THE SOURCES OF ECONOMIC GROWTH

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I. Introduction

For many centuries the colonial and dependent nations of Africa, Asia and Latin America have been mercilessly exploited by the imperialist powers. Now they are fighting to gain their independence, promote industrialisation and improve their economic and social conditions. The present article is concerned with only one aspect of this momentous historical process. It does not set out to show how growth was distorted by imperialism in the past, nor does it try to explain how the new imperialists, led by the United States of America, are today attempting to forge new (if less obvious) chains with which to subjugate the emerging nations. The legacy of backwardness and deliberate impoverishment exists and the big question is how to overcome it. The answer is obviously complicated and many-sided, but there is one fundamental economic problem which every developing country will have to solve if it is to achieve a high and sustained rate of economic growth—the problem of creating a surplus, raising the rate of investment and increasing the stock of capital goods.

A low level of investment is not the only barrier to economic development, and an expanded supply of capital goods must be supplemented by good managers, skilled workers, technical progress and adequate natural resources. Planning of the economy is also essential in order to make the best use of the available resources of labour and capital. But even with these reservations, it is right to place the problems of investment and the surplus at the heart of our analysis of the requirements for economic progress, and the article is devoted to certain crucial aspects of this problem.

II. The Accumulation of Capital

When Marx wished to explain the laws of motion of capitalism, he developed the concept of the accumulation of capital.[1] He analysed the process by which an initial fund, or sum of money, is converted into capital: part in the form of variable capital (v) or payment for labour power, and part in the form of constant capital (c) which represents the value of the means of production (raw materials, machinery,[2] etc.) used up in the process of production. The value of the commodities thus produced is greater than that of their component parts (c+v) and includes the surplus value (s). The owner thus gets back the capital originally advanced plus the surplus. When the commodities are sold this value is realised in a sum of money greater than that with which he started, this increased sum of money is again converted into capital, still more surplus value is produced, and so on over and over again. The more the capitalists accumulate, the greater the surplus value they can appropriate from the workers; and the more surplus value they appropriate, the greater the accumulation of capital. It is this process which Marx identified as the driving force of capitalism.

He further emphasised the tendency for the organic composition of capital (the ratio of constant to total capital, $\frac{c}{c+v}$) to increase, and showed that the expansion in that part of the constant capital which consisted of machinery, buildings, means of transport, etc. was the basis for the increasing productivity of labour.[3] It is this increased productivity of labour which in turn cheapens commodities and so: '. . . by shortening that portion of the working day in which the labourer works for himself, lengthens the other portion that he gives,

[1] *Capital*, Vol. I, Chapters XXIII to XXV.

[2] Strictly speaking, the capital advanced in the form of machinery, etc. (what Marx called fixed capital or 'instruments of production') is not just the fraction used up—by depreciation or wear and tear—in the course of production in, say, a year but the whole cost of the machine. It is the depreciation which enters into the value of the commodities produced, but it is the machinery as such which is important in raising the productivity of labour. This is a complication which Marx side-stepped in Volume I, but dealt with fully in Volumes II and III. '. . . the surplus value is an increment, not only of that portion of the advanced capital which is assimilated by the process of production, but also of that portion which is not assimilated'. Vol. III (Kerr edition, Chicago, 1909), p. 47.

[3] Vol. I (Modern Library Edition), p. 682.

without an equivalent, to the capitalist. In short, it is a means for producing surplus value'.[4]

Here then we have the core of the process of economic growth under capitalism: an initial accumulation of capital is laid out in the form of labour-power, raw materials and machinery, and surplus value is generated. The surplus value plus the initial capital are again laid out and the increased machinery raises the productivity of the labour so that a still larger surplus value is created. In this way, the expansion continues until, under the capitalist mode of production, the internal contradictions produce a crisis which temporarily interrupts the process.

PRIMITIVE ACCUMULATION

But if capital makes surplus value and surplus value makes more capital, it is clear that some initial accumulation of capital is necessary before the process can get under way. This Marx referred to as primitive accumulation 'preceding capitalistic accumulation; an accumulation not the result of the capitalist mode of production, but its starting point'.[5] The last eight chapters of Volume I are devoted to an illuminating account of this process of primitive accumulation: robbery of colonies, expropriation of the peasant producers, plunder of the small-scale artisan, and so on. In Marx's biting phrase: capital comes into the world 'dripping from head to foot, from every pore, with blood and dirt'.[6]

Marx's profound analysis was, of course, designed to lay bare the laws governing the working of capitalism, a specific historical process with its own distinctive property relations. The most important of these is the separation of labour-power from the means of labour, the contrast between the proletariat forced to sell its labour-power in order to live, and the class of capitalists owning all the means of production and so enabled to purchase labour-power and thus to enrich themselves. It is only in this situation, where there is a relationship of exploitation of workers and peasants by property owners and landlords that we can talk of surplus *value* and the accumulation of capital.

We cannot, therefore, apply the same categories of political economy,

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[4] Vol. I, p. 405.

[5] Vol. I, p. 784.

[6] Vol. I, p. 834.

or expect to find the same *relations* of production in systems not based on the capitalist mode of production. But does this mean that we must discard the whole of Marx's analytical approach when we turn to the problems of economic growth in a society in which some other mode of production is dominant? Surely not. Two major aspects of Marx's analysis of expanded reproduction are independent of the specific relations of production in which they are clothed, and must be used in order to understand how the process of economic growth can be promoted (or retarded) in *any* economic system.[7]

Firstly, although surplus value cannot exist in such a society, a *surplus*[8] certainly can, and indeed must be present as an absolutely necessary condition for economic growth. A surplus, in this sense, arises as soon as a labourer can produce more food than he can eat. For some purposes the relations of production which arise from the way in which this surplus is alienated are of primary importance, but in the present context it is more helpful to abstract from this aspect and to focus our attention on the underlying forces determining the size of the surplus and the use to which it is put.

Secondly, the crucial part played by machinery and other capital goods in raising the productivity of labour and so the growth of output is a basic economic (or technological) factor which remains valid irrespective of the type of economic system.

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[7] The most detailed theoretical examination of these problems in the context of an emerging *Socialist* economy was written in Moscow in the 1920s by the brilliant Russian Marxist Evgeny Preobrazhensky. Some of his major writing has recently been translated into English as *The New Economics*, Oxford, 1965. The following statement by Stalin is also very relevant: '. . . Marx's scheme of reproduction does not begin and end with a reflection of the specific character of the capitalist mode of production, it at the same time contains a whole number of fundamental tenets on the subject of reproduction which hold good for all social formations, particularly and especially for the socialist social formation. Such fundamental tenets of the Marxian theory of reproduction as . . . surplus product as the sole source of accumulation; the formation and designation of the social funds; accumulation as the sole source of reproduction on an extended scale—all these fundamental tenets of the Marxian theory of reproduction are at the same time tenets which hold good not only for the capitalist formation, and which no socialist society can dispense with in the planning of its national economy.' *Economic Problems of Socialism in the U.S.S.R.*, Moscow 1952, p. 89.

[8] If we are dealing with a society in which the operation of the law of value has been replaced by the principle of planned socialist production, we must refer to surplus *product* and not surplus value. Similarly we may refer to accumulation of investment funds, but not to accumulation of capital. We may still, however, retain the term *capital goods* for the physical assets (machinery, buildings, dams, etc.) on which the investment funds are expended.

There are thus two crucial and inter-dependent problems which we must now study more closely:

(i) the relationship between the proportion of current output devoted to investment in capital goods and the rate of growth of total national output;

(ii) the way in which this proportion can be increased either by enlarging the size of the surplus product or by altering the use to which it is put, and the external and domestic sources of accumulation.

These two problems are closely related to, and overlap with, two other issues: the shortage of foreign exchange needed to purchase imported capital goods, and the inadequacy of the marketed surplus of agricultural products.

III. Investment and Economic Growth

One of the major determinants of the rate of growth of national output is the proportion of each year's output which is devoted to capital goods (i.e. to investment in machines and other equipment which will produce more goods in the future) rather than to goods available for immediate consumption.

It is possible to indicate the importance of this aspect very clearly, but we must first introduce the further economic concept of the investment-output ratio. This measures the amount of investment which (in combination with labour) is economically and technically necessary to produce a certain increase in national output.[9]

We can then show that if a country devotes 10 per cent of its national income each year to investment in capital goods and has an investment-output ratio of 4, then the rate of growth of national output (or income—the terms are synonymous) will be $\frac{10}{4}$ or $2\frac{1}{2}$ per cent p.a. If the proportion devoted to investment can be raised to 20 per cent

[9] For example, an investment-output ratio of 4 would mean that an increase in the stock of capital of £400 is needed—on average—to produce an increase in output of £100. (For some purposes it is relevant to use not investment, i.e., the *addition* to the total stock of capital goods, but the actual stock itself. We then have the concept of the capital-output ratio or capital coefficient, e.g. a capital-output ratio of 4 would mean that every £400 of capital goods would produce an average £100 of output.)

then the rate of growth would also increase, to 5 per cent per year.[10] If population is growing at, say, 2 per cent p.a. then income per person will rise at a speed of only 0.5 per cent per year in the first case, but at 3 per cent p.a. in the second. This is the difference between stagnant and rapidly improving living standards.

It is thus evident that the higher the proportion of national output devoted to investment and the lower the investment-output ratio the more rapid will be the rate of growth. The investment-output ratio is to a very large extent determined by technological factors in different industries (it requires more fixed equipment to produce £100 of steel than it does to produce £100 of textiles) and by the degree of utilisation of the equipment. Since there is not much a country can do to reduce the investment-output ratio, the requirement for increased growth of output must be an increase in the proportion of national output devoted to investment. Broadly speaking, it is necessary to raise this from the very low rate (around 5 per cent of national income) characteristic of under-developed and static economies, to the much higher rates (typically 15-25 per cent) found in developed and wealthy economies.

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[10] The reasoning behind this calculation can be indicated in the following manner:

Let y = the rate of growth of national output
s = the proportion of national output devoted to investment
k = the investment-output ratio

Then $y = \frac{s}{k}$

This follows automatically from the definitions. This can be seen if we let
O_1 = national output in year 1,
O_2 = output in year 2,

and therefore $\frac{O_2 - O_1}{O_1} = y$ = the rate of growth of national output;

and I_1 = investment in year 1

and therefore $\frac{I_1}{O_1} = s$ = the share of investment in output.

We then have

$$\frac{O_2 - O_1}{O_1} = \frac{I_1}{O_1} \times \frac{O_2 - O_1}{I_1} = \frac{I_1}{O_1} \div \frac{I_1}{O_2 - O_1}$$

But $\frac{I_1}{O_2 - O_1}$ = the investment-output ratio, k

$\therefore y = s \div k$.

INVESTMENT AND SAVING

As this point is of such vital importance we must examine the concept of investment more closely. When we look at *investment* in terms of actual capital goods we can define it as that part of the annual output of final products which takes the form of productive equipment used to produce other goods and services, e.g. machines, tractors, factory buildings, hospitals, dams and roads. The remaining part of final output can then be defined in terms of goods and services for current *consumption*, e.g. clothing, food, medical services.[11]

It is also necessary, however, to look at the same process in terms of income received. We can define *saving* as that part of the annual national income not spent on the purchase of goods for current consumption but either (i) spent directly on the purchase or construction of capital goods (e.g. by peasant farmers or industrial enterprises); or (ii) lent to others (e.g. to banks or to the state) and used by them for the purchase or construction of capital goods; or (iii) paid in taxes of one type or another and used by the state for the purchase or construction of capital goods.

It is thus not difficult to see that investment and saving are simply different aspects of the same process and can be made, by definition, equal to each other. To revert to our basic relationship we can say that if a country wants to raise the rate of growth of national income it must raise the proportion of the national income which is *saved* in order to match the increase in the proportion of national output which is devoted to *investment*, i.e. to capital goods which cannot be consumed.

This basic idea can be clarified by an illustration which is very simple but nevertheless brings out the essential requirements for economic growth. Consider a small village community of 100 men all of whom are engaged in farming. All the farmers eat what they produce (except for a small amount set aside for seed). They have no implements. There is then no net investment or saving, and national output=consumption=the output produced (minus the seed). If next the community decides that twenty of its members should take time off from farming to make a plough and other implements it will be necessary to feed them while they are doing this and so the other eighty will have to share the food they grow with the implement-

[11] This distinction is similar to Marx's division of output between Department I and Department II, the former making producer goods, the latter consumption goods (see especially Volume II); but Marx's scheme includes not only the final products but also the raw materials, etc., which are needed to make them, e.g., in Department I not only the machinery but also the steel; in Department II not only the clothing but also the cotton.

makers. While these items are being made the total food produced and therefore the community's consumption will be lower, but this fall in consumption is matched by the investment in the construction of the plough and implements and so represents a form of saving. When the new capital goods are completed they will raise the productivity of the farmers, i.e. they will in future be able to produce larger crops than when they had no equipment, thus raising consumption and national income. If the community want to develop even further more men can then be diverted to making more or better implements and so the community will prosper. In a money economy the picture will be slightly more complicated but the basic economic relationships will be the same beneath the cloak of money transactions.

In practice it may not be necessary—as it was in the above illustration—to have an actual reduction in consumption in the early stages of economic growth (we consider this point again below), but it will be necessary to hold down the rate of *growth* of consumption below the rate of growth of national income. In other words, a large proportion of the *increase* in national income will have to be devoted to investment rather than to consumption. The more this is done, the higher will be the rate of growth. In fact, it can be shown that by restricting the growth of consumption and accelerating the growth of investment for a period of about ten-fifteen years it is possible

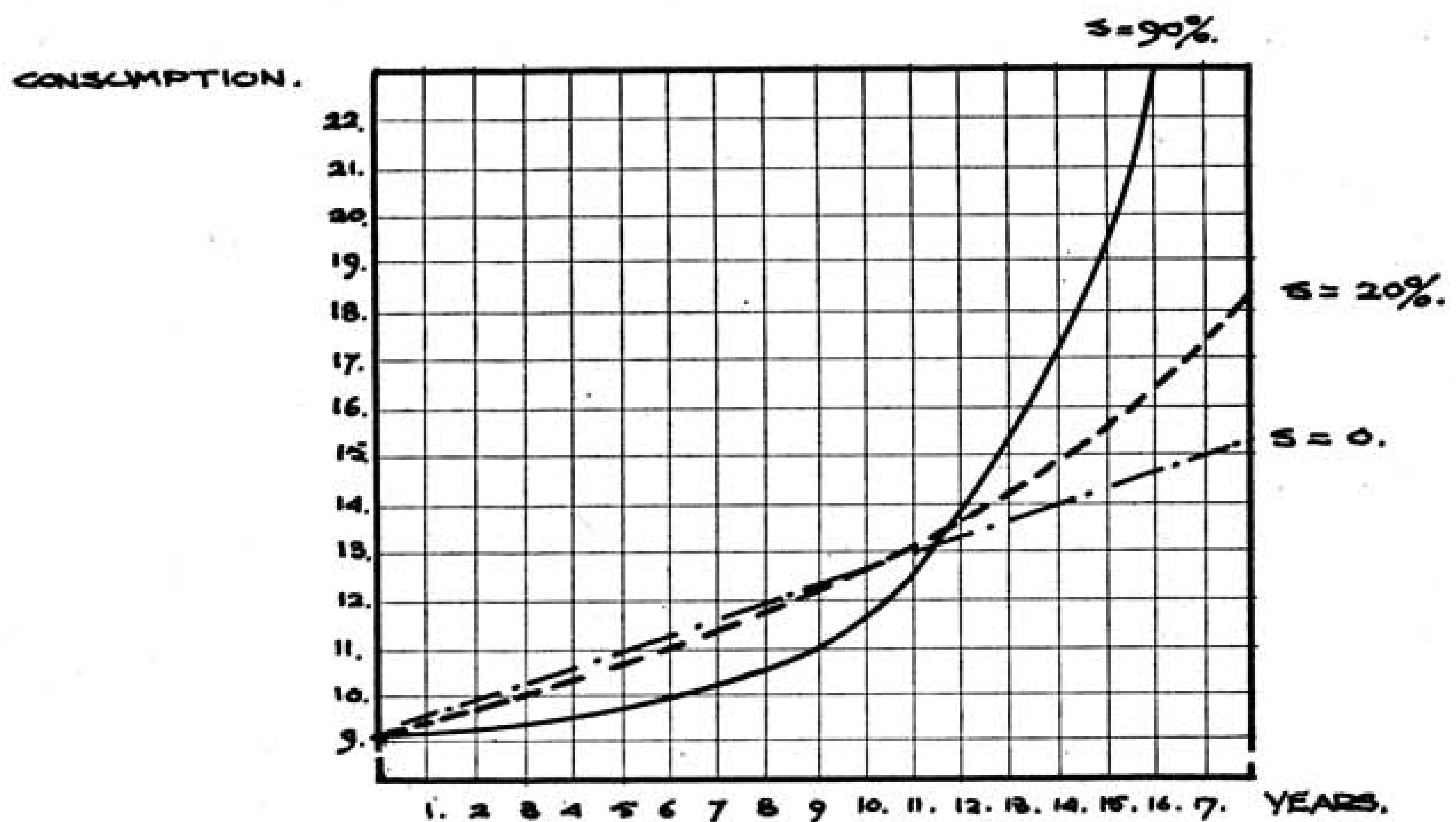

Fig. 1

The diagram illustrates the growth of consumption (assumed to be 9 units in year 1) with different proportions of national income devoted to investment. The investment-output ratio is assumed to be 3.

to raise the rate of growth of national income quite dramatically, and from then on consumption will always be higher than it would otherwise have been.[12] This is illustrated in the diagram opposite which is based on a model of economic growth by a Russian economist G. A. Feldman.[13]

This is, in essence, the secret of the success of the Soviet Union in the 1930s.

THE MARKETED SURPLUS

One particularly vital aspect of the consumption v. investment problem is the question of the marketed surplus of agricultural products. To analyse this let us continue the story of the farming community. As the economy grows, division of labour and specialisation take more workers (for example the implement-makers or handicraft workers) away from the agricultural sector, and they ultimately move off the farms and go to the towns. But they and all the others they meet there still have to be fed. Those who remain behind on the farms must therefore continue to provide food for them. It is, therefore, essential that those who stay in the villages do not take advantage of the fall in the village population in order to raise their own consumption (unless they can at the same time expand production). Moreover, this excess of farm production over consumption must be made available for sale (or exchange) in the towns. This gap between production and consumption by the peasants need not all represent saving by them, since they can use the money they get from selling food to the towns to purchase clothing and other manufactured consumer goods; but the supplies of food (and agricultural raw materials) must be made available to urban workers in the industrial sector.

A surplus of agricultural products available for sale in the market may also be needed for export. This is important because it is often the case that some of the investment takes the form of capital goods which can only be obtained abroad. In this situation it is not enough to have achieved the required level of savings, it will also be necessary to have the required amount of foreign currency with which to pay for the imports. By selling in foreign markets a developing economy can obtain the foreign exchange required for the purchase of capital

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[12] For further discussion of this and other points in this sector see the pamphlet by Maurice Dobb, *Economic Growth and Underdeveloped Countries*, Lawrence and Wishart, 1963, especially Chapters 4 and 5.

[13] See E. D. Domar, *Essays in the Theory of Economic Growth*, New York, 1957, Chapter IX.

equipment from abroad. In this way the surplus from the agricultural sector can help to overcome a further restriction on economic growth.

IV. The Sources of Savings and Investment Funds

It is now time to take up our final theme and to examine the ways in which an under-developed economy can raise the share of national income devoted to productive investment. We may consider the broadly typical situation of an independent country embarking on the socialist (or non-capitalist) road of development, in which a small and as yet undeveloped socialist sector in industry coexists with some private industry and trade and with a large, probably dominant, sector of small-scale peasant production in the villages.

Firstly, the economy may be able to call on *foreign* sources of capital. There are basically three ways in which this can be done.

(i) Direct aid in grants or loans from foreign governments; and private foreign investment.

(ii) Taxation of foreign companies or of foreign importers and exporters.

(iii) Export price policy by the state or socialist sector.

Let us look at each of these in turn; we shall see that there are important limits to all of them. Other socialist countries can be relied on to provide some aid but their own economies are still very tightly stretched and they do not have unlimited resources. If foreign aid and gifts can be obtained without strings from capitalist countries it is, of course, very nice but there is not very much of that available. Foreign loans and private investment are easier to attract but have two crucial drawbacks. Firstly, it does not take very long before the amount flowing out of the country in payment of interest and dividends on past borrowing is at least as great as the current inflow of new lending. Once this happens the borrower is in trouble both with regard to the internal savings problem and the external balance of payments problem. Secondly, and more fundamentally, the conditions required in order to obtain foreign funds from private investors and capitalist governments are in the long run such as to make industrialisation and rapid economic development more rather than less difficult.[14]

[14] For an excellent discussion of the way imperialism uses foreign lending to hold back genuine economic development see the article by Paul Sweezy in *Socialism, Capitalism and Economic Growth, Essays Presented to Maurice Dobb*, Cambridge, 1967.

There are certain possibilities for taxation of foreigners. For example, direct taxes on the profits (and/or dividends) of foreign companies operating in the country; import levies on goods brought into the country for use by foreign companies in their own operations (e.g. mining machinery) or for sale by them;[15] export duties which come out of the exporter's profits—where the exporting is done by foreign concerns—or are passed on to the foreign consumers. The limiting factor for such possibilities is firstly, that once a country uses its freedom and adopts an independent policy there are not likely to be many foreign companies operating in the economy; and secondly, if any companies do remain it is necessary to avoid killing the goose that lays the golden eggs. As long as the companies are needed, taxation should go as far as possible short of driving them out of operation.

Export price policy is much the same in principle as the export levy except that the exports are in this case assumed to be made by the country itself so that the object is to increase the price to the foreign consumer, not to tax the exporter. The restriction here is that under-developed countries are very often unable to control or even influence the price of their exports. These usually consist of primary products for which there are many suppliers, all competing with each other to sell to a few powerful monopolistic buyers who control the market. If the country can decide its export prices it has to be very careful not to go so high as to cut off demand or encourage the use of synthetic substitutes.

To sum up: for the majority of under-developed countries there is probably not very much scope for obtaining savings from external sources. They will therefore have to rely mainly on *domestic* sources. There are basically three forms of domestic savings:

- (i) Voluntary saving: individuals or domestic companies may voluntarily set aside part of their income for purchase of capital goods (or lending to others) rather than for acquisition of goods for current consumption.
- (ii) Taxation can be used to obtain involuntary savings in the hands of the state.
- (iii) The price and wage policy of state-owned enterprises can be used to make profits which are available for investment.

DOMESTIC SOURCES OF CAPITAL

The possibility of voluntary saving is greatly restricted in Africa and certain other countries of the type we are considering by the low

[15] If for sale it is only appropriate if the price fixed by the importer is already the highest possible monopoly price, so that any import levy will represent a deduction from his profits, not an increase in the price charged.

levels of per capita income, and not very much can be expected from this source. In this respect the situation differs from that in an area like Latin America where despite (or rather because of) the acute poverty of the mass of the people there is a much more substantial upper class which *could* provide some domestic saving to finance productive investment.

Taxation can take the form of direct taxes on income or wealth; indirect taxes on commodities; and taxes on agriculture and/or on land. The scope for direct taxes is limited by the general absence or relative unimportance of large incomes referred to above. (Where such incomes do exist it is typically the case that they are not used productively—the owners generally prefer lavish consumption or else they send their money out of the country—and these incomes of the very rich do represent an existing surplus which could be heavily taxed or appropriated and put to productive use by the state.) Indirect taxes represent a more promising source and will typically occupy an important place in any scheme to increase savings. In a low income community these will generally have to be taxes on essentials—salt, matches, fuel, spirits, tobacco, etc. Such taxes on goods bought by the peasants constitute an important part of the process of increasing savings by the agricultural sector and raising the marketable surplus: the greater the amount of the peasant's income paid over in taxes of this kind the lower the real income he has to spend on consumer goods. And, of course, the less developed the economy is, the greater the proportion of the community in this category, and the more important it is as a source of savings.

Indirect taxes can, however, be evaded if the peasants refrain from buying the taxed goods, and so some form of direct agricultural or land taxes is usually needed. These can play an even more fundamental part in this process of drawing off the surplus from the agricultural sector and must occupy the central place in any strategy for the transformation of a backward, mainly peasant society. This can be done in various ways. In the U.S.S.R., for example, a system of compulsory deliveries by collective farms at extremely low prices was used from 1930. The food deliveries were then resold at high prices in the urban areas and the difference represented a tax in kind on the agricultural sector, and was used by the state to build up industry. To take another example, in Japan (at the end of the nineteenth century) a direct tax was imposed at quite a steep rate and was fixed in relation to the value of land in such a way that farmers had a strong incentive to increase output. This one tax provided the new Meiji government with over 80 per cent of its revenue. Various mechanisms of this type could be elaborated at length, but the essential point is straightforward:

in a society where the vast majority of producers are peasant farmers the main source of domestic savings must be found in this sector and tax policy must be directed to this end. In a poor society there can be no painless prescription for economic development.

It is also essential, however, to approach this problem from the other end and the state must help to improve the efficiency of farming so as to raise the output and 'taxable potential' of this sector. There are important ways in which this can be done without using much of the surplus: better seeds, double-cropping, more intensive use of fertilisers, etc.

The final source of domestic saving is in the socialist sector itself: state-owned industrial (or commercial) enterprises. The size of the surplus product generated in this sector depends firstly on the level of wages and secondly on the price charged for goods, particularly consumer goods, sold outside the socialist sector. For any given level of prices the surplus product will be greater the lower the level of wages, and in the early stages of industrialisation it will probably be necessary to ensure that the rate of growth of productivity (i.e. of output per worker) is *not* matched by a corresponding increase in real wages (i.e. of payment per worker). In this way an expanding surplus can be made available to the stage as savings.

The second aspect relates to the prices charged by the state enterprises—the higher these are the greater will be its surplus. In other words, the state enterprises can use a price policy for manufactured consumer goods to have an effect similar to that of indirect taxes levied by the state.[16] The actual source of savings will then depend on who buys the goods—peasants or factory workers or capitalists. The surplus generated by the wage and price policy of the state enterprises can be an important source of savings but there is, of course, the problem of getting them started in the first place. To begin with this is likely to be a much less important source than the agricultural taxes, but over time it will increase in relative importance.

MAKING INDEPENDENCE A REALITY

The main theme of this article can now be summarised: the key to an understanding of the process of economic growth is to be found in the problem of investment. The greater the proportion of its resources an economy can devote to the production of capital goods the more

[16] In the case of the taxes the surplus accrues directly to the state whereas the price policy leaves the surplus in the hands of the enterprise selling the goods. For various reasons the former policy may be preferable in the initial phase of industrialisation.

rapid its growth is likely to be. There are several sources from which the initial surplus can be obtained but the agricultural sector is of primary importance. Given that the agricultural sector must be a major source of savings one further important—and rather depressing—conclusion follows: one cannot expect very large savings to be available when so many of the peasants are living at or below subsistence level, and there can, therefore, be no easy solution to the problem of economic growth.

If, however, this conclusion seems depressing it is necessary to consider the only possible alternatives. These are either to continue at the present low level of development with all that that means in terms of poverty and national insecurity; or else to fall under the influence of the imperialists and follow the capitalist road. But this road will not lead to all-round economic development, it will bring benefits to only a small privileged minority, and it will involve the most severe exploitation of the workers and peasants. It will mean moreover, the loss of national independence and submission to economic and political domination by the imperialists.

A policy of internal accumulation and development along socialist lines is thus—however difficult—the *only* way to self-sustaining economic growth and real national independence. A socialist policy may involve hardships in the initial stages, a capitalist policy can only be disastrous.