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**BRITISH ECONOMIC GROWTH,
1951-1973:
SUCCESS OR FAILURE?**

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British Economic Growth, 1951-73: Success or Failure?

It would be difficult to find any topic involving the use of economic statistics that has not been adorned by the contributions of Dr Geary. No exception is my topic today, concerning productivity and its growth. My misgiving is that in attempting to cover such a broad topic and in particular one with such wide historical range, I shall be likely—in fact certain—to fall somewhat short in the matter of statistical rigour. However, I know that Dr Geary is a man for the broad view as well as a man for statistical rigour, so I hope I shall be forgiven.

“How can there possibly be any question about it?” said a colleague when I mentioned the title of the lecture I was going to give here today. Throughout the post-war period the UK has had a lower growth rate than other industrial countries; our income per head is now below what it is in countries whose inhabitants we once regarded as lesser breeds; we have chronic trouble with the balance of payments; we have rapid inflation; and latterly we have not even been able to maintain full employment (although that is mainly a feature of the period *since* 1973 which lies outside the scope of my lecture today). Is not this the plainest possible case of failure? Indeed, so we read in our newspapers, this must surely rank as a case of degeneracy and decline to be compared only with the last days of Rome or Byzantium or Spain or whatever other precedent may be suggested to the leader-writer by his readings in popular history.

To the man in the street, it must be said, these disasters have been more apparent from the newspapers or television than from his own life. Maybe this was true also, *mutatis mutandis*, in Rome, Byzantium, etc; I do not know. But it is in marked contrast to some other phases of economic bad performance: the 1920s in Britain, the 1930s in the US, most of the post-war period in India and many other less developed countries, and various earlier periods in our

own history, like the 1840s. In those days the troubles were plain enough for all to see from their own day-to-day experience.

A main reason for this paradox is that comparisons of post-war British economic performance with the performance of other countries tell a different story from comparison with the performance of the British economy in earlier periods. For the industrial world as a whole, the post-war period has been one of outstanding economic success. There has been no other quarter century in history to match it. In this success Britain has shared, after its fashion. The growth rate of real income has been faster than ever before; the growth rate of real income *per head* has surpassed that of earlier times by a still greater margin; and for the average wage-earner the benefit has been still greater because of a shift in the distribution of income towards labour. Prices were rising, it is true, but until the late 1960s the rate of rise was moderate and remarkably steady (*not* accelerating). There was high employment. Even the balance of payments, to take a slightly less familiar point, was not really all that bad up till 1974: on the average of the years 1950-73, the current account was in surplus. The surplus was admittedly not very much (some 0.6 per cent of GNP), but it *was* a surplus, so it would be untrue to say that the country was living beyond its means. The surplus was, incidentally, not very different from that of industrial Western Europe as a whole. These good economic results were combined with less social conflict than in earlier times.

It is certainly true, on the other hand, that we have fallen behind other countries. This process has been going on for quite a long time—at least 100 years, in fact. Since the 1870s the growth rate of productivity has persistently been lower in the UK than in the other principal western industrial countries, to say nothing of Japan. Why this should have happened is a great question. But it is not a question specifically about the post-war period. Has the degree of shortfall in growth rate in the post-war period in comparison with other countries been more or less than formerly? The answer is mixed. The shortfall has been greater than formerly in comparison with Western Europe; and this is the comparison usually taken as the measure of our failure. There is too an unpleasant novelty in that continuing slower growth has caused our productivity for the first time to be lower absolutely since about 1960 than in most continental countries. On the other hand, compared with the United States the shortfall in our productivity growth rate has been significantly *less* in the post-war period than it was earlier; in fact

there has not been much shortfall at all.

So there are ambiguities. Reflection on them raises the question what exactly one means or ought to mean by success or failure in this context.

One sense would be: coming high or low in some social welfare function. Obviously there are very difficult problems of measuring that. What social welfare function? Whose social welfare function? How far is social welfare a function of relative income (relative to other countries), how far is it a function of absolute income? It is natural that relative income should figure particularly largely in the social welfare functions of politicians. It is really very irksome and humiliating to be treated in international gatherings as the sick man of Europe. High relative income and a strong balance of payments position are modern prerequisites of national glory, and national glory has usually meant more to princes than to subjects. It may be that the utility of public men has gone down, while that of most other people has gone up to an unusual extent.

Be that as it may, I think a more useful notion of national economic success or failure is in terms not of absolute social welfare but of achievement relative to what was possible. In other words, how far was the economy in a Pareto-optimal situation?—defining that very broadly to include institutional arrangements pertaining to economic activity, but recognising limitations due to the initial endowments, physical, human, and institutional. The better performance of other countries is then relevant not because it inflicts relative deprivation but because it indicates what, maybe, we could have done. Likewise our own past is relevant not because it enters directly into our utility function but because it indicates what we were able to do before, and hence, maybe, what we should have been able to do recently. In either case the comparison is relevant in so far as the environment is similar over space or time, as the case may be.

The general question can be approached in many ways. In this lecture I propose to confine myself mainly to the historical comparison, because this is the field in which I have worked. I propose to ask some questions about what has determined differences between periods in the rate of economic growth in the UK; and in the light of what we were able to achieve before to consider how the post-war period should be appraised. I shall carry the historical comparisons back in time to periods that are too remote, on any reckoning, to be at all similar to recent times. The historical figures are

of interest in themselves and an historical perspective does not mean much unless it encompasses a fair spell of time. At the other end, I shall not say much about the years *after* 1973 because they cannot yet be seen in perspective on account of the deep and still uncompleted world recession.

I proceed by the output-per-unit-of-input or total factor productivity method. In this method one takes the growth of labour input and the growth of capital input and averages them into a figure of growth of total factor input. The averaging is done on the basis of their distributive shares. The difference between the rate of growth of output and the rate of growth of total factor input is the rate of growth of total factor-productivity. Total factor-productivity growth means, broadly speaking, that part of the growth of output which cannot be attributed either to the growth of labour input or to the growth of capital input, on the assumption that the earnings of those factors are a measure of the output they make possible at the margin. For brevity I shall refer to total factor input as input and total factor productivity as productivity.

Table 1: *Annual percentage rates of growth of input and output, United Kingdom, peace-time phases, 1801-1973.*

	<i>Labour *</i>	<i>Gross domestic capital</i>	<i>Total factor input</i>	<i>Total factor productivity</i>	<i>GDP</i>
1801-1860	1.4	1.4	1.4	1.2	2.6
1856-1873	0.9	2.4	1.5	0.7	2.2
1873-1913	0.9	2.1	1.4	0.4	1.8
1924-1937	1.5	1.7	1.5	0.7	2.2
1951-1964	0.0	2.8	0.7	2.2	2.9
1964-1973	-1.1	3.9	0.3	2.3	2.6

* Employment, 1801-1913; manhours, 1924-73.

Sources: 1800-60, C. H. Feinstein, "Capital Accumulation and Economic Growth in Great Britain, 1760-1860", in *Cambridge Economic History of Europe*, Vol. VII (forthcoming); 1856-1973, R. C. O. Matthews, C. H. Feinstein, and J. Odling-Smee, *British Economic Growth* (forthcoming), based mainly on data in C. H. Feinstein, *National Income, Expenditure and Output of the United Kingdom, 1855-1965* (Cambridge University Press, 1972), with revisions and additions. Some of the data are preliminary and liable to further revision.

The rates of growth of output, labour, capital, total factor input, and total factor productivity are shown for a number of peace-time periods in Table 1.*

* Labour is measured in employment until 1913 and in manhours thereafter, on the ground that reductions in hours of work before 1913 were likely to have been offset by induced productivity gains, on account of the very long hours then prevailing.

The periods shown in Table 1 are not of equal length. They were chosen partly for statistical reasons but mainly to provide economically meaningful units. The first phase covers what would normally be thought of as the completion of the industrial revolution; the second period the high noon of British world industrial dominance; in the third period foreign competition and relative decline were beginning; the fourth period is inter-war, excluding the disturbed early post-war phase; and, finally, I have divided the post-war period into two parts because of a number of well-known changes in the pattern of experience after the mid-1960s. The picture is naturally altered somewhat if periods are differently demarcated. The main differences are those that result from alternative treatments of the war periods, and I shall say a word about that later. Apart from that, the exact choice of years does not make such a lot of difference in practice.

Strictly speaking, the measurement of input and productivity is purely descriptive, like the enumeration of the different items in the national accounts; it does not as such imply any causal hypotheses. However, most people who have used it have had a certain more or less neo-classical type of model in mind. In this type of model the rate of growth in the long run is determined on the supply side, that is to say by productive potential: so that growth in input and productivity can be seen as the "sources" of economic growth in more than just a descriptive sense. The rate of growth of productivity is thought of as determined largely by technological and socio-cultural forces, though influenced also by micro-economic institutions—the scope for competition and so on. Of the two elements in input, the rate of growth of labour is also determined mainly by non-economic forces, save in respect of migration. The rate of growth of the capital stock, on the other hand, is more directly economic in origin; it is likely to be high when the other sources of growth are high, though independent variations are not ruled out.

I refer to this supply-dominated model of growth as neo-classical, but it has been adhered to by economists who on other matters would disagree a good deal; in particular, it is compatible with either Keynesian or monetarist hypotheses about the forces determining *short-run* movements in output.

On this model there is no particular presumption as to whether differences between countries or periods in the rate of growth of income are due chiefly to differences in the rate of growth of inputs or to differences in the rate of growth of productivity. One's guess

would be that it would turn out to be a bit of each. The model is quite eclectic, and nothing is ruled out.

None the less, if one approaches the subject from this standpoint, as I do, one *is* a little chagrined to discover from the figures in Table I that in the comparison of the different periods, variations in the growth of input explain none whatsoever of the variance in the rate of growth of income—it is all “explained” on the productivity side. This comes about because in the first four periods there is practically no variation in the rate of growth of total input; and in the last two periods—since World War II—input rose more slowly than before (because of the very much slower growth rate of labour input) while output grew rather faster than before. This is of course entirely *ex post* and says nothing as to causes—for example, it does not rule out the possibility that in any given period output would have risen more slowly if input had risen more slowly. But one cannot say that the periods of above-average output growth were, as a matter of fact, periods of above-average growth in input.

A further surprise, and a more striking one, concerns the relation between the two elements in input, labour and capital. What would you expect this relationship to be *a priori*? I should have expected, and so would most economists, I think, though perhaps not most historians, that there would be a fairly strong positive correlation between them: rapid growth of the labour force should lead to rapid growth of the capital stock, both by permitting rapid growth of output and hence of saving, *and* by making for a high rate of return on investment (plenty of L for the K to co-operate with). In fact, as can be seen from the table, the relationship in the periods shown is one of very strong negative correlation. This negative correlation between the growth of labour input and capital input helps to account for the lack of variation in the rate of growth of total input up till the post-war period. In the post-war period the falling off in the rate of growth of input of labour (the more heavily weighted of the two) was too large to be offset by even the very rapid acceleration in the growth of the input of capital.

One further point stands out, already largely implied by the others. This is that the rate of growth of income has been more stable over time than the rate of growth of income per unit of labour input; again contrary, perhaps, to what one might have expected. This finding relates chiefly to the comparison of the post-war period with earlier periods. In the post-war period the rate of growth of income was only slightly higher than in earlier periods,

though the rate of growth of income per manhour was much higher. In fact the rate of growth of income was really pretty constant over these 175 or so years, varying only between 1.8 and 2.9 per cent a year in the peace-time phases shown.

Table 2: *Annual percentage rates of growth of input and output, United Kingdom, post-war cycles, 1951-73.*

	<i>Labour</i>	<i>Gross domestic capital</i>	<i>Total factor input</i>	<i>Total factor productivity</i>	<i>GDP</i>
1951-1955	0.5	2.3	1.0	1.8	2.8
1955-1960	-0.4	2.6	0.4	2.1	2.5
1960-1964	-0.2	3.4	0.9	2.5	3.4
1964-1968	-1.5	4.1	0.1	2.4	2.5
1968-1973	-0.9	3.8	0.4	2.4	2.8

Source: see Table 1.

Some rather similar conclusions emerge from comparison of different parts of the period since World War II. I have shown the relevant figures in Table 2. The phases shown there are cycles from peak to peak. There was a clear upward trend in the rate of productivity growth, at least until the mid-1960s, whether measured as total factor productivity or labour productivity. On the other hand, there was no upward trend in the rate of growth of output: the upward trend in productivity was matched by a downward trend in input, broadly speaking, though the trends are not perfectly smooth. The comparison between trends in labour input and capital input also resembles that found over the longer historical period: that is to say, they go in opposite directions, with the rate of capital accumulation increasing over most of the period very markedly, while the rate of increase of labour input declined—or rather the rate of decrease of labour input increased. These trends, too, are not perfectly smooth, but the general inverse pattern is plain enough. There are signs of a change in the pattern at the end of the period; in the last cycle, 1968-73, the rate of increase of the capital stock for the first time showed a slight decline, while labour input continued to fall steeply. In the present recession, since 1973, this coincident downward trend in the rates of growth of labour input and capital input has continued, of course; that is not at all comparable because it is not a complete cycle, and that is why I have not shown the figures, but it seems likely that when we do reach the next peak the same will turn out to have been true over the whole peak-to-peak

cycle. I shall revert to that presently, and leave it aside for the moment.

Of course all these figures are at a tremendously high level of aggregation—both in lumping together all kinds of output, labour, and capital, and also in dealing in the case of Table 1 with very long periods of time. Innumerable ways of qualifying them will leap to everyone's mind. However, on the face of it the two main findings—the lack of relation between the growth of total input and the growth of output, and the inverse relationship between the growth of capital input and labour input—could be taken to suggest a very different type of model of underlying causation from that I referred to earlier. In this alternative type of model, the rate of growth of output is *not* ultimately determined on the supply side, but by some other constraint: by the growth of demand (or some categories of demand), or possibly by the balance of payments. On this hypothesis, an exogenous change in the rate of growth of labour supply will not as such affect the rate of growth of output; instead, it will lead to an offsetting change in the opposite direction in the rate of capital accumulation, or in productivity, supposing it does not simply lead to a change in unemployment. Hypotheses of this type have been put forward by Beckerman, Arthur Lewis and Kaldor. The rate of growth of output determines the rate of growth of productivity, not the other way round—Kaldor's interpretation of Verdoorn's Law. This is an extension to the economy as a whole of the hypothesis examined in relation to specific industries by Salter, Kennedy, and others. It has been called a Keynesian model of growth, meaning that it does for the rate of growth of output what Keynes did for the *level* of output, namely, substitute demand for supply as the explanatory variable. I shall refer to it as the demand-dominated model, as contrasted with the more usual neo-classical supply-dominated model. These terms are over-simplifications designed merely for vividness.

The two types of hypothesis have some interestingly different implications for the notions of "success" or "failure" in economic performance. On the supply dominated hypothesis, a large part is played by socio-cultural factors that determine the rates of technical progress and population growth. The economist must then be very cautious in saying what is a good performance or a bad one. If, for example, growth in productivity in a country is slow because the *mores* create an aversion to change or effort, or a dislike of the ethos of competition, then it is not for economists to say that this is

necessarily a failure in performance, in a sense relevant to policy. There is a trade-off between growth of output and certain non-economic values. One set of attitudes is not unequivocally better than another. In this connection it is relevant to compare economic indicators with social indicators, and as is well-known they do not show by any means the same ranking of countries. Of course, the socio-cultural forces that affect changes in productivity or its rate of growth may often, or even usually, affect economic and social values in the same direction. For example, conflicts between social classes or between ethnic or other groups may make both for social malaise and for poor economic performance. But a conflict between social and economic effects is possible.

On the other hand, if the main determinants of growth lie on the demand side, social objectives are less likely to be involved one way or the other, and the criterion of success or failure is more clear-cut. The whole matter is more technical. For example, if a high rate of growth of output is dependent on having the right monetary policy or the right exchange rate arrangements, there is not likely to be much on the debit side socially to set against the policy that gives the higher growth rate of output (leaving aside any debit elements that result from growth itself, as opposed to particular sources of growth). The economist has potentially a larger role in diagnosing failure or success, and in prescribing the optimum policy, if the demand-dominated hypothesis about growth is true than if the supply dominated hypothesis is true.

I shall now look a little more closely at the various historical phases to see what they suggest about the relative validity of the supply and demand dominated views and hence about the criteria to be looked at in assessing post-war experience.

First, the several phases before 1914. The *issue* here is very clear. There was a long-run downward trend in the rate of growth of output and also of total factor productivity. Which was cause and which was effect? The Lewis-type demand-dominated hypothesis is that the growth of foreign competition progressively weakened the growth of demand for exports and this discouraged enterprise and investment and so led to the slower growth of output. The opposite hypothesis is that the rate of growth of productivity declined, partly for technical reasons and partly for socio-cultural entrepreneurial ones, and that this was the cause of the slowing down in output growth: any loss of ground to foreign competitors was a consequence rather than a cause.

The answer is no doubt that it was a bit of each, and the real issue is how big a bit. I doubt if we shall ever be able to resolve that decisively. There are important elements in the decline in the rate of growth of productivity in that period where the explanation seems to be clearly on the supply side, such as in cotton textiles and in the new industries. I find it more difficult to identify sectors where the trouble was unquestionably on the demand side, but doubtless there were such.

A question in parentheses: Does the behaviour of prices help to resolve the issue? Prices were rising in 1900-13, the period when the growth performance was least good. Is this a clincher in favour of the supply hypothesis, on the grounds that rising prices must mean strong demand? The answer is no, because the rise in prices was due to a rise in world prices. In fact it seems that the rise in world prices actually had some deflationary effect in the UK in this period, by making for an unusually slow rate of growth of real balances. The rise in the oil price in 1974 would have had a similar effect if policy had simulated the gold standard.

Secondly, the inter-war period. This is more complicated, with several cross-currents. The question, what determined the trend rate of growth of output in Britain in the inter-war period is not quite the one that has normally been asked. People have usually been concerned either with the rate of productivity growth or with the causes of depression and recovery in a cyclical sense. The elements in the situation were as follows.

There was a pervasive tendency for total factor productivity growth in industry to be at a more rapid rate than before World War I. A similar tendency is found in the United States in the 1920s, and it seems reasonable to regard it as the result of a shift in technology. On the other hand, there was an absolute decline in productivity in services, generally agreed to have been caused by the crowding into services of workers unable to get jobs elsewhere—it will be remembered that it was in connection with this phenomenon that Joan Robinson originally introduced the concept of concealed unemployment. The movement of labour input was peculiar. There was a tremendous fall between 1913 and 1924. This was partly because of the rise in unemployment, but even more important quantitatively was the reduction in hours of work, originating in the immediate post-war period, the largest single reduction in hours that has ever taken place in Great Britain. Then between 1924 and 1937, the increase in the labour supply was unusually

rapid, largely for demographic reasons affecting age-distribution. This is the rise shown in Table 1, but it is a bit misleading here to look at the peace-time phase only. Total labour input actually declined slightly between 1913 and 1937. So it would scarcely be right to say, as superficial observation of the inverse trends in the growth of capital input and labour input would suggest, that investment was low in the inter-war period because the labour supply was growing so rapidly. Labour supply *was* growing rapidly but it followed a great fall. However, we can reasonably say that the *abundant* supply of labour, caused partly by unemployment and partly by demographic causes, was a factor contributing to low investment, along with depressed expectations and low demand generally.

What then did determine the rate of growth of output in the inter-war period? Proximately, the answer must surely be on the demand side. This is perhaps a period in which something like Harrod's warranted rate of growth, invented, significantly enough, in 1939, did describe what determined the actual rate of growth. What were the underlying determinants of the growth on the demand side is a much more complicated question. It is difficult to believe that a somewhat faster or slower rate of growth of the labour supply would have made any difference to the rate of growth of demand. However, there are various ways in which the rate of growth of *productivity* may, despite the general excess capacity, have stimulated demand, for example, by making new outlets for investment. This is apart from the obvious point that in the longer run, when the slack came to be taken up after World War II, it was possible to draw on both the gains in productivity and the increase that had taken place between the wars in the labour force.

Finally, we come to the post-war period. Output rose rather faster than before. The rate of growth of labour input was *much* less than in earlier peace-time periods. The absence of growth in labour input up till the mid-1960s, and the absolute decline in it after that, were due mainly to demographic causes, together with further shortening of hours of work, along with longer schooling and earlier retirement, between them much outweighing the increase in the labour-force-participation of married women. The forces affecting the growth of labour in the post-war period were in my opinion mainly exogenous though there is room for argument (which I shall not here enter) about the causes of the trend in hours of work. There was within the post-war period a trend increase in

unemployment, but that was before 1973, quantitatively a small item compared with other forces.

The somewhat faster than previous growth in output was thus achieved by much faster than previous increases in capital accumulation and total factor productivity. There were interesting differences between sectors in the behaviour of productivity. Alone among sectors, manufacturing, until the mid-1960s, showed no significant improvement in the rate of productivity growth compared with the inter-war period. The British experience in this respect resembles that of the United States. In both countries there was no speeding up of total factor productivity growth in manufacturing across World War II, in contrast to the speeding up that had occurred across World War I. This certainly looks like some sort of "failure" in that sector; but it should be remembered that the great improvements registered in some other sectors were indirectly due to manufacturing—for example, the sector with the fastest productivity growth, agriculture, plainly owed much to the chemical industry. There was a great speeding up of productivity growth in services: in comparison with inter-war this was due partly to the absence of the special influence of increasing concealed unemployment that had prevailed then; but it was much more than could be accounted for by that alone. There is every reason to suppose that the innovations responsible for these improvements, and the capital investment that embodied them, were induced partly by the shortage of labour, an unaccustomed feature of the British economy.

In sum, one may say that the post-war period was distinguished from other periods by (a) an exogenously lower rate of growth of labour input (b) a partly exogenously higher rate of total factor productivity growth, though not in manufacturing (c) a high level of demand. Between them, in uncertain proportions, those accounted for the higher rate of capital accumulation compared with the past. The latter was another major feature of the period and helped permit the historically rapid rate of growth of labour productivity.

This quick historical survey indicates, it seems to me, that the truth does not lie either all in an out-and-out supply-dominated neo-classical model nor in the extreme demand dominated model suggested by first inspection of the figures in Table 1. In all periods exogenous influences on the rate of growth of productivity had an effect on the outcome, probably even in the inter-war period. Whether the other exogenous force in the neo-classical model, labour force growth, had much effect on the growth rate of output seems

to me less clear, at least within the ranges experienced. The inverse relationship between labour force growth and capital growth does look more than just coincidental.

In the light of this background of mixed forces that seemed to have affected the past rate of economic growth in the United Kingdom, let me now revert to the question how the post-war period should be appraised—and whether anything can be said about the prospects.

When I first started working on these subjects, in the early and middle 1960s, the view I was inclined to take, in the light of the circumstances then prevailing, was rather a complacent one. It could be summed up like this.

On the supply side, some improvement did take place compared with *pre-war* in the underlying upward trend in productivity, through technical advances, education, improvements in industrial organisation and so on. This improvement made it possible to sustain a relatively fast rate of output growth, despite the absence of growth in labour input. The improvement did not go so far as in some other countries. The reasons for this are not clear, but probably lay in deep-seated attitudinal factors. The ethos of thrusting aggressive competition, which is probably a main progenitor of productivity growth, was (by comparison with other countries) uncongenial both to managers, who wanted to behave like gentlemen, and to workers, who wanted to exhibit solidarity. Such attitudes would take a long time to overcome and it could be debated whether it would be in all respects desirable to overcome them—the *ethos in question* is after all not entirely an amiable one. However, according to the complacent view, further speeding up of productivity growth through such means as improved application of knowledge are to be welcomed and would be likely to lead to corresponding speeding up in the rate of growth of output.

On the demand side, things were better than in previous periods. Demand conditions not merely ensured a high level of employment but also permitted an exceptionally rapid rate of capital accumulation, by historical standards, and a reasonable amount of restructuring of industry (the dispersion in growth rates between industries was as great between 1951 and 1964 as in the inter-war period, which we think of as one of notable restructuring).

On this complacent view (which, to anticipate, I have not entirely abandoned) the balance of payments was an exaggerated problem—as already mentioned the balance of payments on current

account was favourable on the average years; and stop-go was an exaggerated problem too—as Wilson and others have shown, our cyclical fluctuations were actually smaller than those of most other countries. Our persistently defensive posture in the balance of payments did have disadvantages and probably tended to retard growth but it could not have been entirely avoided in view of the arrears of growth abroad.

Since the mid-1960s, the situation has changed in a number of respects; and, moreover, we can now see more clearly the significance of certain trends already present at that time. To what extent do these developments require a revision of the complacent view I have expressed regarding Britain's economic performance—meaning, performance relatively to what was possible? (They do not, of course, undo the satisfaction that may be felt with the great improvements in living standards compared with the past that had been attained by the mid-1960s; those remain.)

Let me enumerate some of these changes particularly relevant to growth.

First, there was a marked acceleration in the rate of productivity change in manufacturing. In the cycle 1968/9-1973, labour productivity in British manufacturing grew practically as fast as in the main continental countries, or possibly even faster if certain measurement biases are allowed for. This raises in acute form the question about the primacy of productivity versus that of production. If the speeding up of productivity growth was exogenous, and if, moreover, there was no corresponding speeding-up in the growth of production (as there was not), it seems to follow that on this occasion at least productivity growth was not the main determinant of production growth: *prima facie*, an anti-neo-classical finding. A neo-classical supply-dominated position can be sustained if we regard as also exogenous the decline in the supply of the factor labour. That would mean that on this occasion at least the supply of labour did matter. There is probably some truth in that. However, an alternative explanation is possible. It is well known that demand pressure was less than it was earlier in most of the years between 1964 and 1973, though not in 1973 itself. This low pressure of demand may have been partly responsible for the decline in labour input, though it is difficult to maintain that it was the main cause. More important, it may have been responsible for the speeding-up of productivity growth, by leading to a once-for-all shake-out of labour and the withdrawal from operation of the least efficient

firms or plants. This is the opposite kind of outcome from that postulated by Verdoorn's Law, but is not impossible. However, a speeding-up of productivity growth for that reason would not necessarily be maintainable—it might go into reverse when demand had expanded to the point where the less efficient sources of supply had to be drawn on again.

The second feature of the years since the mid-1960s has been the continuation, in more pronounced form, of the tendency to a decline in the profit rate, especially in manufacturing. This tendency was already apparent earlier in the post-war period. Not unexpectedly, the speeding-up of the decline in the profit rate was accompanied by a slowing-down in the rate of increase in the capital stock. This is even more apparent in annual data; the annual percentage increase in the capital stock rises steadily through the post-war period up till 1968, and thereafter declines equally steadily. The historically high rate of capital accumulation in the post-war period begins to look more like a long swing, like that of the 1890s, and less like a shift to a permanently higher level. Maybe it was premature to suppose that the high rate of capital accumulation, due to a combination of labour scarcity and a high level of product demand, was to be a permanent source of faster labour productivity growth than in the past. During most of the post-war period the investment-income ratio had an upward trend, and this is not something that could be expected to continue indefinitely. The increasing amount of attention paid by most companies to their overseas operations as a source of profit is another feature reminiscent of pre-1914 longswing-downswings in domestic investment, and a sign of poor openings at home, though the emigration has been of effort and enterprise rather than directly of capital as in the nineteenth century. The conclusion suggested by this is that the historically rapid growth of the 1950s and earlier 1960s in the UK had rather more the character of a terminable boom than of a permanent shift.

Third, there has been a change in the trend of primary product prices. Their rise, especially, of course, the oil price rise, has been the main cause of the deterioration in our balance of payments. Historically, periods of rising primary product prices have generally been unfavourable to Britain. There is nothing much we can do about it, but we can now see that the stability of primary product prices was one of the factors that helped up till the late 1960s, but was not a factor that could be expected to be permanent.

I have not mentioned the most obvious novelty, the unprecedented severity of the recession and inflation since 1974, since those have been primarily world problems rather than specifically British ones. However, they too emphasise the amount that was owed to a favourable world conjuncture in the earlier part of the post-war period.

In conclusion, let me draw together the points I have just been making in the context of the questions posed at the beginning of the lecture.

Both supply side forces and demand side forces contributed to the better growth experience of the British economy in the post-war period compared with earlier. Both types of forces, too, contributed to our having a lower growth rate than continental countries. The outcome was not bad, in the sense that it is doubtful if different policies would have made for a significantly better growth performance. All this relates to the period until the mid-1960s. The policies adopted since then have been more ambitious but less successful in the event. For reasons probably more deep-seated than government macro-economic policy, there has been some falling-off of investment; while there is no reason to suppose a deterioration in the underlying rate of growth of total factor productivity (possibly even the reverse), there has thus been a weakening in one of the forces previously making for rising labour productivity. At the same time the restoration of the previous high level of demand has become problematical, largely because of the less favourable world environment.

I have never seen much prospect of a startling transformation for the better of the British growth rate compared with what was achieved in the 1950s and the first half of the 1960s. This in itself depresses me less than it depresses some people, because I do not take such a gloomy view of what was attained in those years. The question now is whether we can get back to something like that path. If we could, I should regard that as a pretty satisfactory outcome.