II

CHARACTERISTICS OF ECONOMIC DEVELOPMENT[1]

THE three major characteristics of the process of economic development are the growth of population, the progress of technology (resulting in a rise in productivity per man), and the accumulation of capital. Empirical evidence suggests that these three factors normally go together: when an economy enters the stage of more rapid growth, the rise in per capita income, the growth in population and the proportion of current income devoted to capital accumulation are all accelerated.

Economic theory has not, until recently, had much to offer in explaining the behaviour of these factors, and in formal treatment their movement generally appears as a non-economic variable (as part of the data of the system). Recent attempts at formulating a dynamic theory of economic growth concerned themselves with the more modest task of analysing the relations that must exist between the movements of these various factors in order that they should be mutually consistent. Thus in recent years considerable attention was paid to the arithmetical relation between the growth of population and technical progress on the one hand, and the ratio of capital to output, and the proportion of income saved, on the other hand. It was pointed out (originally by Mr. Harrod and Mr. Domar) that if, say, the ratio of capital to annual output is 5:1 (i.e. the capital requirements of a given output-stream are five times the annual value of the output) a society will require to save 15% of its annual income if it is to expand its capacity to produce by 3% per annum, or 20% of its income if its rate of growth of output is to be 4%, and so on. Hence given the technical relation between capital and output, the potential rate of economic growth depends upon the proportion of income saved. On the other hand the potential rate of growth is limited also by the rate of growth in the effective labour potential which in turn is determined by the growth of the

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working population and the rise in productivity (output per man). If we regard the annual increase in productivity as the result of the improvement in technical knowledge (a non-economic factor) this gives an independent determinant of the potential rate of growth which is (approximately) equal to the *sum* of the percentage growth in population and the percentage growth in productivity. Hence to ensure an effective rate of growth, the rate of increase in the labour potential and the proportion of income saved in the community must stand in a certain relation to each other. Thus if the rate of increase in population is 2% per annum, and the rate of increase in productivity is also 2%, while the capital-output ratio is 4 : 1, the proportion of income saved must be 16%, since it is with a saving of 16% that the rate of capital accumulation exactly matches the required rate of increase in output capacity. Because there is no inherent force which brings these magnitudes into due relation with one another, the process of economic growth must be inherently unstable, proceeding by fits and starts.

Considerations of this kind, though illuminating in some respects, do not really take us any nearer to answering the basic question of why it is that some societies, at certain periods of their history experience a more rapid rate of economic growth than in other periods, and a more rapid growth than other societies over the same periods. Since about 1750 the countries of Western Europe and North America experienced a rate of growth in national production which must have been at least 30 to 40 times as high as that experienced over many earlier centuries.[1] Though their population also grew at many times the previous rate (perhaps 10 to 20 times as fast) the growth of production so far outstripped the growth in population that real income per capita —the standard of living—doubled or trebled in each century.[2] Since these processes of rapid growth were confined to certain countries, and did not extend to the world as a whole, differences in real income per head emerged between the different areas of

[1] This is an extremely crude estimate, of course, based on tentative estimates of population growth and the long range trend in per capita income.

[2] It should be observed that the percentage rate of increase in population tended to be highest in those areas where the percentage increase in real income per head was also the highest.

the world of an order of magnitude which must have been unknown in previous ages. At present, the real income per head of the developed countries, making allowance for short-comings in statistical measurement, is 10, 20 or perhaps even 30 times as large as the real income per head of the truly underdeveloped areas of Asia, Africa, Latin America or South-Eastern Europe. Some of this difference must be of long standing, and must have existed prior to the economic revolution of the last two centuries. But there can be no doubt that the effect of this economic revolution (since it was so largely confined to a limited number of countries) has enormously exaggerated these differences. The task of a true theory of economic growth—which is lacking at present—would be to account for these phenomena: to explain *why* some societies have experienced such an enormously accelerated expansion; and if they did, why the movement has not spread to others.

Clearly a theory which looks for the explanation of these phenomena in the habits of greater thriftiness of the population of some countries, or in the occurrence of important inventions there, would be quite inadequate.

Neither the accumulation of capital nor the flow of technical invention or innovation, any more than the growth in population, can be regarded as "independent variables"—they are manifestations of a process of development, but they cannot explain *why* the development occurs where it does and when it does. It is generally admitted that population growth takes place largely in response to economic growth, and not independently of it—even though in some societies it may *appear* at times that the growth of population outstrips the growth of economic potentialities. The same is true of technical invention or innovation. Though new ideas looked at in isolation are the spontaneous product of the human brain, the kind of ideas that come forth, and their frequency, is very much a matter of environment. Technical innovations take place in societies where traditionalism gives way to a desire for experimentation: where men are anxious to overcome physical limitations of capacity or labour; where, in other words, they are actuated by the desire to expand. Further, given the desire to expand and to experiment, the supply of capital is

capable of being adapted to the requirements of expansion, in much the same way as the supply of labour and the flow of innovation. The main source of finance (of industrial capital accumulation) has always been the re-investment of profits of business enterprises; while the rate of real investment is at the same time one of the main determinants of the amount of profits that is thus available for financing.[1] Hence saving and capital accumulation is in no different position from technical progress or population growth, as being one of the features that characterise developing societies rather than as the ultimate *cause* of economic progress. Fundamentally they are manifestations or consequences of a basic social urge towards expansion.

In my view the greatly accelerated economic development of the last 200 years—the rise of modern capitalism—can only be explained in terms of changing human attitudes to risk-taking and profit-making. It was the result of the displacement of production units governed by a traditionalist outlook—the peasant and the artisan—by business enterprises led by men who found risk-taking and money-making their chief interest in life; by men who were out to make a fortune, rather than just a living. The emergence of the business enterprise characteristic of modern capitalism was thus the cause, rather than the result, of the change in the modes of production; and it was the product of social forces that cannot in turn be accounted for by economic or technical factors.

Once the planning of production gets under the control of men who are actuated by the desire to expand, progress tends to become self-generating: higher rates of capital accumulation and a higher rate of population growth are called forth in response to the requirements of expansion. The stronger the urge to expand (which is only another way of saying the greater the risks entrepreneurs are willing to take, or the greater their optimism about

[1] It should be noted that the proportion of net income saved rarely exceeds 15%, even in the most progressive societies, and this proportion is adequate in advanced countries to sustain a relatively high rate of growth on account of a low ratio of capital to output. It is true that in stagnant economies the proportion of income saved is much lower than this—perhaps 2 or 3%—I do not believe, however, that it has ever been the inability to set aside the critical 10% of annual income which has prevented societies from engaging in economic development. It would be more true to say that it is the lack of economic progress which keeps the savings coefficient low, rather than the other way round.

the future) the greater are the stresses and strains to which the economy becomes exposed; and the greater are the incentives to overcome physical limitations on production by the introduction of new techniques. Technical progress is therefore likely to be greatest in those societies where the desired rate of expansion of productive capacity (in itself the result of innumerable decisions taken by entrepreneurs) tends to exceed most the expansion of the labour force (which, as we have seen, is itself stimulated, though only up to certain limits, by the growth in production).[1]

On this view, the actual rate of development is the outcome of the strength of entrepreneurial pressures on the one side, and the elasticity of responses of population growth, technical progress and capital accumulation on the other side. These latter are conditioning factors which must clearly exert an autonomous influence on the course of events, even if their particular growth-coefficients are not given independently of economic forces. However strong the urge to expand, the actual rate of economic progress could never exceed a certain maximum, determined *either* by a maximum attainable rate of saving, *or* a maximum attainable rate of population growth, *or* a maximum attainable flow of new ideas (or some combination of these). But the point is that the *actual* values of these variables, in any given society or at any given age, are not determined by their theoretical *maximum* values, but are capable of being slowed down or accelerated in accordance with the push or pull exerted by entrepreneurial behaviour. There is an elasticity of response in each of these elements, which means that the postulate of some supply curve gives a truer representation of their character than the usual postulate of an independent constant.

The above sketch is not intended as anything more than an indication of the critical rôle of psychological factors in economic development, and as an expression of the author's belief that a true theory of economic growth will require far broader consideration of the purely sociological aspects—an explanation of how different mental attitudes come to develop in society, why traditionalism, at certain stages of society's development, gives way

[1] The same forces which give rise to economic growth generate also, in a capitalist economy, cyclical fluctuations, but this aspect of the problem cannot be gone into here.

to rationalism, and so on—than is usual in writings on economic theory. It will require, in other words, some kind of integration of economics and sociology.

The proposition that it was the emergence of the capitalistic entrepreneur which gave rise to modern capitalism (rather than the other way round) sheds, however, very little light on the problem of why economic development was so uneven between different countries—why the movement, once started, has not spread more widely and evenly among the different areas of the world. A purely "psychological" explanation is, I believe, inadequate here—since capitalist enterprise has, in fact, spread to all parts of the globe; it would not be true to say that the modern form of business enterprise is completely unknown in any of the underdeveloped areas of the world; the important difference is only that in the underdeveloped areas the capitalistic segment of the economy has remained small and has not shown the same tendency to dynamic expansion as in the developed areas.

To throw more light on this question, we must introduce another highly important consideration in the problem of economic development—namely the fact that economic growth requires a *balanced* expansion of the various sectors of the economy; and if the expansion-potential in some critical sector is low or non-existent, the expansion-potential of the other sectors cannot become effective. Clearly if the supply of some critical basic material—for purely technical reasons—cannot be increased, the industries depending on the use of that material cannot expand either. There is some evidence that the progress of some past civilisations foundered on the exhaustion of timber supplies. Here again technical progress, stimulated by the "urge to expand", tends to come to the rescue through the development of new processes and substitute materials, and the development of communications which enlarges the field from which the supply of basic materials can be drawn.

But the growth of critical sectors of the economy may also lag behind not so much on account of some basic natural scarcity which imposes an insurmountable physical barrier, but simply on account of the fact that the social forces making for expansion do not extend to all sectors of the economy, but only to some of

them. I am thinking here of the critical division between industry and agriculture. The growth of industrial production necessarily presupposes the growth of agricultural production; it presupposes moreover that the *proportion* of agricultural output which is not consumed inside the agricultural sector, but is supplied to the industrial sector should become steadily larger.

Economic progress (at any rate in so far as it is associated with a growth in real income per head) necessarily entails a reduction in the *proportion* of manpower engaged in food production. Indeed the proportion of manpower engaged in agriculture is one of the most commonly accepted indices of the degree of economic development of a country, since it is invariably inversely related to real income per head.[1] The proportion varies from as much as 70-80% in countries like India, China and South-Eastern Europe to less than 10% in the United States, Great Britain and New Zealand.[2]

The development of industrial production requires an increase in *total* agricultural production because with higher real income food consumption increases as well, though probably less than proportionately. But more important than this, it requires an increase in the *proportion* of output which the agricultural sector is willing to supply to the towns. In a country where 80% of the people are engaged in agriculture, the agriculturists sell on balance only one-fifth of their output, four-fifths being consumed by themselves. But where the proportion is only 10%, it is necessary that the farmer should be willing to sell nine-tenths of the output which he produces and consume only one-tenth. This requires not only a much higher productivity per man—the ability of each man engaged in agriculture to produce enough food for 10 families instead of $1\frac{1}{4}$ families. It also requires the willingness of food producers to consume non-agricultural products—or to accumulate capital assets outside the agricultural sector—for nine-tenths of their income. This willingness clearly presupposes not only high technical abilities but also a desire for

[1] In measuring this proportion for any particular country, due allowance should be made in the agricultural figures for net food exports or net food imports since that part of agriculture which is engaged in exporting food is indirectly procuring industrial products.

[2] After adjusting the British and New Zealand figures for food imports and exports.

a high and varied standard of living, or for the possession of money-wealth which is characteristic of the capitalist entrepreneur rather than the traditional peasant.

In Britain, the country where modern capitalism may be said to have originated, the so-called "agricultural revolution" preceded the "industrial revolution". In a sense, agriculture became possessed of the capitalistic spirit (manifesting itself in the enclosure of lands into larger estates, and the search for new methods of land cultivation and animal breeding) prior to the growth of manufacturing industry; and it was the resulting growth in food production and in the productivity of labour engaged on the land which supplied both the food and the manpower for industrial expansion. At a later stage, the further growth of industrial capitalism was made possible by the food imported from the "new countries" overseas which again was supplied by settlers with a commercial outlook who had far more affinity with the mentality of the capitalist entrepreneur than with the peasantry of Europe or Asia.

Here in my view is the real explanation for the fact why so many areas of the world failed to participate in the process of economic development following on the revolutionary technical changes of the nineteenth and twentieth centuries. Once these techniques have been invented and successfully adapted in their countries of origin, their imitation by other countries in the field of *industrial* production is a relatively simple matter—as is evidenced by the fact that in so far as a manufacturing industry exists in underdeveloped countries, the techniques used, and the man-hour productivity of the labour employed there, do not seem to be very different from that which obtains in the developed countries (with the sole exception of the U.S., where man-hour productivity in manufacturing appears to be very much higher than in all the other countries of the world). The reason why the growth of manufacturing industry has not proceeded farther must be sought, therefore, not in any lack of capabilities for manufacturing, but in the inability of these countries to supply food for larger industrial and urban populations. This inability may manifest itself in a lack of capital for industrial expansion or in a lack of markets: in both cases, however, the fundamental cause

is the inability or unwillingness of the agricultural sector to supply more food to the towns. Where banking institutions exist, the demand for industrial products, and the rate of capital investment in industry could always be stepped up by the simple method of credit expansion. The limit to credit expansion is set however by the risk of inflation, which in turn is nothing else than the impossibility of procuring the additional food demanded as a result of the higher incomes generated in the industrial sector.[1] (The additional demand for industrial products could always be met out of the expanded production of industry itself.) Hence any relative growth of industry in an economy presupposes a corresponding growth in the *excess* of agricultural production over agricultural self-consumption. The problem could of course also be met, in any one country, by procuring additional food from abroad. But this presupposes the sale of industrial products in foreign markets—a matter in which a relatively underdeveloped country is bound to be at a grave disadvantage in relation to the more advanced countries with established markets. (The real bulk of the exports of industrial products of the world is concentrated on some half a dozen or so advanced industrialised nations.) It is no accident that all the countries which succeeded in developing manufacturing industry on a large scale (such as Sweden, Germany, Belgium, Switzerland, apart from Britain and the U.S.) possess a highly efficient and largely "commercialised" agriculture, with both high yields per acre and high productivity per man. Again, it was the recognition of the basic character of this problem which led to the forced conversion, at enormous sacrifices, of individual peasant farming into collectivised farming in Soviet Russia in the 1930s.

[1] The fact that in the underdeveloped countries there is generally a large "disguised unemployment" on the land, so that large transfers of labour from agriculture to industry could be effected without any *unavoidable* loss of agricultural production, does not mean that any reduction in agricultural population would tend to be followed by an increase in the amount of food which agriculture is willing to supply to the rest of the economy (on the supposition that, with a reduction in numbers, agricultural self-consumption would diminish). Where farming is in the hands of peasants activated by the desire for "sufficiency" rather than profit, the amount supplied to the outside sectors tends to be governed by the need for industrial products. Since, as a result of a reduction of numbers, the quantity of industrial products "needed" is also reduced, it is quite possible that a reduction in the agricultural surplus population would tend to be followed by a reduction, rather than an increase, in the amount of food supplied to the towns.

If these considerations are correct, the key to an accelerated growth of the underdeveloped areas of the world lies in bringing about fundamental changes in both the mental outlook and the technical knowledge and skill of their peasant populations.[1] Economic development will of course invariably involve industrialisation (or at any rate the relative growth of secondary and tertiary industries taken together) but this can be expected to follow, almost automatically, upon the growth of the food surpluses of the agricultural sector—whereas it is certainly not the case that a rise in industrial production in itself induces greater agricultural supplies. Once this is recognized, the efforts of underdeveloped countries could be concentrated—far more than they are at present—on tackling the problem of how to raise productivity on the land, as a prior condition of industrial development. The most promising line of approach (even though it is not one that yields immediate fruits) seems to me to lie in a vast effort at raising the general level of education in rural areas—since, as past experience of the more developed countries has shown, it is education, far more than natural environment, which is responsible for the differences in outlook between the urban and rural populations.

[1] It was the success in infusing this change of outlook, and the level of technical education of the peasantry, which alone made possible the economic development of countries such as Germany or France.