Europe, the US and the world economy: Alan Greenspan's search for a fifth Kondradieff

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9 September 2001
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Abstract

This paper was presented at 15:00 hours local time in Ankara, Turkey on 11th September 2001. On the basis of an economic analysis of the world economy it surmises an entry into an 'age of war' – a period of financial and military competition between advanced countries comparable to the period of classical imperialism from 1893-1918. [1]

At the close of the session which was 17:00 hours local time, being 8 hours ahead of Eastern time, hence 9:00am Eastern time, I was scheduled for an interview on Turkish television. 'First, there is something you should see', said the reporter. He led me to the television van where CNN footage showing an aircraft impacting the first trade tower. The second impact occurred as I watched. I emerged from the van five hours later and the interview never took place.

Keywords: 9/11, World Economy, Kondratieff, Development, Europe, US, value, price, TSSI, temporalism, profit rate, polarisation, inequality, globalisation, deregulation, imperialism, World Systems Theory, unequal exchange, dependency, North-South

[1] I wish to acknowledge the support of the Economic Statistics Group of the Greater London Authority. The analysis and any errors are my own.

EUROPE, THE US AND THE WORLD ECONOMY:
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Alan Freeman Wednesday, 6 August 2001

INTRODUCTION[2]

This paper aims to establish a macroeconomic framework for understanding the changing structure, and current state, of the Euro-zone and the UK economy.

The approach I adopt follows from a basic premise of this paper: the world market is an integrated and interconnected system. To analyse any part of it we must begin from its position in the system as a whole.

The world market is however spatially separated, it is composed of nations, regions and trading blocs. This geographical separation is at one and the same time a partition of the world economy into distinct markets with their own monetary and fiscal régimes which, nevertheless, form part of a single global market. What interests us is the structure of the world economy and its fundamental historical trends; we therefore focus on changes, over time, in the relations between its regions and nations, considered as parts of it.

POSTWAR OUTPUT AND GROWTH

We begin with the most basic economic magnitude of all, nominal output. Because we are interested in historical trends in relative position, we first consider quantitative indicators that are independent of secular changes which affect all parts of the economy uniformly, such as inflation. We therefore confine our attention to *ratios*.

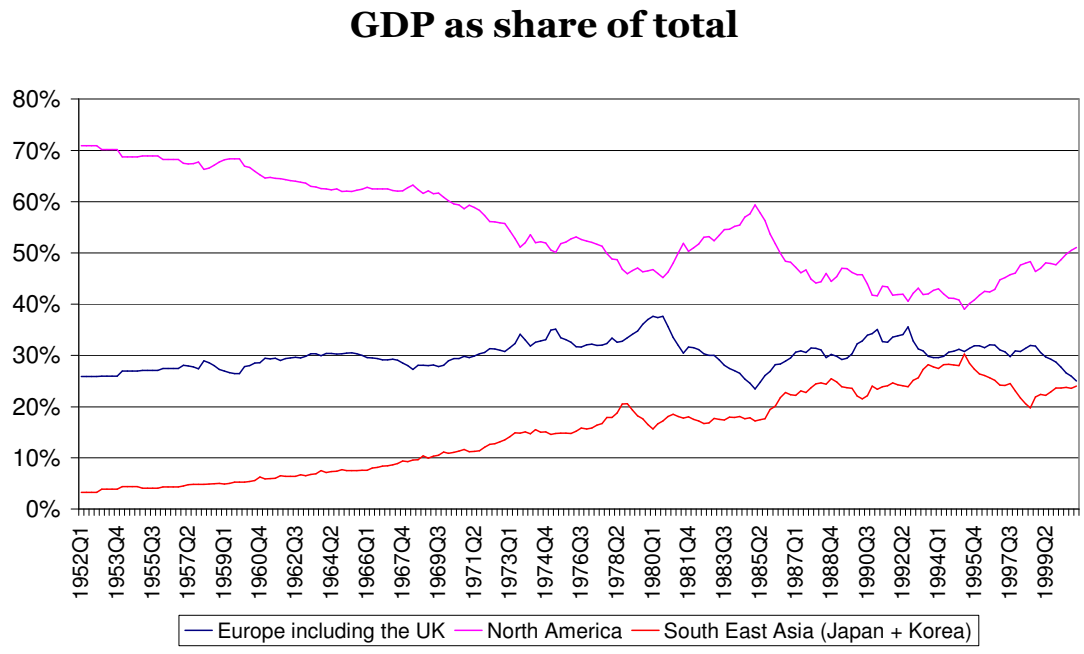

Figure 1

For simplicity we restrict ourselves to the G7 countries, together with Korea because of its significant relation to the Japanese economy. We divide these into three *regions*, namely Europe including the UK, North America (US + Canada) and South-East Asia (Japan + Korea).

Figure 1 shows the *share of total output* for which different regions account, that is, we divide each region's GDP, expressed in dollars, by the total output of all eight countries.[3]

The graph clearly divides postwar world history into two quite distinct periods, a separation which, we will later see, expresses itself in many other quantitative indicators. The first period, lasting until 1980, exhibited

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[3] For simplicity, for the rest of the article we will call this total GDP 'advanced country GDP', although a number of advanced countries are omitted. The omissions do not make a significant difference to the conclusions.

a simple secular world trend, namely the relative advance of South-East Asia and Europe at the expense of North America, whose share in advanced country output fell from 70 to 45% whilst Europe rose from 25% to 40% and South-East Asia rose from 5% to 15%.

1980 saw the first of two sharp reversals; North America's share of advanced country output recovered to 60% almost entirely at the expense of Europe, with South-East Asia continuing its relative expansion at a slower rate until its absolute peak of 30% in 1994. The decade 1984-1994 saw this reversed, and 1994 saw a second sharp turning point, in which North America's share again recovered by 10% but this time at the expense of both Europe and South-East Asia.

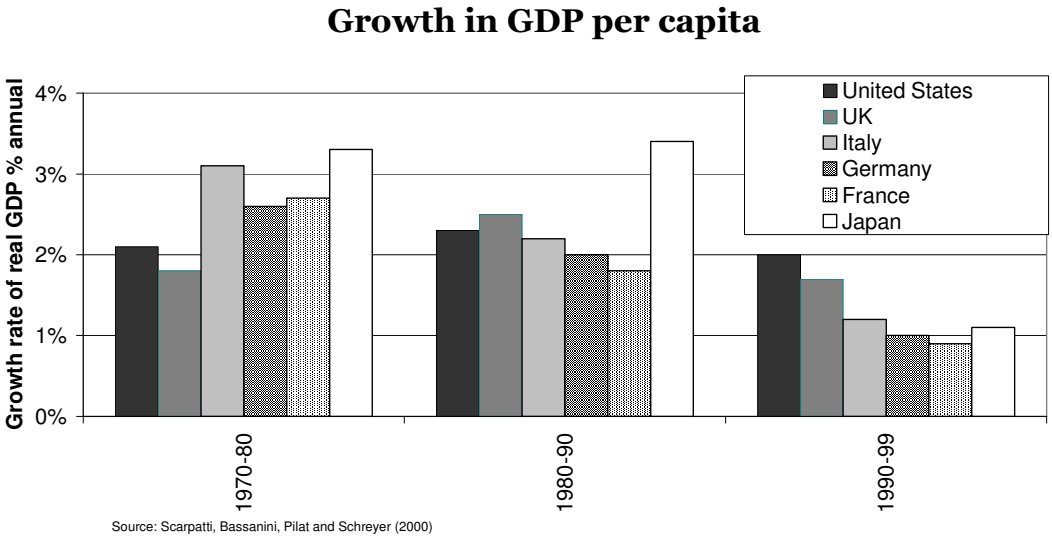


Figure 2

Although for reasons of time we have not been able to put together the economic evidence in the same form, it is important to note that in parallel with this development there was a sharp renewal of polarisation between the advanced industrial nations as a whole and the third world (see for example Freeman 1999), beginning in 1980.

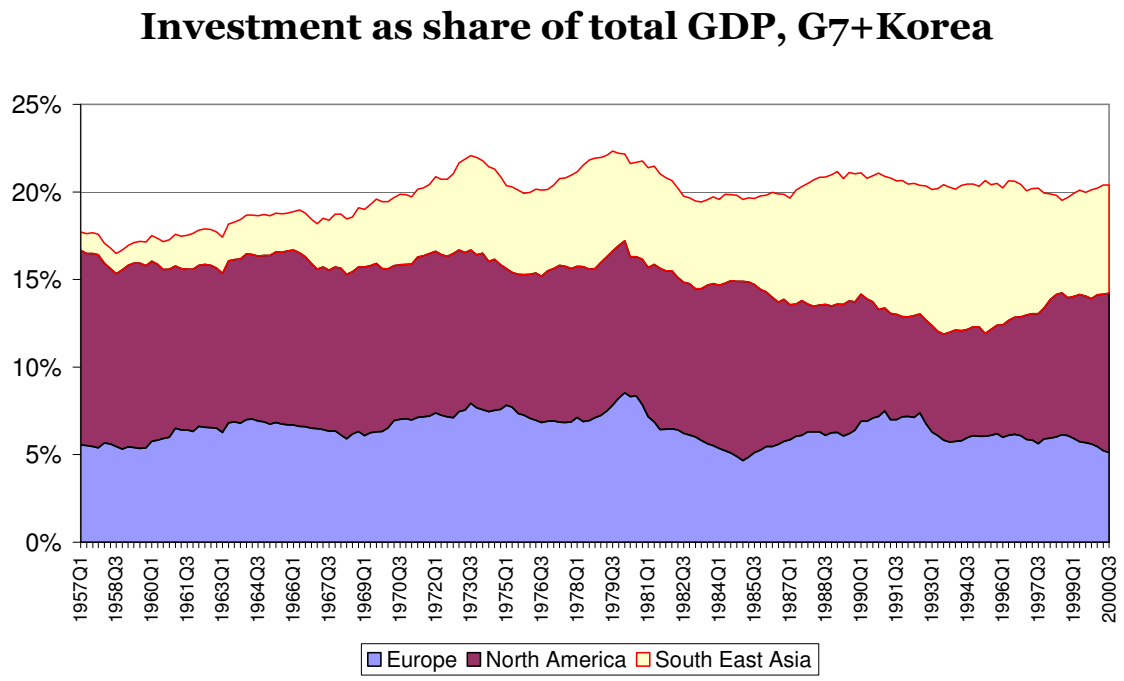


Figure 3a

The historical change in the situation of the advanced countries is also illustrated by OECD figures for growth rates in real (use-value) output per capita in figure 2, which show a complete reversal in the ranking

of the major industrial powers. In the 70s only the UK stood lower than the USA; in the last decade the US and UK registered the top average growth rates of all G7 countries.

1980 and the Reagan-Thatcher revolution thus ushered in a definite new turbulent period in which North America has been making systematic inroads into its relative losses of the postwar boom. The principal purpose of this paper is to analyse the nature, causes and possible outcome of this new historical development.

In particular w e want to investigate three related questions. The reference point of these questions are those periods in history during which there have been prolonged phases of rapid growth, sometimes termed 'long waves', such as the industrial revolution or 'first Kondratieff', or the prolonged postwar Golden Age or 'fourth Kontradieff'. The issue of concern is whether we are the beginning of a new such period, which from Greenspan's use of the term 'new paradigm' economy is clearly the premise that informs US policymakers. I will break this down into three questions, namely:

(1) Is the course of development initiated by this change in the USA's relative position *sustainable*, that is, has it opened a new period of historical growth for the USA?

(2) Is this course *generalisable*, that is, can it fuel a worldwide growth?

A subsidiary question is: what is the likely depth and extent of the current recession or, perhaps more importantly, what are its likely consequences in terms of the relations between advanced industrial countries?

INVESTMENT

The second major premise of this article is that the principal driving force of growth is *investment*. In the early postwar years, investment rates in South-East Asia reached historically unprecedented levels, facilitating sustained annual growth ratesof 8% and over. Growth at this rate has projected economies such as Korea from relative backwardness to the standards of a modern industrial state within a generation.

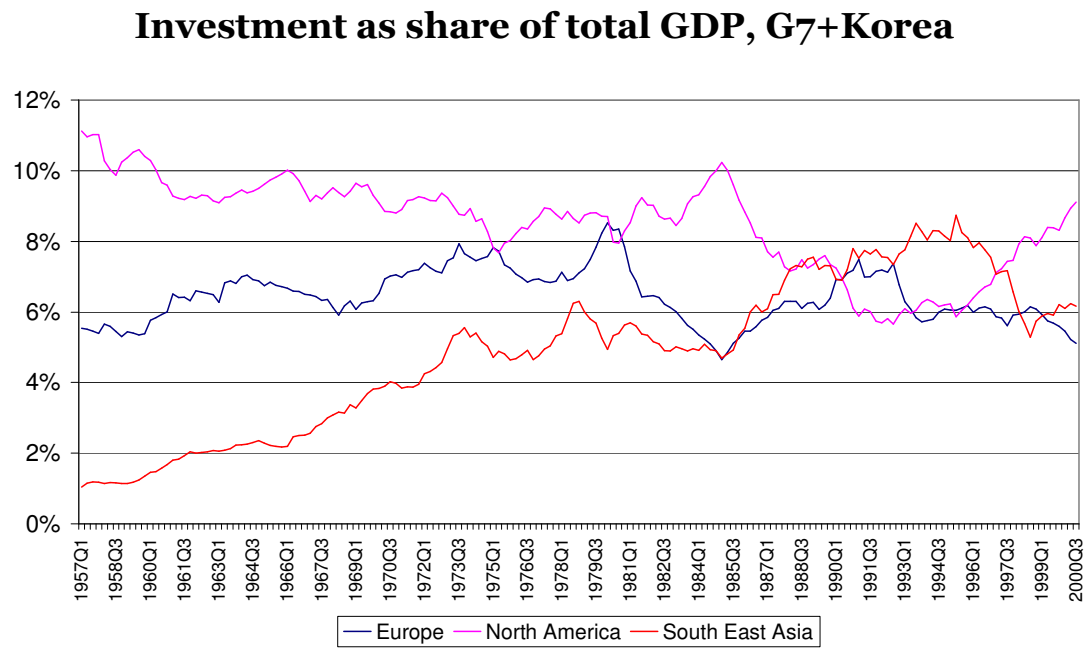


Figure 3b

Investment, the principal driver of accumulation and hence growth, is financed out of a *definite, but limited quantity of capital*. Capital may not be created out of nothing; like Shakespeare's spirits of the deep,[4] it may not be summoned into existence by decree but arises out of production. It is that (accumulated) part of output that remains unconsumed and is deployed in pursuit of profit; output in turn arises from human labour, whose magnitude is set absolutely by the size of the economically active population and the hours for which it works.

[4] 'I can summon spirits from the vasty deep'

'So can I or any man, but do they come when you do summon them?'

This quantitative limit expresses itself as an aggregate monetary relation that is recognised in the national accounting framework; total world savings equals total world investment. Each nation, therefore, can finance its investment ultimately from only one of two sources: from its own savings, or by borrowing from other nations.

Again to abstract from all effects except regional difference, figure 3a shows the investment of each region, as a share of the total GDP of all regions. Figure 3b shows the same magnitudes accumulated or 'stacked', so that the top line shows the total investment of the advanced countries, as a proportion of the GDP of the advanced countries. Figure 3a illustrates the constraint of the quantity of capital, and figure 3b exhibits its effects. The relative shares of investment have changed dramatically, but their total has remained remarkably stable, rising from 17% in 1952 to 22% in 1973 and thereafter never falling below 19% or rising above 22%. The investment share of North America in contrast fell from 11% to 5% between 1957 and 1991 while South-East Asia's rose from 1% to 9%.

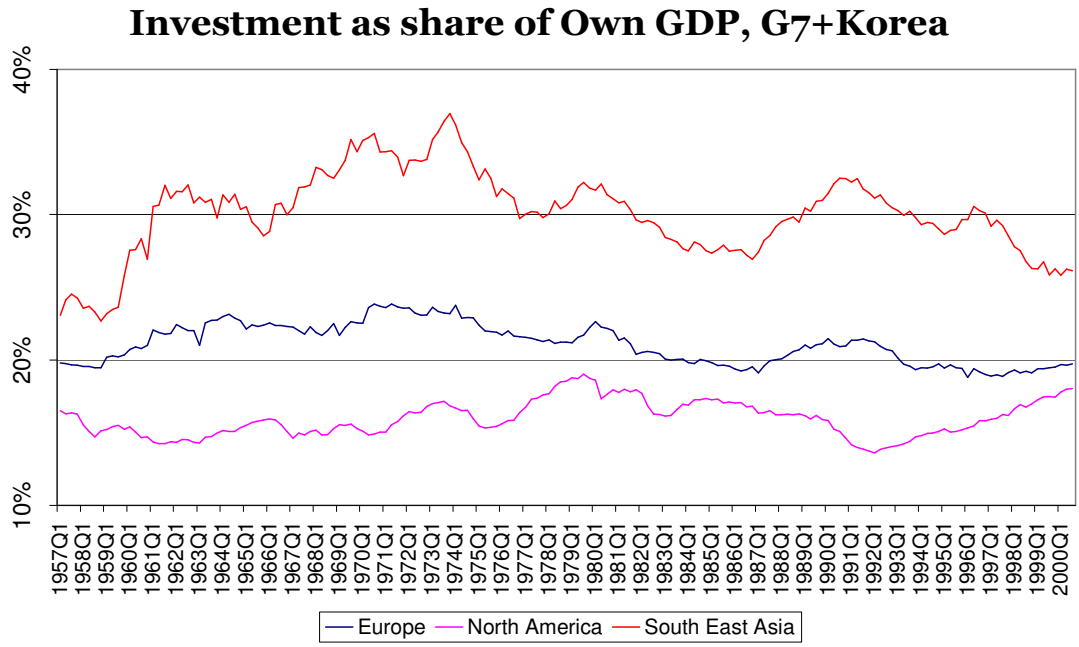


Figure 4a

Figure 4a shows a different but related quantity; the *investment rate* of each region, that is, the proportion of that region's GDP which is invested; figure 4b shows the same for the European countries. These two figures exibit a further, and equally important point: although the USA successfully restored its investment rate nearly to its postwar peak of 22% of GDP, and although Japan's investment rate fell to a postwar low, nevertheless throughout the period Japan's absolute investment rate remained above that of the USA. For this reason, and despite the prolonged Japanese economic crisis, there is no indication the USA has overcome the basic productivity advantage in trade which Japan established during 1950-1980. To the contrary, as we shall now see, the US's failure to overcome this productivity gap is the source of a persistent US balance of payments deficit which is, if anything, worsening.

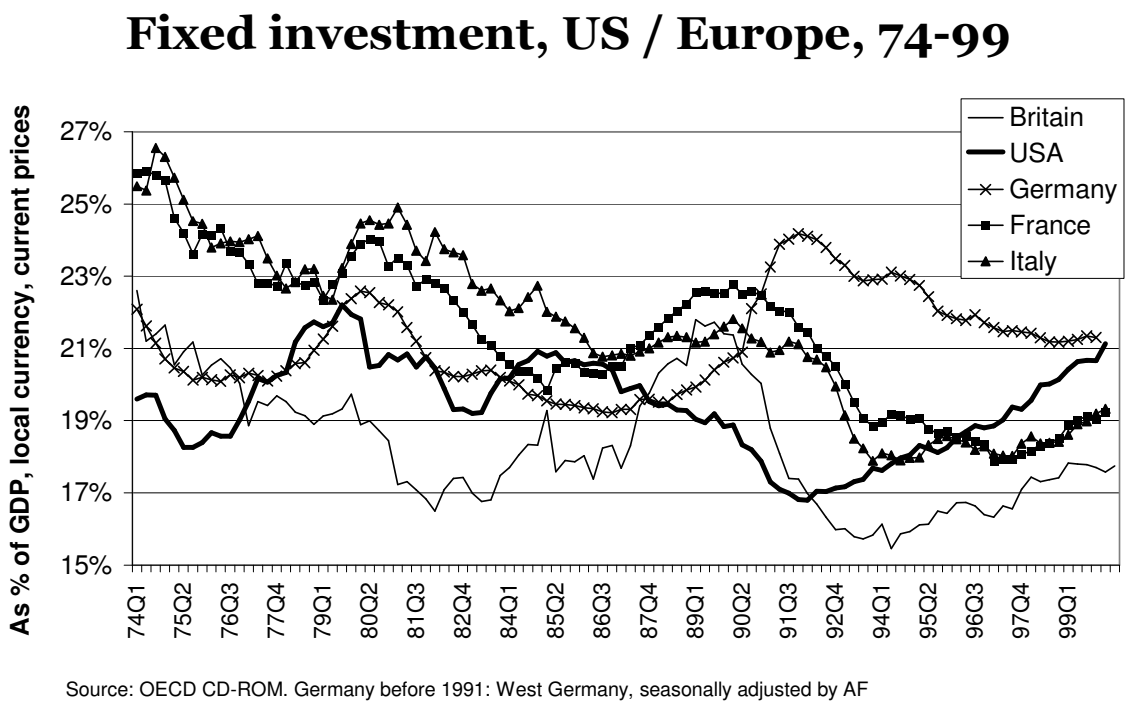
In like manner, although the UK experienced a steady and quite prolonged investment surge parallelling that of the US, at the end of this surge the proportion of its output being invested remained below that of every other advanced industrial nation, with the result that in the present recession, the trade deficit appears to have returned to haunt it. In the next section we consider why this might be.

INVESTMENT AS THE DRIVER OF GROWTH

Investment cuts costs, that is, raises productivity. The criterion which allocates market-driven investment is that it should yield a higher than average profit, which, if the product is sold into a single uniform market at a uniform world price, can only be achieved by reducing unit costs. But if unit costs are reduced, by definition productivity rises and hence output. It is in this way that the profit motive translates into a growth imperative. This produces three distinct but related effects.

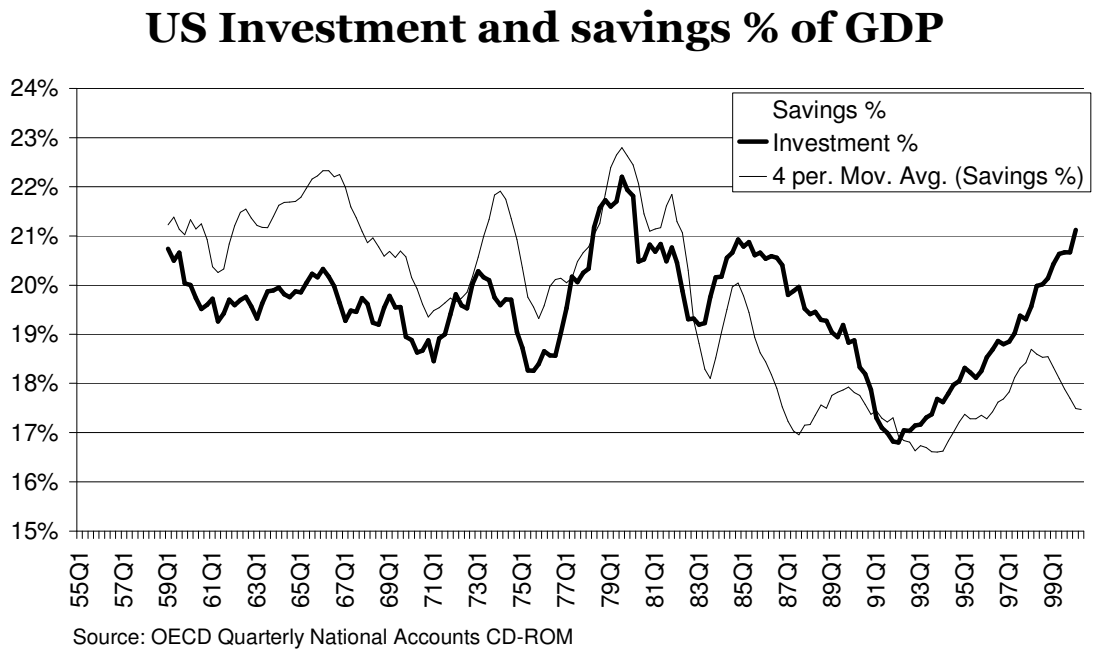
- The investing nation grows economically; it produces more goods for the same amount of consumed capital.

- If a nation raises its productivity higher or faster than another then it achieves a consistently higher profit rate; it outperforms and outcompetes the less productive nation.
- The profit rate declines secularly as long as investment continues, since investment accumulates, that is, augments the total stock of capital representing claims on total profits. The profit rate is restored periodically by means of crisis, an abrupt suspension of accumulation.[5]



Source: OECD CD-ROM. Germany before 1991: West Germany, seasonally adjusted by AF

Figure 4b



Source: OECD Quarterly National Accounts CD-ROM

Figure 5

For a given nation, the first effect may outweigh the third and thus a nation or region may escape a falling world profit rate, if it can outcompete its rivals in the race to raise productivity.

[5] The profit rate differs depending on whether it is measured in terms of money, use-value, or hours of labour. The law of the tendential fall in the profit rate applies to hours of labour.

The more a nation or region invests, the more marked these effects. Nations may of course circumvent the restrictions of their purses by cunning techniques to direct investment where it is most effective and we shall see that the US investment boom of the 1990s was exceptionally, and probably consciously, directed into ICT (Information and Communication Technology).

However I know of no evidence that such techniques can overcome the fundamental quantitative relation which is, the more investment, the faster the rise in productivity. I know of no case where sustained high investment has produced sustained low growth, or vice versa.

The relative rates of investment of nations or regions therefore offer a key quantitative indicator of the relative strengths both of the fundamental economic forces driving up their output and living standards, and the forces that tend to change their relative competitive positions.

Both figures 3a and 3b clearly identify the basis of the extraordinarily rise of South-East Asia from 3% to 30% of world GDP in 40 years from 1954 to 1994; namely, its unprecedented investment rate, never less than a quarter of its output. Second, they identify the basis of Europe's steady but less spectacular improvement relative to North America. Finally they illustrate how and why North America, and the USA in particular, have been able to rise again to the top of the GDP growth league among the advanced industrial nations, on the back of a sustained investment boom.

However, it is not so simple, on the basis of a mere ten years of relatively faster investment growth, at rates which are nevertheless lower than those nations that have invested at considerably greater rates for most of the second half of the century, to overcome the cumulative disadvantage that has resulted.

In consequence the US's expansion of the 1990s has been financed on a completely different basis to that of the world's 1950-1990 'golden age' expansion.

SAVINGS, CAPITAL MOVEMENTS, AND THE WORLD INSTABILITY PROVOKED BY US GROWTH

The ten-year growth of US output is dominated by its prolonged ten-year expansion of investment. Between 1990 and 2000 GDP expanded by 8% as a proportion of the GDP of the G7 countries; investment by 4%. However, as is also indicated by GDP trends, this was not the result of a world expansion; it happened because the US grew at the expense of the other advanced industrial nations, whose investment contracted, again reversing postwar trends.

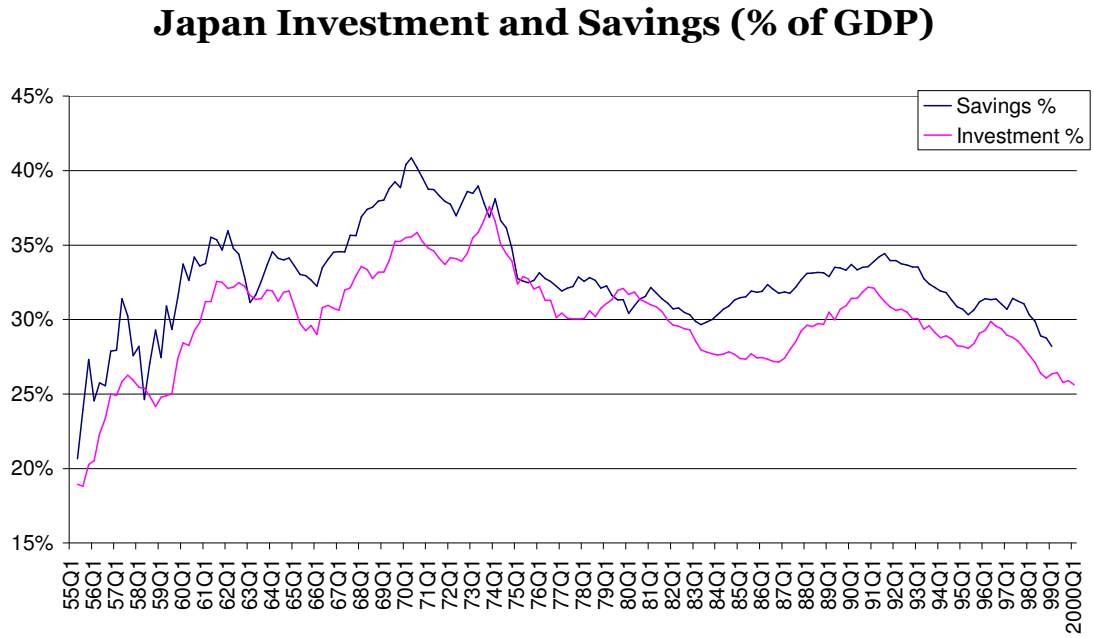


Figure 6

This is a fundamental source of instability of the global economy. Figure 5 exhibits a different facet of the same two periods already noted: up till 1980, US investment was financed from internal savings, which always exceeded investment. This reversed in 1980 and savings from then on fell behind investment. This

was particularly marked in the 1990s expansion in which savings and investment moved in opposite directions.

As figure 6 shows, the Japanese savings-investment relation since 1980 is more or less the reverse of this. The money for US investment comes from abroad, which manifests itself in persistent US balance of payments deficits and persistent South-East Asian surplusses. However as figure 7 shows, this relation emerged out of the turning point of 1980. This graph shows how much investment is financed out of domestic sources. It exhibits net borrowing (savings minus investment) as a proportion of investment.

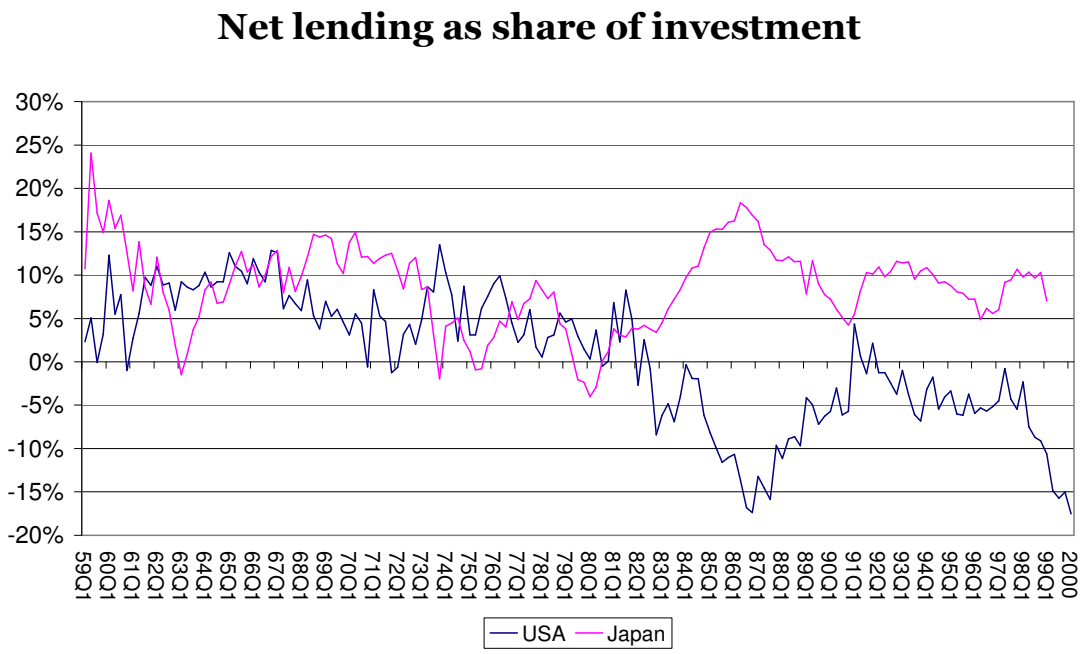


Figure 7

Essentially the world financial system acts as a vacuum cleaner to draw these trade surpluses into the financing of US investment. The basic sources of finance are South-East Asia and to a lesser extent, the Third World, as figure 8 shows.

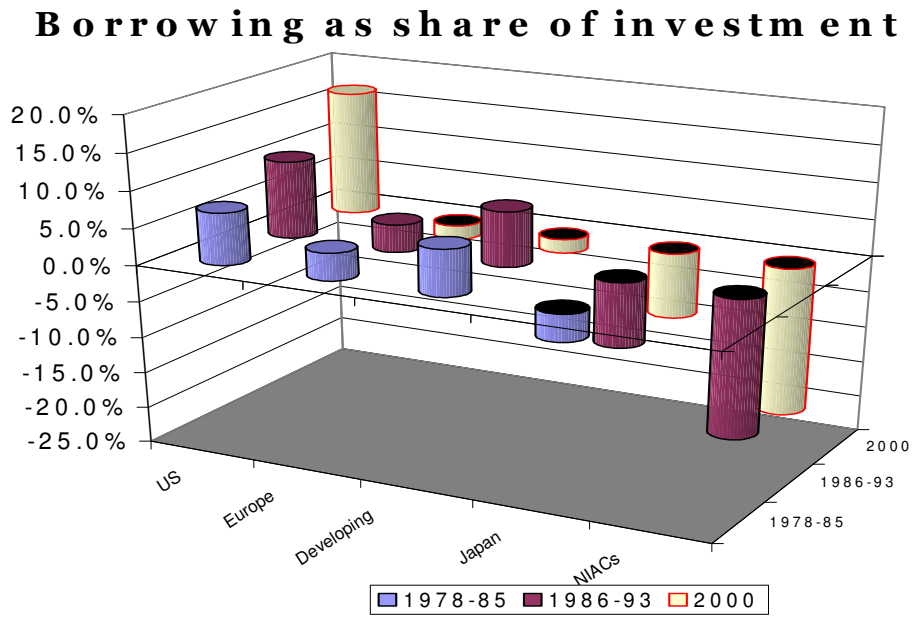


Figure 8. Source: IMF Economic Outlook October 2000
Notes: NIAC = Newly Industrialised Asian countries; Negative (top of the cylinder is black) means countries are net lenders; Net borrowing of NIACs for 1978-85 is missing

The impact of 1980s trade and financial deregulation was to mobilise world capital around US expansion. However in consequence US expansion was purchased at the expense of the expansion of the rest of the world economy.

This exhibits the significant difference between the US/North American expansion of 1990-2000, and the 'Golden Age' worldwide expansion of 1947-65. The postwar world expansion was financed by the net *export* of capital from the major industrial powers and above all US capital. The expanding powers were therefore, in a basic sense, the motor of growth. The US expansion of the 1990s has been financed by the net *import* of capital from the rest of the world and above all from South East Asia. The mechanism is as follows:

- The US emerged from World War II with a substantial productivity advantage which translated itself into a competitive advantage in world trade, yielding a surplus profit.
- For political and economic reasons, the US did not invest this surplus profit but exported it as capital to the rest of the world, where it was absorbed in domestic investment particularly in Germany and Japan. As the defeated in the war they could not be permitted to redevelop external spheres of political or economic influence; nevertheless, they had to be shored up as a bulwark against communism. This led to a highly intensive mode of development in which they regained their strength in world markets by means of a so far unprecedented level of investment and hence technical advance.
- Meanwhile the UK, as the US's junior partner, continued to pursue an extensive model of development founded in the export of capital, but without the productivity advantage that would allow it to finance these capital exports through a stable trade surplus. In consequence it suffered the now well-known, almost classical symptoms of the 'British malaise'; the steady loss of industrial superiority, regular devaluation crises and a systemic trade decifit.
- The entire period of extended and rapid accumulation that opened in the 1950s gave rise, through the accumulation of capital stock, to a prolonged decline in the world general rate of profit (see Freeman 1999) leading to what we term a *generalised crisis*: a slowdown or suspension of accumulation in all nations, the return of synchronised trade cycle crises in 1974, 1980, 1989 and now 1999. The return of mass unemployment, and extensive political and economic turbulence.
- In this situation, the US and to a lesser extent the UK launched, in the early 1980s, a political programme aimed at restructuring the world economy: the 'neoclassical counterrevolution' as Todaro (1974) puts it which included widespread deregulation, the re-imposition through the WTO of a uniform world market for the products of the advanced countries, the creation of a world market in intellectual property through WIPO and other means, the opening up to capital of the markets of the former Soviet Union and Eastern bloc, the breakup of protectionist policies in the third world, and so on.
- The programme had twin objectives; on the one hand, to restructure relations between the advanced countries as a whole and the rest of the world, principally to create a genuine world market including a world market in capital, enabling global economies of scale which would open the door to larger-scale investment than hitherto; on the other hand, to enable the USA, through its domination of the world commercial and financial system which arose from the dollar's world role and the US's political and military pre-eminence, to secure advantages in the commercial and financial sphere which could offset its productive weakness.
- It is now clear that a third potential function of the programme, for the USA, was an attempt to restore its productive pre-eminence. A potential outcome of the ten-year rise in US investment, above all if it is maintained through the recession, is the restructuring of the US economy so as to re-establish the productive lead that it held after world war II. It is clear that this is what US policymakers hope for.

We now consider the nature of the investment boom itself and the possible consequences.

LOCATION OF THE US ATTEMPT TO OVERCOME THE PRODUCTIVITY IMBALANCE

The role of government in the US investment boom

The role of public spending in the US investment boom is significantly underestimated, perhaps because it does not conform as closely to the market model which it is supposed to incarnate. Not least, it is often forgotten that the internet itself is a state project, arising out of ARPA military work in the 1960s and launched essentially on the back of academic-military collaboration.

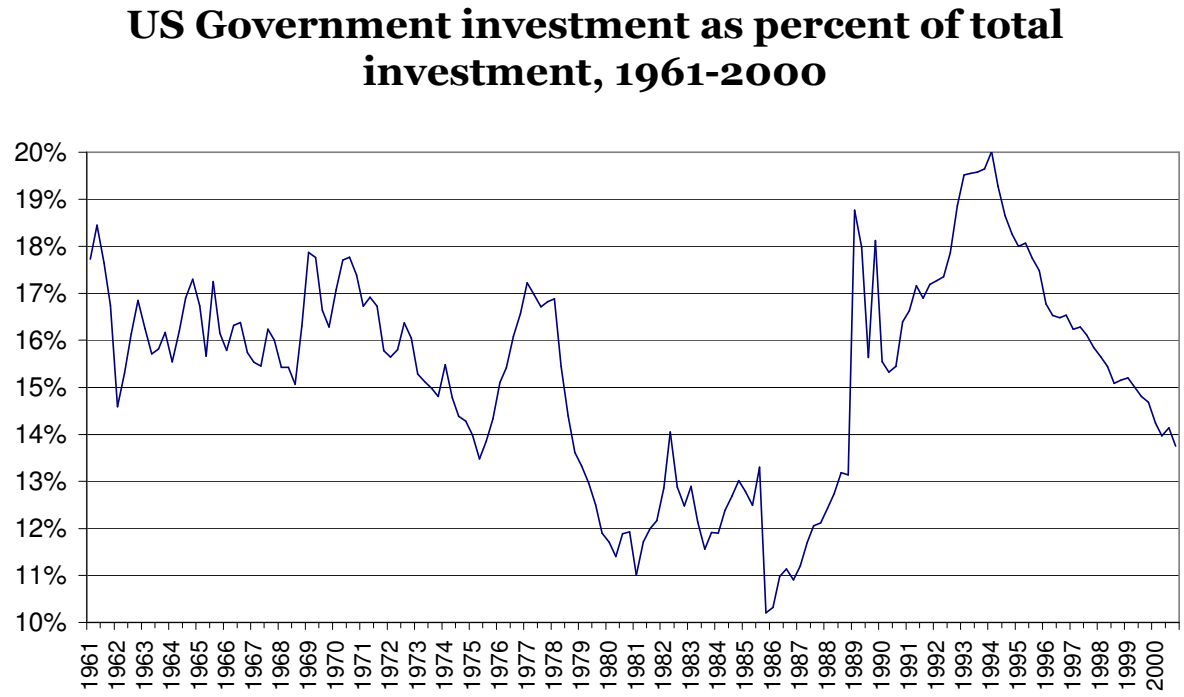


Figure 9a. Source: BEA

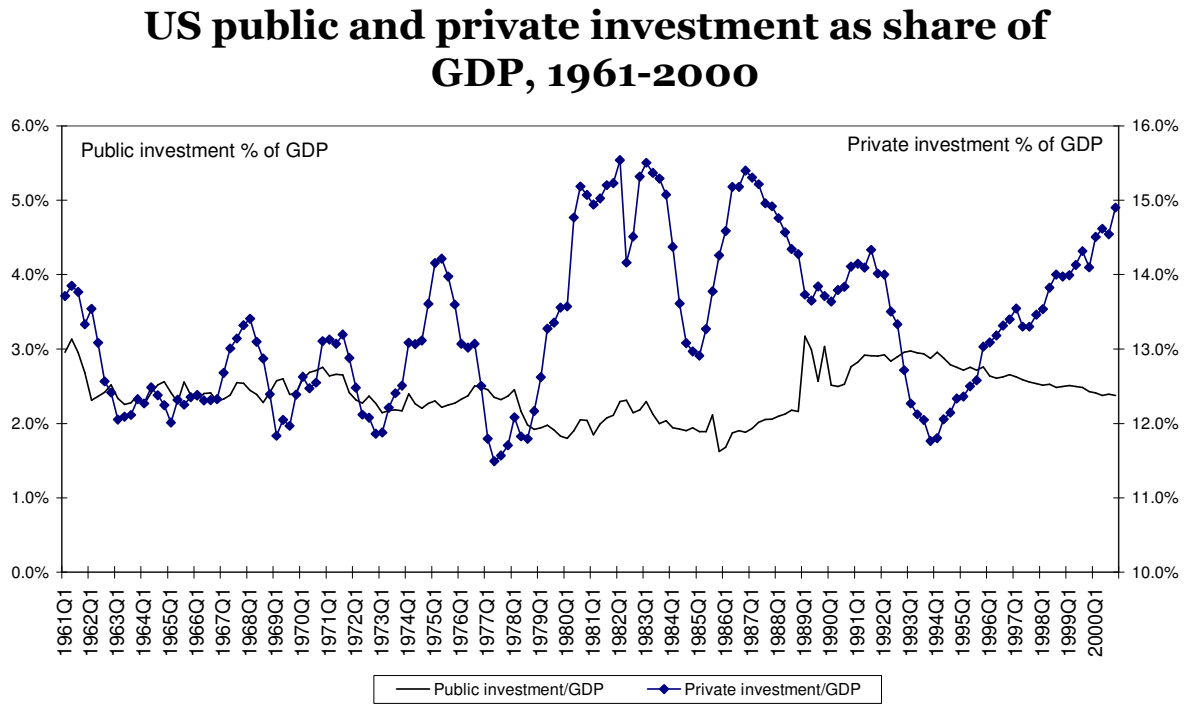


Figure 9b. Source: BEA

As figures 9a and 9b show, there was a steep ten-year rise in the proportion of investment provided by the state, which reached a postwar peak in 1994. Until 1995 this was the principal source of expansion of US investment.

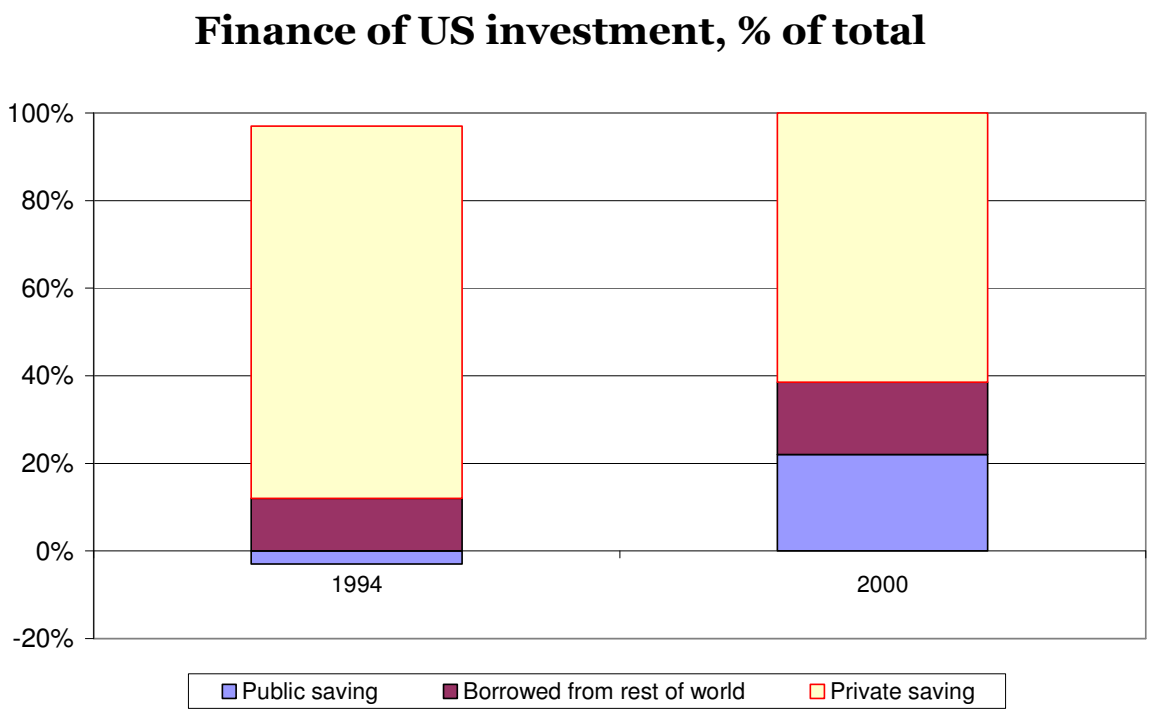


Figure 9c

Source: IMF Economic Outlook, October 2000

What has the US invested in?

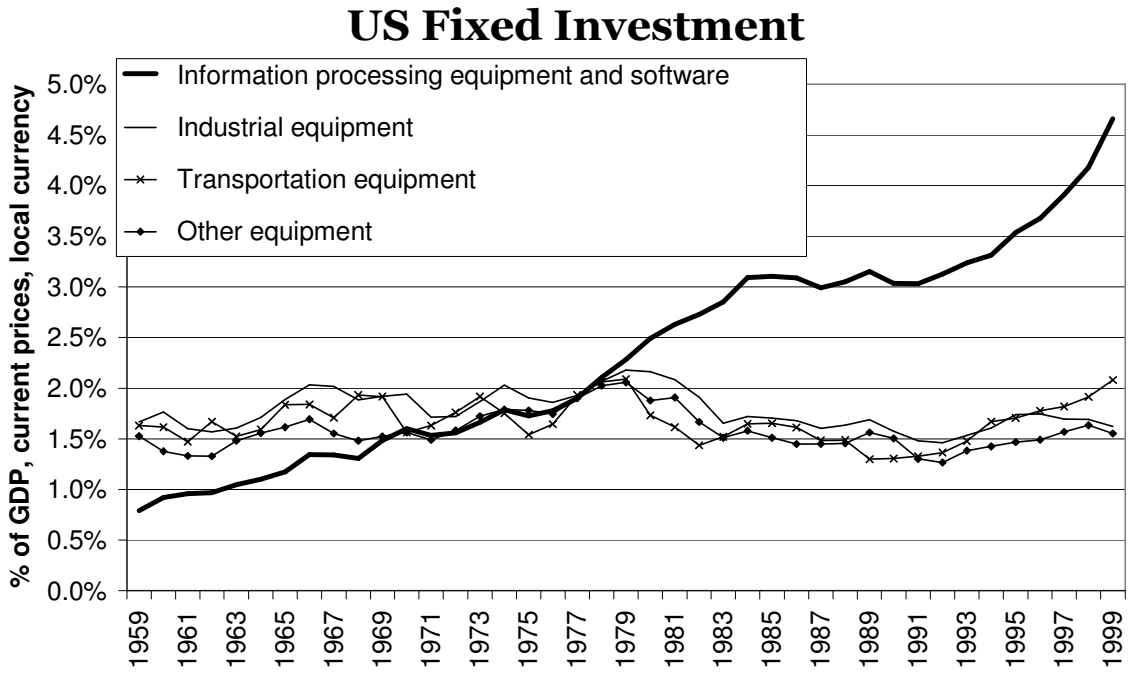


Figure 10: breakdown of (private) investment showing ICT investment

Note: the BEA provides breakdowns of investment only for the private sector. This is about 75% of total US investment but proportions vary significantly (see later)

The role of government saving is also significant as figure 9c shows. The investment boom was not the product of the domestic market in capital in the US; the private sector now saves less, as a percent of GDP, than at any time in the last twenty years. The fundamental change has been the influx of foreign capital, and an increasingly significant role of public funds initially as a direct source of investment, and subsequently as funder of private investment.

Thus in the most recent five years, the state (public purse) has moved from being a modest net borrower (0.6 % of GDP) to a net lender providing savings equal to 4.7% of GDP. 21% of all investment in the year 2000 was financed from public saving and 17% from abroad.[6]

Figure 11 shows where this investment went; how much the US private sector invested in various sectors since 1959 as a share of GDP. The US investment boom was almost entirely concentrated in ICT – 75% of all additional investment since 1980.

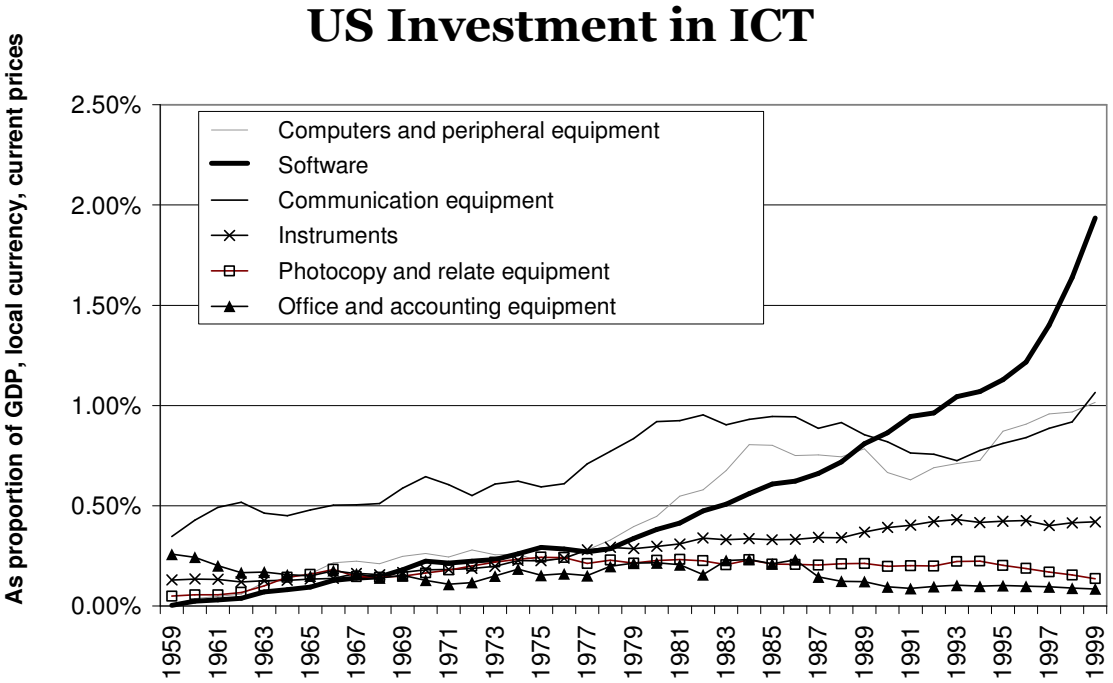


Figure 11: where ICT investment goes

Figure 11 shows how this is broken down into various components of ICT. It is striking that the great majority of the growth is accounted for by three sectors alone: software (which dominates), communications equipment, and communications equipment.

All the figures about investment refer to *annual investment*, which accumulates. The importance of this is that even a small difference in annual percentage, over a period of years, adds up to a much larger difference in the stock of productive assets which two nations possess.

The OECD (Schreyer 2000) has made estimates of the relative level of investment by various nations given in table 2 at the end of this paper.[7]

THE NEW ECONOMY AND THE DISTINCTIVE NATURE OF THE US INVESTMENT DRIVE

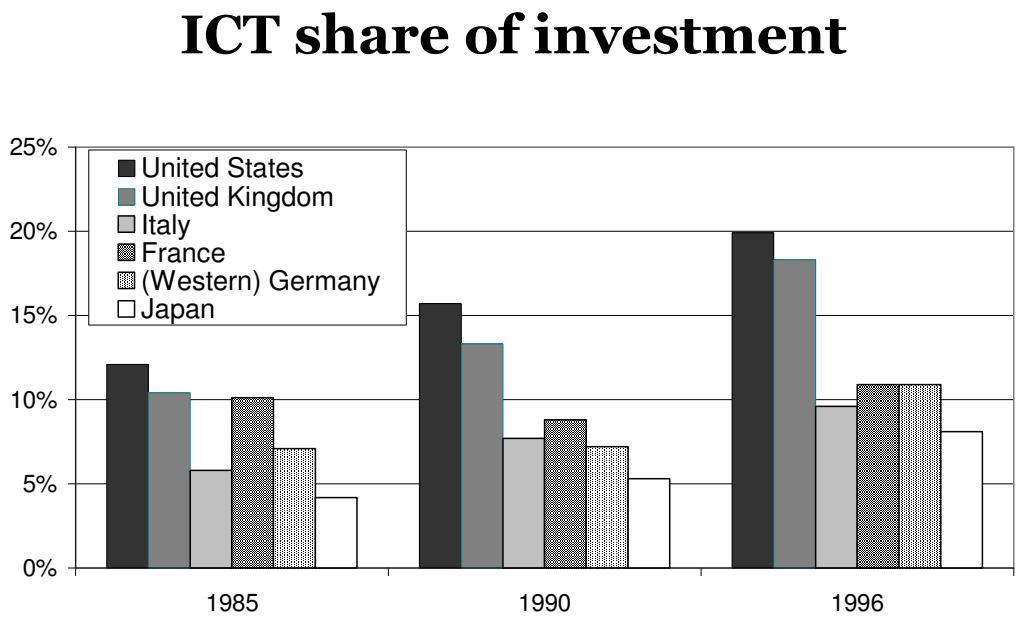
The OECD statistical office is making a strong effort to produce estimates of comparable investment in new technology by country and its impact on productivity. So far this is dogged by the problem of estimating

[6] Savings by the government are not the same as government investment. If public saving is greater than public investment (as was the case from 1998 onwards) then the government is lending money to the private sector, and vice versa.

[7] The proportions of investment in ICT are lower than those given by the BEA. There are two reasons for this; firstly some categories of expenditure which the BEA includes are excluded by the OECD notably software, and second, the OECD attempts to estimate real, rather than nominal expenditure. This only means, however, that the OECD figures probably underestimate the gaps in investment.

'real' output; there is no consensus on how to measure the increase in production of the computer industry when, for example, it produces a new computer that theoretically runs 3 times as fast but does not increase the throughput of a human user by anything like this amount.

The OECD does provide some comparable measures which are worth examining and which illustrate the systematic lead of the US in ICT investment and the rapid expansion of this section of investment. Note that because of the OECD's attempt to estimate investment in its own 'constant prices' discussed above, these percentages are not very comparable with the nominal percentages given above.



US investment is disproportionately concentrated in ICT compared with other countries except the UK, which trails the US in general investment but is close behind it in ICT investment. It should be noted that for example Japan therefore has a higher general level of investment but a lower level of ICT investment. It should also be noted that there are important differences in the *production* of ICT not expressed in *investment* in IT. The US produces software and a growing amount of hardware. SouthEast Asia produces hardware. Europe produces less of both. ICT investment in these different countries therefore has differential effects.

GOLDEN AGE OR RETURN TO CLASSICAL IMPERIALISM?

In this paper we do not have the scope to enter the extensive debate on Kondratieff waves. The purpose and methodology of this paper is, using the Galilean approach, to begin with what can be considered indisputably factual, to identify the theoretical and conceptual elements required to coherently interpret the facts, as revealed by what data we have, and on this basis to present an interpretation.

We need to examine, and make judgements on, trends in global development whose time span is half a decade. We must therefore adopt the *minimum* theoretical presuppositions needed to make such judgements, based on the evidence before us.

All such evidence suggests that there are long-term processes expressed in most principal indicators of motion of the world economy (sectoral prices, growth rates, unemployment rates, accumulation rates, profit rates), and that these long-term processes alternate long (15-30 years) periods of growth (low unemployment, rapid accumulation, high profits, rapid sectoral price disparaties) with equally long periods of stagnation (high unemployment, slow accumulation, low profits, asking Dad about price disparities,).

On this basis, definite periods of extended expansion and relatively slow expansion in the evolution of capitalism can be identified.[8] What is interesting to the economic historian is that these periods can be

[8] In terms of value conceived of as labour hours, these may be explained as periods of accumulation during which the capital stock grows, leading to declining profit rates, alternating with periods of disaccumulation in which the capital stock contracts, leading to the restoration of profit rates. However to state our conclusions in this form would be to presuppose the conceptual and theoretical elements whose necessity we aim to demonstrate.

identified by other means, relating their start points, and perhaps also their end points, to politically significant events in world history. Thus the expansion of 1848-73 opens with the defeat of the 1848 revolutions; the expansion of 1893-1914 opens with the epoch of imperial conquest and ends with WWI; the postwar expansion opens with Pax America and its end is announced spectacularly by the events of 1968. This coincidence is the root of a dispute I consider one of the most fundamental of modern historical theory, between Trotsky and Kontradieff in which Kondratieff argued for an *automatic* or *endogenous* process of contraction and expansion over a 50-70 year period, against which Trotsky argued that such processes, unlike the business cycle, were *externally conditioned* and that, in particular, phases of expansion presupposed a fundamental reorganisation of world geopolitics.

The *endogenous* features of a phase of expansion concern definite technical relations that exist between the various components of demand originally broached by Marx in Volume II of *Capital*, in the section on expanded accumulation and the subject of the Luxemburg-Bauer-Bukharin debate on accumulation. This discussion is also well-known and further developed in the discussion on long waves. The issue at stake, now at the forefront of financial commentary on the present recession, is this :*what are the conditions for the demand for investment goods to constitute a stable and growing element of demand as a whole?* Or, to put it another way, what are the conditions for a prolonged self-sustaining investment boom?

Regardless of technical innovation, it is a theoretical possibility, as Bukharin and Bauer established, that investment (strictly speaking constant capital) to form an ever-growing part of annual turnover at least for prolonged periods. This does not require that an ever-increasing part of annual consumption be invested, merely that *some* part of annual consumption is in every year invested, so that the total product of society circulating as capital grows. In terms of labour hours, which allows us to set aside changes in productivity or nominal prices, this can be explained as follows: if annual new value (hours worked by living labour) is fixed and if the part of this annual new value consumed by workers and capitalists (wages plus capitalist consumption) is also fixed, then each year, the unconsumed part of the product, measured in labour hours, must be larger than it was the year before.

Of course, it is possible that accumulation is accompanied by a fall in prices, so that the unconsumed part of capital does not grow. But in that case all that has happened is that society has consumed the product by depreciating it, instead of by directly consuming it. The situation we are discussing, which clearly is what happened in the phases of prolonged expansion, is that the accumulation of capital outstrips its depreciation. This is simply historically what has actually happened, and our task is to explain this evident fact, not to waste speculative energy in fruitless attempts to prove it theoretically impossible.

For capitalism to expand on this basis requires a *technical restructuring*, in that production must be organised to absorb this extra unconsumed part of the product which appears as accumulated capital. This technical restructuring arises as a consequence of technical innovation, of the introduction of new products and methods of production generating a self-sustaining demand for new means of production.

It should be clear on this basis that investment can itself generate demand for investment. For example, if there is a growing demand for computers in order to raise productivity in offices, this in turn generates demand for microchips, which generates demand for microchip factories, and so on.

During a wave of expansion, this process is organised around *particular technologies* characteristic of the epoch. Thus for example, in 1893-1914 *steel and electricity* were the great expanding technologies. In 1947-1965 *motor transport and oil* played a similar role. They were ‘core technologies’, not only because they themselves expanded but because they facilitated the expansion of all other technologies.

Why is this? Essentially, because the *application of a core technology anywhere in the economy* can raise productivity. By replacing steam or coal power with eletrical power, and by replacing iron or brick structures with steel, more or less any producer of the early twentieth century could cut costs, increase production, and raise profits. The core technology thus plays the role of a universal source of superprofits.

The hope of US policymakers is clearly that in the current historical period, ICT and ‘new technology’ can play a similar role. Because the application of ICT in almost any branch of production can raise productivity in that branch of production, an investment boom is theoretically possible in which the motive to invest, and the motive to deploy ICT, become synonymous.

In that situation, the nation or region that draws the greatest benefits is clearly the *producer of the core technology*. British superiority throughout the mid-nineteenth century was almost synonymous with its superiority in the production of coal and iron. The rise of Germany, and the rise of Steel, are almost a single concept. The automobile is an indisputably American product, and so on.

The thrust of US technology policy should now be clear; it is to restore the general superiority of US industry by re-establishing US dominance in the production of the core technology of what they hope will be the next great wave of expansion.

I want to examine some of the difficulties associated with this idea. In particular, I want to suggest, based on historical evidence, that the conditions for such a world development are not merely technical but in fact political.

I want to suggest no more than a line of enquiry: that waves of expansion separate themselves, on analysis, into two distinct types; stable-hegemonic, and ustable-competitive.

If we examine the expansion of 1848-73 we find that it was characterised by British political and military hegemony and that this political hegemony (as was the decline of 1873-1893) was accompanied by *economic hegemony*. The pound was the universal trading currency and London effectively determined the world's money supply through its control of the reserves of gold; the world market was a gold/sterling market. Moreover Britain was *productively superior*; it therefore ran consistent trade surplus which meant, as explained above, that it was financing the growth of the rest of the world.

The decline of 1873-1893 was marked by the steady erosion of this hegemony, as Britain's economic rivals, notably Germany but also the USA, caught up in a process of intensive industrialisation.

A process very characteristic of the present world situation then began. Faced with the loss of its industrial superiority, Britain used its political, commercial and military superiority to secure for itself the advantages which it could not preserve in the open market. It embarked on a process of conquest, absorption of territories, and organisation of world markets to its special advantage, accomplishing two objectives: (1) harnessing and subordinating the labour and wealth of these territories to the expansion of its own capital, effectively providing a privileged zone in which to locate its capital (2) excluding its otherwise more productive rivals from these advantages.

It is noteworthy in the light of present discussions that this often took the form of interventions *nominally* in support of free trade and opening markets (eg the opium wars) which were *in fact* aimed at securing special privileges for British traders and producers.

This in turn forced its rivals to respond on similar terrain, so that a rush for territories and markets ensued culminating in World Wars I and II.

The 'belle epoque' of 1893-1914 was thus *co-terminous* with the period of classical imperialism, a struggle for territorial and market influence between rival great powers, none of which was capable of guaranteeing the stability of the others.

This allows us to give a quite precise meaning to the term 'hegemony'; in a hegemonic expansion, the expansion of the leading nation is a condition for the expansion of the other advanced nations. In an unstable expansion, the expansion of the leading nation is an obstacle to the expansion of the other nations.

This gave rise, among soviet economists in the 1920s, to a debate which has become known to the world purely through the interest the Western world has shown in Kondratieff, but which includes most of the elements of the modern debate. It is most accurately summed up in a remark of Trotsky (1923) in the debate with Kondratieff:

> One can reject in advance the attempts by Professor Kontrad'ev to assign to the epochs that he calls long cycles the same "strict rhythm" that is observed in short cycles. This attempt is a clearly mistaken generalization based on a formal analogy. The periodicity of short cycles is conditioned by the internal dynamic of capitalist forces, which manifests itself whenever and wherever there is a market. As for these long (fifty-year) intervals that Professor Kontrat'ev hastily proposes also to call cycles, their character and duration is determined not by the internal play of capitalist forces, but by the external conditions in which capitalist development occurs. The absorption by capitalism of new countries and continents, the discovery of new natural resources, and, in addition, significant factors of a "superstructural" order, such as wars and revolutions, determine the character and alteration of expansive, stagnating, or declining epochs in capitalist development

This suggests that the conditions for a phase of expansion are not 'endogenously' guaranteed, are not organic to the evolution of the capitalist market. A world expansion requires external, politically-shaped conditions. Thus the re-organisation of the world under US hegemony, and the military defeat of Japan and Germany, were actually preconditions for the long wave of 1950-1965. The technical possibilities of a new long boom cannot therefore be studied separately from the political environment. This creates a framework in which to

understand, for example, US-European policy in the East, US policy towards China, or the politics of European integration.

Although the 'golden age' of 1950-1965 is the most recent historical reference point for a phase of sustained investment-led growth, the best historical analogy is the period 1893-1914. Politically, the nature of this period was very different from others in that it was accompanied by expansionist military policies aimed at the acquisition of territories and by inter-country struggles for the domination of territories and markets. It was dominated, in a nutshell, by *inter-advanced country* competition. I will suggest that this is the best historical analogy to help us grasp what is now happening in the world economy.

The situation we now find ourselves in, as the data at the beginning of this article demonstrate, is that the US is attempting to reconquer its productive dominance by investing imported capital into the core technology of the present age. However, the situation this provokes in the rest of the world is intensely destabilising, both economically and politically. In particular it has been instrumental in the prolonged South-East Asian depression, and has been a driving force behind a systematic restructuring of political relations between the USA and Europe, in which the UK occupies a critical middle position. But this creates a conundrum. On the one hand to the extent that the US successfully diverts capital to its own expansion, it brings down the world market into which it must sell. On the other hand, to the extent that other advanced countries set in place effective counter-measures, the US is unable to finance its expansion.

From this point of view the integration of Europe cannot be conceived of as a purely organic process, internal to the European nations, but must be understood in the first instance as a response to the USA, as an attempt to set in place a protected market for both labour and capital, and a set of policy instruments governing the regime of accumulation on a regional basis, that can permit European capital to avoid the fate of South-East Asia and compete effectively with US capital on its new chosen terrain.

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APPENDIX: HOW MUCH DO THE ADVANCED COUNTRIES SPEND ON ICT?

Table 2. **ICT investment** from Schreyer (2000)
Total industries, percentages

	Canada	France	Western Germany	Italy	Japan	United Kingdom	United States
Share in non-residential GFCF							
IT equipment							
1985	6.9	6.1	3.4	3.4	3.4	5.2	6.3
1990	7.3	5.0	3.5	4.1	3.8	7.5	8.7
1996	10.1	6.0	6.1	4.2	4.6	11.7	13.4
Communication equipment							
1985	4.2	4.0	3.7	2.4	0.8	5.2	5.8
1990	5.3	3.8	3.7	3.6	1.5	5.8	7.0
1996	6.1	4.9	4.8	5.4	3.5	6.6	6.5
Average annual rate of growth of constant price expenditure on:							
IT equipment							
1985-90	17.2	16.2	18.8	20.8	23.6	25.5	19.6
1990-96	17.6	11.0	18.6	12.9	14.5	17.6	23.8
Communication equipment							
1985-90	20.6	19.0	18.4	25.6	34.7	20.3	16.7
1990-96	4.3	2.1	3.4	9.2	15.0	2.2	5.1
Share of ICT in nominal productive capital stock:							
1985	4.3	2.4	2.9	1.3	1.2	3.6	6.2
1996	5.0	3.2	3.0	2.1	2.3	5.2	7.4

Source: Schreyer (2000:12)