that 'the contracting parties declared themselves as: Recognising that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, developing the full uses of the resources of the world..'

Further, an important lesson of the Golden Age is that there should be coherence between internal and external regulation. Also required is continual institutional change and renewal with changing circumstances. This did not happen in the Golden Age, which greatly contributed to its demise.

6) Comments on the Entrepreneurial State

As was indicated in section 1) this part of the paper will comment briefly on entrepreneurship. Contrary to much of the literature, we shall argue here that modern states play an important entrepreneurial role in economic development. The recent book by Mariana Muzzacato (2013) emphasises this point. It may be useful

to illustrate this analytical point with some examples, first from the Third World and secondly from advanced countries.

We start with the case of the Indian Communications Technology Industry (ICT industry). ICT industry is regarded by many Indians and the conservative international media as being successful due to the fact that it had no government interference i.e. it benefitted from 'benign neglect'. But this is simply a case of ignoring unwelcome facts. The characterisation of ICT being regarded as an example of benign neglect by the government is grossly inaccurate and misleading. India's comparative advantage in software development stems from its competitive advantage in cheap skilled labour. This advantage did not arise spontaneously but was helped, in fact established, by the government. The evidence shows that the government helped the industry in a variety of ways in its early stages. It provided the infrastructure, particularly the huge expansion of post high school education, free of course to the industry. Similarly, the government helped develop the city of Bangalore as the hub for technological industries which greatly assisted their growth.

Next we take up the case of probably the most important technological innovation in modern India – the case of the Green Revolution. This involved close cooperation between the

government, the scientific community and the Punjabi⁵ peasants. In a nutshell the government provided cheap loans and basic inputs to all farmers (fertilisers, seeds etc.). The scientific input came from the collaboration between Ohio State University in the US and Punjab's own agricultural university in Ludhiana. The net result of this collaboration between the government, the universities and the private sector was that Punjab had a huge long term increase in both rising wheat production. Before this enormous technical leap of the Green Revolution India was a basket case with respect to food grains and had to depend on hand-outs from the US to feed its people. After the Green Revolution the country became self-sufficient in food grain production.

It may be interesting to next consider the connection between the entrepreneurial state and the Keynesian analysis. The late Professor Kaldor provided a classic statement on this point from a Keynesian perspective. He advocated public investment as part of a national plan where it is possible to take into account all kinds of indirect effects which would not be possible with private investment. Keynes had argued that in the face of complete uncertainty investors generally rely on a convention that the future will be just like the present and for that reason the effects of the existing situation

⁵ The Green Revolution took place largely in the Punjab

enter, in a sense disproportionately, into the formation of long term expectations. Hence capacity is only likely to be created insofar as its use appears to be profitable at the existing state of demand. Since the demand for commodities depends on the levels of incomes which are generated in production the additional production generated in the future by the sum of the investment decisions of the present will itself increase the demand for commodities in comparison with the present level – a factor which private investors cannot take into account (or can do so only imperfectly) since they take their decisions independently of each other. Investment by public enterprises, on the other hand, can take the comprehensive effect of all investments into account in judging the social profitability of any particular investment project. It should be noted, however, that a state plan is capable of doing this even when the investment is undertaken by private enterprises, as the Japanese example shows. What is required is that there be a fairly comprehensive state investment plan for industrial development and that state should be capable of implementing this plan.

To sum up, an entrepreneurial state will certainly help economic growth. To get faster growth and permanent full employment, from a Keynesian perspective, a fairly comprehensive state investment

plan for industrial development is required, as well as the ability of the state to implement this plan.

In conclusion, it is necessary to draw attention to a recent important contribution by Mariana Mazzucato (2013). She emphasises important lessons vital for effective institutionalisation of innovation. There is need to strengthen sources of funding for public R&D. She argues that the negative image of the state in relation to innovation needs to be changed. She suggests there are a whole host of innovations which the state has done, particularly in US, which the private sector could not do. She regards innovation as the main force driving growth in the market economy. It is therefore vital to continue to direct public resources into catalysing innovation. These are important ideas for the development of the entrepreneurial state which deserve full-fledged further research.

Table 1: Level and rates of Growth of Real GDP/Person, 1950-95
(\$1990GK and % per year)

Adapted from: Crafts, N. (2012) Western Europe's Growth Prospects – A Historical Perspective, *Warwick University CAGE Working Paper No. 71*, p.23

a) 1950-73

| | <i>Y/P 1950</i> | <i>Y/P 1973</i> | <i>Growth Rate, 1950-73</i> |
|--------------|-----------------|-----------------|-----------------------------|
| Switzerland | 9064 | 18204 | 3.08 |
| Denmark | 6943 | 13945 | 3.08 |
| UK | 6939 | 12025 | 2.42 |
| Sweden | 6739 | 12494 | 3.06 |
| Netherlands | 5971 | 13081 | 3.45 |
| Belgium | 5462 | 12170 | 3.54 |
| Norway | 5430 | 11324 | 3.24 |
| France | 5186 | 12824 | 4.02 |
| West Germany | 4281 | 13153 | 5.02 |
| Finland | 4253 | 11085 | 4.25 |
| Austria | 3706 | 11235 | 4.94 |
| Italy | 3502 | 10634 | 4.95 |
| Ireland | 3453 | 6867 | 3.03 |
| Spain | 2189 | 7661 | 5.60 |
| Portugal | 2086 | 7063 | 5.45 |
| Greece | 1915 | 7655 | 6.21 |

b) 1973-95

| | <i>Y/P 1973</i> | <i>Y/P 1995</i> | <i>Growth Rate, 1973-95</i> |
|--------------|-----------------|-----------------|-----------------------------|
| Switzerland | 18204 | 20627 | 0.58 |
| Denmark | 13945 | 20350 | 1.74 |
| Sweden | 13494 | 17648 | 1.23 |
| West Germany | 13153 | 19849 | 1.92 |
| Netherlands | 13081 | 18700 | 1.65 |
| France | 12824 | 18206 | 1.61 |
| Belgium | 12170 | 18270 | 1.87 |
| UK | 12025 | 17586 | 1.75 |
| Norway | 11324 | 21578 | 2.96 |
| Austria | 11235 | 17959 | 2.16 |
| Finland | 11085 | 15970 | 1.88 |
| Italy | 10634 | 17216 | 2.21 |
| Spain | 7661 | 13132 | 2.48 |
| Greece | 7655 | 10321 | 1.37 |
| Portugal | 7063 | 11614 | 2.29 |
| Ireland | 6867 | 12734 | 2.85 |

Table 2: Level and rates of Growth of Real GDP/Hour Worked, 1950-95
 (\$1990GK and % per year)

Adapted from: Crafts, N. (2012) Western Europe's Growth Prospects – A Historical Perspective, *Warwick University CAGE Working Paper No. 71*, p.24

a) 1950-73

| | <i>Y/HW1950</i> | <i>Y/HW 1973</i> | <i>Growth Rate, 1950-73</i> |
|--------------|-----------------|------------------|-----------------------------|
| Switzerland | 8.16 | 17.86 | 3.46 |
| Sweden | 7.35 | 18.01 | 3.95 |
| UK | 7.00 | 13.37 | 2.85 |
| Denmark | 6.72 | 15.88 | 3.80 |
| Belgium | 6.00 | 17.42 | 4.73 |
| Norway | 5.78 | 15.06 | 4.25 |
| Netherlands | 5.73 | 17.32 | 4.91 |
| France | 5.07 | 15.63 | 5.02 |
| West Germany | 4.36 | 16.05 | 5.85 |
| Finland | 4.03 | 11.60 | 4.69 |
| Italy | 3.98 | 14.58 | 5.82 |
| Austria | 3.52 | 13.20 | 5.93 |
| Ireland | 3.00 | 8.18 | 4.45 |
| Spain | 2.60 | 9.92 | 6.00 |
| Portugal | 2.18 | 9.33 | 6.53 |
| Greece | 1.93 | 8.07 | 6.42 |

b) 1973-95

| | <i>Y/HW 1973</i> | <i>Y/HW 1995</i> | <i>Growth Rate, 1973-95</i> |
|--------------|------------------|------------------|-----------------------------|
| Sweden | 18.01 | 23.13 | 1.15 |
| Switzerland | 17.86 | 21.92 | 0.95 |
| Belgium | 17.42 | 30.37 | 2.56 |
| Netherlands | 17.32 | 27.75 | 2.17 |
| West Germany | 16.05 | 30.83 | 3.01 |
| Denmark | 15.88 | 26.98 | 2.44 |
| France | 15.63 | 29.02 | 2.85 |
| Norway | 15.06 | 29.82 | 3.15 |
| Italy | 14.58 | 24.29 | 2.35 |
| UK | 13.37 | 24.33 | 2.76 |
| Austria | 13.20 | 23.50 | 2.66 |
| Finland | 11.60 | 22.36 | 3.03 |
| Spain | 9.92 | 22.21 | 3.72 |
| Portugal | 9.33 | 13.60 | 1.74 |
| Ireland | 8.18 | 17.21 | 3.43 |
| Greece | 8.07 | 11.63 | 1.68 |

Table 3: Growth Characteristics of Different Phases for OECD Developed Countries, 1820 – 1979

(Arithmetic average of figures for the individual countries)

Adapted from: Maddison (1982)

Source: Glyn, A., Hughes, A., Lipietz, A. and Singh, A. (1987) The rise and fall of the Golden Age, Department of Applied Economics, DAE Working Paper , University of Cambridge

| (Annual average compound growth rates) | | | | |
|---|------------------|-----------------------------------|--|--------------------------|
| Phases | GDP | GDP per head of population | Tangible reproducible non-residential fixed capital stock | Volume of exports |
| I (1820 – 1870) | 2.2 ^a | 1.0 ^a | (n.a.) | 4.0 ^b |
| I (1870 - 1913) | 2.5 | 1.4 | 2.9 | 3.9 |
| II (1913 – 1950) | 1.9 | 1.2 | 1.7 | 1.0 |
| III (1950 – 1973) | 4.9 | 3.8 | 5.5 | 8.6 |
| IV (1973 – 1979) | 2.5 | 2.0 | 4.4 ^c | 4.8 |

^a Average for 13 countries

^b Average for 10 countries

^c 1973 – 1978

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