PROBLEMS OF CAPITAL FORMATION IN UNDERDEVELOPED COUNTRIES WITH SPECIAL CONSIDERATION OF CAPITAL IMPORTS AND BALANCE OF PAYMENTS PROBLEMS.

by

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INTRODUCTION

Criteria of Development

Since the termination of the hostilities in 1945, the literature dealing with economic development has been constantly increasing. While the economic discussion of the nineteen twenties and thirties was strongly influenced by the great depression, the emphasis has shifted since the war to the question: "why are come countries 'rich', while others are 'poor'?"

Many attempts to solve this problem are primarily empirical in nature, offering specific recommendations for specific cases. Where the discussion is carried on at a more general level of abstraction, a basic obstacle becomes apparent. When we talk about "underdeveloped" countries, we usually think that it is generally understood what we mean by this term. When it comes to a discussion of possible remedies, however, it is often discovered that there is no generally accepted definition and our whole approach to the problem is largely determined by whatever definition we have in mind.

In order to agree upon a possible solution, or common approach, we have to have some idea of what "underdevelopment" actually means, why a country is in that stage, and what the criteria of evaluation of this stage are. By

embedding our notions of development into our definitions we commit ourselves at least in part to a certain direction in our search for a solution. It is unfortunate that most contributors to the subject have not quite realized this, and have consequently created much confusion by skirting the problem of definition. We can save ourselves from possible pitfalls by making clear the assumptions upon which our analysis is based.

In his comparison of different countries, one of the earliest writers in this field, Colin Clark[1] uses the level of income as a measuring rod for determining the degree of "underdevelopment". He uses so-called international units, representing a certain batch of commodities, and then says that a country is "developed", or "underdeveloped", depending on whether it compares favourably or unfavourably with a country such as the U.S.A. This kind of comparison is widely accepted practice, but it is questionable whether it is feasible the way it is stated by Clark. It will be seen below that this approach is a necessary condition for a proper evaluation, but it is not a sufficient one.

One of the most prominent contributions to the subject is the United Nations Report on Measures for Economic

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1. Colin Clark: Conditions of Economic Progress. Second edition, London, MacMillan Co. 1951.

Development of Underdeveloped Countries"[2]. It purports to "prepare, in the light of the current world economic situation and of the requirements of economic development, a report on unemployment and underemployment in underdeveloped countries, and the national and international measures to reduce such unemployment and underemployment". This formulation suggests that the employment problem is at the root of underdevelopment. Clearly, the authors of the Report had in mind the widely observed phenomenon of widespread low productivity in underdeveloped countries. In most of these countries 80 per cent of the total population is employed in agriculture. The small size of the average farm and the use of primitive techniques make it impossible to produce more than is necessary for the barest subsistence. Modern industrialisation, with the use of methods of large-scale production and power-driven machinery occupies only a minor sector of the economy.[3]

If the U.N. Report tries to explain the existence of such conditions in terms of "unemployment and underemployment", it makes the serious mistake of defining the problem

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2. United Nations: Measures for the Development of Underdeveloped countries. Department of Economic Affairs, United Nations, May 1951. Co-authors: D.R. Cortez (Chile) D.R. Gadgil (India) G. Hakim (Lebanon) Th. W. Schulz (Chicago) W.A. Lewis (England).

3. Manufacturing industry has developed sufficiently only in India and China to show a modest change away from agriculture.

with just one of many factors bearing on the problem, and it is questionable whether this factor is even the most important single contributor. Remedying unemployment of labor means in principle the reorganization of just one factor. A reorganisation of all the factors used in the production process would be more likely to strike at the root of the problem.

We shall see below how the redistribution of surplus labour in agriculture will help to solve the problem of economic backwardness, but it will also be seen that such a redistribution can be effective only when undertaken together with other measures. A reorganisation of all factors of production (Land, labour, farm implements) in combination with a change in the production process would enable a smaller number of people to extract the same, or even more, output from the soil. That labour, which could be thus set free, is at present "underemployed", and it is the main concern of the U.N. Report to look around for other employment possibilities. Although this places considerable emphasis on employment, the Report actually does not dissociate itself from the position of Colin Clark, who uses income aggregates as criteria for development.

The Report goes on to point out that the solution to the problem is to create new employment opportunities. The writers of the Report feel that some relief can be found by taking new land into production, wherever that may be

possible. Furthermore, effort has to be concentrated on building new industries, of which manufacturing comprises the largest and usually the most promising category. Thus, the most urgent problem of underdeveloped countries is industrialisation.

Leaving for the moment this rather sweeping conclusion undiscussed, let us turn to paragraph two of the Report. Here the authors confess that they had some difficulties in interpreting the term "underdeveloped" countries. They say that they use it to mean "countries in which per capita real income is low when compared with the per capita real income of the U. S. A., Canada, Australia, and Western Europe". This indicates clearly that the U.N. Report, in spite of it's emphasis on the employment aspect, stands essentially on the same ground as Colin Clark does.[4]

The question that arises in this context is: "How far are income criteria helpful in the evaluation of the degree of 'underdevelopment' of a country?". Let us start with the point of least fundamental significance, the problem of measurement and of statistical exactness. It is a well known fact that, exact as statistics in advanced

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4. We should perhaps mention here that the latter's definition is somewhat more useful than the former's because it includes less. By starting out with an employment approach, the U.N. Report implicitly sets out the premise that industrialisation is the only answer which it is not in all cases. See further below, pp

countries may be, there are areas of doubt; e.g. there is still no perfect solution to the index problem. But at least the figures on which a particular comparison may be based, are fairly exact and reliable. However, this is not the case of practically all underdeveloped countries. Figures, as they are published (Colin Clark, U.N. publications) can be based only on haphazard guesses, which in some instances may serve as illustrations, but which on the whole cannot be relied upon. With respect to income aggregates, the problem is accentuated since many of these countries have large pockets of barter economy where values do not enter into the monetary sphere and are thus difficult to measure in monetary terms.

Serious as these problems may be at the moment, it appears to be of a mere technical nature and there is every reason to believe that they will become less serious over time. Although it would be quite difficult to base large-scale economic planning on the data available at present, this does not prevent us from analysing mainly in deductive terms, certain cause and effect relationships in the course of economic development.

In addition to the inaccuracy of its data, the technique of using income aggregates as criteria for development has a much more fundamental shortcoming. Are we justified in using arbitrarily defined units of income as a basis for comparing subjective values which this income gives us?

By way of contrast, let us consider Prof. S. H. Frankel[5] who gives a negative answer to this question and goes to extremes in doing so. He objects not only to the belief that it is possible to compare subjective values among individuals of different national and cultural background, but also to the belief that we can do this among individuals of the same, or greatly similar background. He claims that the breakdown of statistical abstractions, such as "income", and "investment" etc. cannot rightfully be used for comparison purposes. We would only be justified in doing this if we were able to measure in money terms what makes up the psychic stream of income derived from each accounting unit of income, and if we could have some indication as to the individual degree of this psychic satisfaction for each individual. He bases this view on the notion that two mutually exclusive and incompatible categories of thought are involved.

On the one side, according to Prof. Frankel, we have the mere accounting category "income". Taken as such, it is of no value for a comparison at all. It is rather the

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5. S. Herbert Frankel: "United Nations Primer for Economic Development". Quarterly Journal of Economics Vol. 66, No. 3, Aug. 1952, p. 301. Also: "Psychic and Accounting Concepts of Income and Welfare". Oxford Economic Papers, Vol. 4, No. 1, Feb. 1952. And: Some Conceptual Aspects of Industrial Economic Development of Underdeveloped Countries. Princeton University Press; Essays in International Finance.

"welfare" pattern, as adopted by different societies, as well as by different individuals within the same society, which gives to the "income" they receive its particular value. But this "welfare", or psychic stream of income eludes any measurement.

It may be noted in passing that he carries this approach to its logical conclusion and denies on the same grounds the justification for any attempt to develop welfare economics in general. He goes even further and follows L. von Mises in assuming that there are no constants, or even parameters in the economy whatsoever. When we look at statistics, we can see only historical incidents, we can see nothing which we can expect with any justification to repeat itself. That, of course, would make the whole science of economics an impossibility.

It is quite clear that Prof. Frankel's point, as he states it, is untenable, but we can leave further proof of this to the welfare economists. The reason we are discussing his argument in this context is, that there appears to be a valid element in his approach, when he cautions us about the use of income terms as means of comparison. It appears that there are cases where we cannot make comparison, in these terms. Let us take Africa as an example. If we compare the "money" income (and that is the only one available to us through statistics) of a tribesman in the interior of the African bush with that of a native pulling rickshaws for white tourists, it will be quite evident that

the income of the former will be only a small fraction of that of the latter. But were the tribesman to emerge from the bush to earn the same income, there can hardly be any doubt that the non-monetary values destroyed for him could not possibly be offset by the money income which he would now receive. This point is worth making, because we can definitely conceive of instances where money income, or even physical income, expressed in comparative monetary terms, is low; and yet the need for economic advancement from a welfare point of view is not warranted. The problem is only where we should draw the line.

Professor Frankel is not alone in his scepticism about the use of income terms as development criteria. Another protagonist is Prof. Jacob Viner[6]. However, the latter, although going out from the same starting point, comes to completely different, and to my mind much more realistic, conclusions.

There is a fundamental difference between the two authors. Professor Viner mainly objects to the rather loose usage of income terms, but he does believe in their usefulness if they are properly defined. A definition of an underdeveloped country can be quite workable if it is used to mean a country which has good prospects of using more land,

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6. Jacob Viner: International Trade and Economic Development. Oxford 1953, Chapter 6.

labour, or capital to support the present population at a higher standard of living, in other words, if there are possibilities of increasing the income per head in the country. This definition, of course, would be acceptable only to those who regard individual welfare as the ultimate goal of economic activity. If national autonomy, industrialisation per se, etc., are taken to be the goals, this definition would not hold. But even if we rule out this latter implication, there are some shortcomings to this definition. A country, after having embarked on a development project, may find that aggregate income, aggregate wealth, total product etc. have increased, and that even wealth per head, output per head etc. have gone up. But it may very well be that the absolute extent of "crushing poverty" has increased too. Although real income for the population as a whole has gone up, the number of those living on the margin of subsistence may have grown. If one were thus to make success in the fight against crushing poverty the indicator of development, a country may have regressed, although it meets all the other tests of development. It is quite clear that this is the case in most Asiatic countries. Here population growth threatens to wipe out the initial gains from economic development.

To summarize: In the context of our discussion of Prof. Frankels argument we had seen that it is conceivable that some low income countries may not need economic development, at least from the welfare point of view of the people

living in it. But Prof. Frankel completely neglects in his presentation the case which Prof. Viner has in mind, that is where widespread poverty exists. In view of the most appalling nutritional and sanitary conditions in which we find almost one half of the worlds population, it seems very hard to muster enough patience to follow the argument which he advances against commonly used development criteria.[7]

In the framework of this paper we shall follow Prof. Viner in using average real income, in combination with the extent to which crushing poverty prevails, as a working notion of development. We may note that this does not include countries like Canada where the standard of living is comparatively high although vast territories in the north are virtually untouched. Our present discussion centers upon the problems of nations with strong population pressure on the available land and with evidence of widespread and glaring poverty.

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7. Professor Frankel has been particularly concerned with the development of Africa for over two decades, and that seems to have biased his views in favour of problems characteristic of that area; problems pertaining to the overpopulated Far East do not figure prominently in his thinking.

CHAPTER I

The Problem of Initial Capital Accumulation

Tribes in Africa live in an abundant nature, if their physical needs for subsistence were to increase, a process of adjustment by means of taking more land into cultivation would be within their reach. It is conceivable that such a process could be left to a slow cultural evolution, with little or no interference, except for medical aid or the training of local personnel, from the outside. Here it is questionable whether large scale economic development is necessary in the first place.

In densely populated areas, however, the case is an altogether different one. Firstly, intense and widespread poverty means more than doing without cars and central heating. It means hunger, disease, and premature death for millions. It is this immediate physical plight, regardless of the yard stick by which it is measured, that calls for change. And what is more important, change is necessary not only by our standards: the nations suffering from such conditions themselves display a growing desire to improve their lot. But here, unlike the case mentioned above, improvements cannot be left to a slow, evolutionary process generated by endogenous forces. Deliberate policy has to exploit improvement possibilities to the utmost to raise even some hope of eventual success.

In the densely populated countries of the Far East it is almost impossible for the people themselves to raise themselves by their own boot straps. These countries are mainly primary producers. Their overall poverty is an expression of low productivity in agriculture, in which about 80 per cent of the total population is employed. One of the main causes of rural poverty is the small size of the average farm, which generally has to support a very numerous family. And this average size tends to become even smaller through splitting up the family property among the children. Thus it becomes increasingly difficult to maintain the present, already very low, standard of living. The majority are not able to boost their income sufficiently enough to save. This in turn makes them unable to buy the farm implements that would make their efforts more productive. In many cases they have to rely on occasional work, if any is available, outside their own farm, to supplement an insufficient income derived from the soil. Or they have to resort to consumption credit, a very widespread device, which has led in countries like China and India to heavy rural indebtedness. And if they default on the repayment of their debts, they loose their small holdings thus adding to the already sizable army of landless labourers.

That percentage of national income which is contributed by industrial production is only a small fraction

of the total. The output per head of industrial production is very low. And even in this sector relatively inefficient techniques are being used. The major part of this non-farm output comes from handicraft industries using highly labour intensive methods of production, usually located in households or scattered villages. There is, however, a tendency toward a decline in handicraft industries in favour of machine produced goods, often made by new mass production methods. The development of the latter has been greatly accelerated by the war.

The extent to which modern production methods have taken hold varies regionally. Textile industry, for instance, has developed more fully in China and India than in other parts of the Far East, while mining has forged ahead furthest in South East Asia, although here development in the extracting industries took place mainly for export purposes rather than for further processing at home. Private foreign capital was largely responsible for this, a fact which will be of some interest to us later on[8].

Obviously, the present economic structure does not enable governments to prevent famines or poverty in general by relying on the existing productive capacity. The fact that changes are necessary can no longer be disputed. The problem is in what way the productive resources should be

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8. See Chapter 4 below.

rearranged and supplemented so as to increase output per head. Would further industrialisation be the only answer? In the last analysis this question can only be solved by the nations concerned themselves. But we can certainly try to investigate some of the arguments advanced in search for possible solutions. In order to arrive at some workable suggestions for the problem of battling poverty we have to get some idea as to what causes may be responsible for it.

Leaving cultural and social factors aside, we shall concentrate on the economic aspects of the problem. Quite generally, we can say that the standard of living of a country depends on its overall productivity. This in turn depends on sources for raw materials, capital equipment, the number of skilled workers available, the techniques of production, and the type of market organisation. A change in any of these may bring about a rise in productivity. But in order for the rise in productivity to raise the standard of living as well, we would have to assume that the population figure did not go up at the same time; and even as it is, the rate of population growth is substantial. The birth rate is much higher than in Western countries, but it is offset to a great extent by a fairly high death rate.

Any attempt to raise productivity under such circumstances will tend to be syphoned off by an immediate increase in population caused by a drop in the death rate. It is true that also economically advanced countries also

experienced drastic increases in their population figures in times of increasing productivity. In this case, however, the increase in productivity usually kept one jump ahead of population increases, thus making it possible for real income per capita to increase.

In two important points conditions as they now prevail in the Far East are different from the ones in Western Europe at the beginning of the industrial revolution. First, Western Europe was then not densely populated, and furthermore, the North American continent absorbed large numbers of the increased population as immigrants. Second, cultural and social patterns, creating an adequate response to the opportunities created by the beginning of the industrial revolution, were favourable to changes in the economic system.

Although death rates declined only eventually, the resulting increase in population was matched by a growth of productivity both domestically and in newly settled lands overseas, a fact which favoured a greater degree of specialisation and mass production. And, so far as there was still a chance of net increases in productivity being eaten up by too rapid population growth, the urbanisation of large parts of a formerly agricultural population proved to have a declining effect on the birth rate. In what are now advanced countries, population increases were often a welcome phenomenon to satisfy a sharply rising demand for labour. Many corporations in North America, for instance, had labour recruiting agencies

in Europe whose task it was to bring additional labour across the Atlantic.

In the Far East of today, however, the supply of labour, actual or potential (those who could be used in industry with only minor training), already exists and by far outweighs the slowly increasing demand for such labour. Any further increase in population arising from greater productivity tends only to widen this gap. Furthermore, in the Far East factors which lowered the birth rate in what are now advanced countries can be expected to make themselves felt only in the more distant future; and that would probably be after the period of initial productivity increase during which a lower birth rate would be most urgently needed.

This dilemma, or rather the attempt to resolve for it, is the very starting point for any successful development project. How can the increase in productivity be accelerated greatly enough to keep ahead of the population increase?

One of the better known approaches to the problem in theoretical discussion is that advanced by Prof. Dusenberry[9] with his "unit multiplier". He points out that increases in important types of capital formation can be achieved with a maximum use of labour, and with hardly any capital at all. Projects like dams and irrigation constructions can be built

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9. J.S. Dusenberry: "Some aspects of the Theory of Economic Development". Explorations in Entrepreneurial History; Vol. 3, No. 2, Dec. 1950.

with a very high ratio of labour to capital. Costs could be kept at a minimum in this case since the transfer price for labour (diverted from agriculture) is likely to be very low.

Fortunately there exists even in the most backward countries some untapped resources of idle wealth which could be utilized (e.g. wealth held in the form of precious metals). If the government were able to draw on these resources for an expansion of the quantity of money, this increase could be used to finance the transfer of farm labour into construction. Such a transfer need not hurt agricultural production, since in most of the countries under consideration there is evidence of widespread disguised unemployment in agriculture. The new workers could now use their wages to buy the food which they previously helped to produce themselves. That would, of course, result in a net increase of income for those remaining in agriculture. The farmers might spend this increment and thus drive up prices, since total output at that stage has not yet increased. Or they might hoard it, making the new increment of money unavailable for further investment. The government could prevent this by absorbing the increase in income through taxation.

There is a further possibility which could render the project useless. If they were unable to benefit it through increased income, those remaining in agriculture might choose to produce less, just enough for their own subsistence consumption. But it is conceivable that reasonable incentives

keeping up the original level of agricultural output would lie within the reach of a resourceful government.

If the tax funds in the hands of the government are of approximately the same size as the expenditure on construction projects, no additional demand will accrue, and prices will not rise. Actual consumption will remain at the same level as before. After their completion these construction projects will cause a general increase in productivity, either by facilitating agricultural production, or by creating "external economies" for new industrial projects. According to Prof. Dusenberry, this has actually been done by the British in India. If this method is successfully adopted, it will eventually result in a rise in productivity and real income.

Again, the increase in real income could be absorbed through taxation. That could lead to a continuation of original projects, or to the purchase of capital equipment from abroad, presumably through exports. The resulting expansion of productive capacity would then lead to another source of finance. The wages paid to the workers are supposed to stay at their old level, determined by the original transfer price. That would place the government in a position where it could exert some Robinsonian "monopolistic exploitation of labour", the proceeds of which could again be plowed back into investment projects. In principle, Prof. Dusenberry believes, this kind of approach would make

possible complete industrialisation of an underdeveloped country without any foreign aid.

It has been pointed out by Prof. Higgins[10] that Prof. Dusenberry fails to make one point explicit. A tax on any increase in income arising from increased productivity is not only desirable as a source of revenue for further investment projects, it is also necessary to prevent these initial gains from being wiped out by population increases. But that is only a subtle way of giving the advice not to improve conditions of sanitation, health, and nutrition. Because if increases in productivity should spill over into these fields, the death rate would drop and the whole project would not work.

There is no reason to believe that Dusenberry's scheme could not work, at least theoretically. The almost exclusively self-financed industrialisation of Russia probably made use of similar methods. Although not many details are known about it, this much is clear. Russian industrialisation was only possible through the sacrifice of millions of human lives. In the nineteen twanties Russia exported wheat when at the same time it experienced an acute famine. It is highly doubtful, however, if a similar policy could be adopted by the non-communist governments of the Far East under present world conditions.

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10. B. H. Higgins: "Reply to Professor Dusenberry", Explorations in entrepreneurial History, Vol. 4, 1951.

CHAPTER II

The Bombay Plan[11]

In considering the question: "Why are some countries 'rich' and others 'poor'?", we have to be careful to avoid some common pitfalls. It is often argued that some countries are rich because they have sizable deposits of raw materials. Iron ore and coal, especially, are considered to be the necessary condition for industrialisation. This has some elements of truth in it, but at the same time it asserts too much. For one thing it does not suffice as an explanation for economic conditions in the Far East, because in those countries there are sizable, and mainly untapped, resources of raw materials. But even if that were not so, the statement is not always correct.

A country like Switzerland has a high standard of living, but it has very little or no mineral resources within its borders. Other countries, like Bolivia and Malaya are rich in terms of mineral resources, but their standard of living is low. It has to be kept in mind that the existence of raw materials is only one of many factors determining productivity.

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11. A Plan for Economic Development of India Bombay. 1944 Written by a group of prominent Indian industrialists.

Another point which has to be made here pertains to the population problem. If we link up poverty with over-population, we have to use the latter term always in a relative sense. A country is usually called densely populated if the number of people per square mile is higher than in most other countries. We cannot infer from that, however, that a high population figure as such would be conducive to poverty. The Kingdom of the Netherlands, for instance, is one of the most densely populated countries and still it has a fairly high standard of living. Density of population and increases in population are not detrimental in themselves. If we try to speak of density or of an increase in population being detrimental to general welfare, we have to set this in relation to all other factors giving rise to productivity within a country.

It is only by viewing the population figure in relation to the other economic magnitudes that we can label a particular population figure as the optimum under which all existing resources can be used to maximize real income for the population. If the population figure exceeds this magnitude, then we can rightfully speak of a country being overpopulated, that is overpopulated with respect to other factors of productivity (including not only capital, land etc., but the techniques of production used, the skill of the labour force, general literacy, etc.) As long as we make this modification, we can safely speak of the Far Eastern countries as being overpopulated, because the allocation of their existing resources is not at their economic maximum.

It is now generally accepted that, in order for increases in productivity to keep ahead of population increases in overpopulated countries, industrialisation undertaken simultaneously with modernization in agriculture is the only answer. In agriculture, less people have to produce more, while new jobs have to be made available to those set free from agricultural production. And furthermore, it is now widely accepted that, besides the need for improvement in cultivation techniques, literacy, health conditions, etc., the most important single requirement for development is capital.

In order to be able to see the significance of the capital factor in development, it is perhaps helpful to discuss an already existing proposal. From the discussion of the specific case we should then be in a position to arrive at some more general conclusions pertaining to the problem of development. In casting about for a suitable example, the Bombay Plan, one of the earliest plans drawn up by the citizens of an underdeveloped country, appears to be the most representative one. This is probably no accident since a group of Indias most distinguished economists has collaborated on this project.

Contrary to its name, the Bombay Plan is not so much of a plan but rather a statement of objectives. With respect to a more detailed foundation for its execution, it calls for a series of three five year plans, to be worked out by the government. Its purpose is mainly to put forward as a basis for discussion the general lines along which economic develop-

ment should take place. As such it does not deal with matters like organisation, methods, and techniques required for the execution of such a plan. Policy implications, such as equitable income distribution, questions relating to government control of economic activities, etc., are also omitted.

The Plan was written at a time when the constitutional powers of the Indian government were too weak to carry out any effective planning on a national level. For the maximum effectiveness of such a plan, however, it would be essential to have a national government with a wide range of economic powers, a factor which is also greatly needed for coordinating projects undertaken on a regional level.

The principal aim of the plan is to double present (1944) national income within fifteen years from the time the Plan commences operation. It is assumed that the population increase per year will be approximately five million, an estimate which is based on the recent decennial census reports of the Indian government. That would mean that national product on the whole would have to increase by about 300 per cent in order for national income to double. To accomplish this goal, the Plan envisages a doubling of agricultural output, and an increase of industrial output five times that of the base period. That would leave the country still largely agricultural, although the preponderance of agriculture would be greatly reduced.

One of the most important features of the Plan is that it puts such heavy emphasis on the advancement of industry, confining agriculture to a secondary role. Furthermore, within

the industrial sector, heavy emphasis is placed upon the development of power and capital goods industries. It was the experience during the war that nothing has hindered rapid expansion more seriously than the absence of basic industries. The planners therefore intend to give these industries top priority in their scheme. This, it is hoped, will make the Indian economy less dependent on foreign countries for imports of plant and equipment. That would greatly reduce the strain on foreign balances which is likely to exist for the duration of such a development project.

In spite of this emphasis on basic industries, the Plan provides for a moderate expansion in consumption industries in order to avoid unnecessary hardships on the population during the planning period. While in the sector of basic industries heavy capitalisation may be unavoidable, the production of consumption goods should be mainly confined to small-scale cottage industries. Here production could be highly labour intensive, causing only a minor drain on foreign exchange for the import of capital equipment.

The Bombay Plan is particularly vague on the point of finances. The authors feel their actual estimates are so momentous as to appear impractical to many conservatively minded people. They feel that the real capital of a nation consists of its natural resources, and that money is merely a means of channelling them into their most productive uses. Looked at in that way, they feel that their proposed capital

expenditures stay well within the limits of their national wealth.

This is of course a debatable point, and it will become apparent in a later part of this paper that the financial aspect is not merely a "camp-follower"[12]. Especially with respect to the international monetary relations of such a country this view might get the planners into unexpected and serious balance of payments difficulties. They go on to say, however, that their estimates do not pretend to be absolute but that owing to the lack of sufficiently precise data they are rather illustrations of what might be done. They would like also to see their estimates thought of in terms of commodities, rather than in terms of money. The latter is more of a measuring rod, based on the average purchasing power of the rupee between 1931 and 1939.

With respect to the preponderance of basic industries, the plan provides for expansion in the following fields:

Power - electricity.
Mining and metallurgy, iron and steel, manganese, etc.
Engineering - machinery of all kinds, machine tools.
Chemicals - fertilizers, dyes, plastics, Pharmaceuticals.
Armaments.
Transport - railway engines, cars, shipbuilding, automobiles, aircraft, etc.

The need for heavy investment in these fields is quite obvious.

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12. Term used by Seymour E. Harris in: Economic Planning. New York, 1944, p. 252.

No modern industry can conceivably be operative without sufficient power developments, machinery, etc. As far as agriculture is concerned, besides the reorientation of antiquated methods of cultivation, the most important single factor in raising productivity is an ample supply of fertilizer. With increasing total production the volume of trade will swell, necessitating additional and in most cases more modern transportation facilities.

It should be noted that the development of power ranks first on the list. It is held with considerable conviction on the part of the planners that any improvements in industry, large scale or small scale, and in transportation, are not possible without considerable electrification. With respect to the possibilities of expansion in this field, the planners have reason to be optimistic. It is estimated that the magnitude of potential hydro reserves in India is in the neighbourhood of 27 million kilowatts. So far, only half a million of that potential has been developed.

The Plan provides similar breakdowns, as we have discussed them, for industry, agriculture, transportation, university, and technical education. Without discussing these fields at similar length, so much should be said about agriculture: It ranks definitely below industry, the main purpose is to rearrange available facilities, e.g., by regrouping the existing strip farming in order to make farming possible on a larger scale. The purpose of improvement in

agriculture is not so much one of complete modernisation along lines similar to those in industry: the Plan aims at a less ambitious goal by trying to use only the amount of capital needed to increase production enough to satisfy domestic consumption. That would imply little or no production of agricultural commodities for export. The pattern of production would be almost exclusively dominated by domestic needs.

The Plan provides for much flexibility with respect to the sector of the consumption goods industry that should be developed first. They feel that this should depend primarily on the growth of income. They expect marked variations in consumption patterns as income goes up. In other words, the type of goods demanded with a low level of income such as inexpensive cotton goods, will eventually be replaced by a scale of goods catering to a more developed taste.

How exactly this consumption pattern will appear in the various stages of development, is impossible to predict. The Plan therefore leaves the consumption end deliberately open to make it more responsive to changes in consumers' preferences. The only other alternative would be to discard the idea of free consumers choice altogether and to introduce a system of autocratic planning, which determines for the consumer what he "wishes" to consume.

With respect to the estimates of the need for capital in the various industries, the authors feel that it is not possible to be very specific. A large number of industries

will be introduced for the first time to the country.

The ratio of capital to expected net product is bound to vary substantially between different branches of industry. By net product we mean the gross product of an industry minus the cost of raw materials including power consumed in the production process. This capital intensity factor is likely to be quite high in the actual operation of some branches of industry, such as hydro-electric power. In the construction of hydro projects, the capital intensity may be much lower than would be the case in a more advanced country. Where labour is exceedingly cheap shovels can do the job of bulldozers, and wheel barrows can take the place of dump trucks. But in the operation of such a project, not even the greatest number of coolies could take the place of turbines and of high voltage transformers, and also electricity cannot be conveyed in baskets.

This factor of capital intensity is of considerable importance. It will be dealt with again in a later part of this paper where we discuss the foreign trade implications of economic development. For capital intensive projects will depend greatly on imports and thus bear upon the foreign exchange position.

Actual estimates as to the average capital intensity in Indian production are possible only for a small number of products owing to the lack of statistical material. Quite generally it can be stated, however, that the production

techniques adopted should be as labour intensive as possible. A prominent place of small-scale cottage industry in the consumption goods industry, for example, is supposed to serve this end.

According to the Bombay Plan, in order to guarantee an increase of national output to Rs 2240 crores (£1680 mill) per annum, capital would be required to the extent of Rs 4470 crores (£ 3360 mill). This assumes a capital to output ratio of 2.4, which is moderately low when compared with that of more advanced countries. This capital estimate is a rather staggering figure which becomes clear when it is compared with the figure for the total capital invested in manufacturing plants (other than transportation) in the pre-war period, which is only Rs 700 crores (£ - 525 mill).

The estimates for the total need of capital in the various fields, agriculture, industry, transportation, education, and health include both non-recurrent and annually recurrent expenditures. On this basis the breakdown of the total is as follows:

	Rs crores	£ Mill
Industry	4480	3360
Agriculture	1240	930
Communications	940	705
Education	490	367.5
Health	450	337.5
Housing	2200	1650
Miscellaneous	200	150

The expenditures required consist of "external" and "internal" finance, meaning expenditures made at home and made abroad for the import of goods and services respectively.

This division is necessary in order to show that proportion of the total funds which is needed in the form of foreign exchange. The planners feel that India will be mainly dependent on foreign machinery as well as on foreign technicians at least for the first few years of the plan. In later phases, the imports are to be displaced at an increasing rate by domestically produced machinery and by native technicians. Thus the planners envisage very heavy "external" finance in the initial phase of the Plan, which is to be replaced more and more by "internal" finance as the Plan reaches more advanced stages.

As sources of external finance the Plan includes:

Hoarded wealth of the country, mainly gold.
Indian short-term loans to the United Kingdom, sterling securities held by the Reserve Bank of India.
Balance of Trade Surplus.
Foreign borrowing.

The funds required for internal finance will have to come from:

Savings of the people.
New money created against ad hoc securities, that is the inherent credit of the government.

As already mentioned, it is believed that it would be within the power of a strong centralized government to adopt measures effective enough to mobilize at least part of the hoards of precious metals.

While the authors of the Plan estimate the total hoarded wealth in the country to be in the neighbourhood of Rs. 1000 crores, they expect that no more than Rs 300 crores (£ 225 mill) of this would be forthcoming.

Sterling balances: War purchases of Great Britain led to an accumulation of sterling balances of about Rs 800 crores (£ 600 mill) at the time when the plan was drawn up. Between that time and the end of the war, British purchases in India have been fairly constant, it can therefore be assumed that this figure had grown to about Rs 1000 crores at the end of the war. As such it enters the calculations of the Bombay Plan as a further source of external finance.

The Balance of trade: It will be recalled that improvements in agriculture are to be directed mainly to the increase of goods for domestic consumption. This is likely to cause a drop in traditional export items, such as jute. On the other side, there is expected to be an increasingly large substitution of domestically produced goods for items previously imported. Owing to the second factor, the planners believe that their surplus on the balance on current account will not shrink below Rs 40 crores (£ 30 mill) annually. This, too, will be available for external finance since India was able to expatriate most of her sterling debt during the war. If the above mentioned surplus could on the average be maintained over the whole planning period, about Rs 600 Crores (£ 450 mill) would be available.

Foreign borrowing: The planners arrive at a surprisingly low estimate for foreign borrowing. They are thinking primarily in terms of private capital, the inflow of which

they welcome so long as it is not used to gain political influence or to serve the ends of a foreign interest group. The most serious obstacle to the encouragement of foreign lenders could conceivably be the inflationary conditions brought about by large scale domestic finance with "created money". The planners feel, however, that this need not lead to inflation since the money will be used strictly for purposes which, by adding to the total capacity of the economy, will counter any inflationary tendencies that monetary expansion might otherwise create. The bulk of the foreign borrowing would have to be available primarily in the initial phase of the plan. As newly created domestic capital would come into use, the money supply could be gradually reduced. The Plan assesses the total needed from such sources at about Rs 700 crores (£ 525 mill).

Savings: Unlike more advanced countries, the percentage of national income saved is on the average quite low. The planners do not think that saving can be more than 6 per cent of the national income, thus yielding about Rs 4000 crores (£ 3000 mill) over the whole planning period of fifteen years.

Created money: This is perhaps the most controversial feature of the whole Plan. If the amount possibly forthcoming from savings - which the planners consider an estimate much on the conservative side - are not actually of a greater magnitude than indicated here, a large part of the total

capital, Rs 3400 crores (£ 2550 mill) would have to come from inflationary sources.

The use of the word "inflationary", however, is carefully avoided by the authors of the Plan. It appears that a deliberate effort has been made to dispel any fears arising from the threat of inflation. They explain that this money could be created by borrowing "against ad hoc securities from the Reserve Bank". This is possible, they feel, if the people have full confidence in the resourcefulness of their government.

This kind of money creation is considered to be economically sound by serving the creation of new capacity and thus being eventually "self liquidating". The optimism of the planners goes even so far as to assume that prices at the end of the planning period are likely to be somewhat lower than at the beginning. It would be only for the duration of the plan, and then primarily during the initial phases, that the danger of an inflationary pressure could occur through too rapid expansion of purchasing power. This of course could have serious implications, but it should be the job of the government to keep inflation within manageable proportions by exerting rigid controls of consumer spending. If the inflationary pressure turns out to be heavy, such controls might have to be so stringent as to make "liberty and freedom of enterprise.... suffer a temporary eclipse".

To summarize: A break down of funds derived from the

above mentioned sources would be :

	Rs crores		Pound Sterling	
External finance:				
Hoarded wealth	300		225	
Sterling securities	1000		750	
Balance of Trade	600		450	
Foreign borrowing	700		525	
		2600		1950
Internal Finance:				
Savings	4000		3000	
Created money	3400		2550	
		7400		5550
Total:		10,000		7,500

Evaluation: A proper evaluation of the Bombay Plan is a rather precarious undertaking because at so many points we have no other choice than to take the author's word for it. Wherever statistical data are produced we have no way of passing judgment as to their reliability. It is a well known fact that underdeveloped countries do not have anything that would compare favourably with DBS and US census publications. Whatever material is available on India, is likely to be inexact and incomplete. The authors, in a sense, are aware of this fact. They point out that their plan is actually more a listing of objectives, rather than a detailed layout of procedure. It is left mainly to the first Five Year Plan[13] of

13. Government of India Planning Commission: The First Five Year Plan, Government of India, New Delhi, July 1951.

the Indian Government to improve and correct the original estimates[14].

Although the statistical background is shrouded somewhat in mystery, the leading principles embedded in the Plan are graphic enough to lend themselves to a critical evaluation. One of these aspects is the premise that social and political conditions in India after the war have to be more conducive to economic planning than they were at the time the Bombay Plan originated. Undoubtedly, the newly gained independence and division of the former Crown Colony into two separate states has brought about serious economic as well as political complications. On the other hand the new Indian government has now all the features of centralisation the authors of the Bombay Plan had hoped for. The new constitution gives the federal government sweeping powers in matters pertaining to economic development. Now that the constitutional stage is set, how successfully will the various parts of the Bombay Plan be acted out?

Much of the success of the Plan will depend on how far the planners are justified in their assumption that the role of money is mainly that of a mobilizer of physical resources. There is no doubt that part of the finances will

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14. The First Five Year Plan also concentrates more on such "essential matters as organisation, methods and techniques required", a feature which the Bombay Plan expressly leaves out.

actually result in an expansion of capacity, but it must be feared that money creation, at least on the scale provided for in the Bombay Plan, will mainly bid away existing resources already in production and invite inflation with no sizable contributions to productive capacity.

One of the dangers of the Plan is that it relies quite heavily on this sort of finance. The figure given for money to be created is already large as it is. But most likely it will have to be of much greater magnitude as indicated. The planners have arrived at their cost estimate by taking 1931-39 values as their basis. No allowance has been made for subsequent price increases. If we make this correction, the estimates for total capital needed will have to be much larger than they are estimated by the planners.

To recall the main goal of the Plan: Within a period of fifteen years total productivity should have risen threefold, while real income after allowance for population growth should increase by 200 per cent.[15] It will be attempted presently to show that this is not possible unless the whole character of the financial scheme is altered. The Plan, as it stands, relies heavily on self finance. Foreign borrowing does not figure prominently in the Plan. We shall anticipate

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15. As the Plan stands, three quarters of the total finance is supposed to be forthcoming from domestic sources. The total of all finance is to serve an increase of net output in industry six times as large as current output, and an increase in services three times as large as current (1944) services.

so much as to say that the positions of capital raised domestically and capital raised abroad will have to be completely reversed. This, however, will change the whole character of the development scheme in very significant aspects.

Development as such, the raising of output through the creation of new capacity, should be relatively unaffected. But the specific problems arising in connection with the accomplishment of this will change in character. The authors of the Plan envisaged a minor decline in commodity exports, still leaving a moderate amount of excess foreign exchange for the import of capital equipment. With foreign borrowing in the foreground the country's position in international trade will be seriously affected. The new problems which will invariably arise in such a case will be dealt with more extensively in a later chapter.

The Bombay Plan states that the sum of Rs 10,000 crores should be sufficient in order to achieve the stated goals within fifteen years. But this is hard to believe once we examine some of the techniques used in deriving this figure. Most of the expenditure items are broken down into "non-recurring" and "recurring" expenditures, where the former item refers to original construction while the latter means maintenance expenditures. The Rs 10,000 crores figure, however, excludes recurring expenditures, except for the first year. They are treated for the rest of the planning period as "working capital" which is supposed to be self-financing.

This, it seems, is a piece of arithmetical acrobatics which shakes our belief in the original figure.

The planners obviously treat recurring expenditures as a revolving fund which it is not. This flaw in the computation is a serious one, since the recurring expenditures item with about £ 900 mill is far from being negligible. Nearly half of this amount is spent on improvements in public health and education. These can certainly not be regarded as "working capital" in the conventional sense. And even if we widen this term so as to include some kind of social working capital, we cannot assert that this capital is self-financing. As it is, these recurring items are not only not self-financing, they are on the contrary an additional heavy burden on public finances which are already quite heavy as the Plan stands.

Very much of the practicability of the Plan depends on whether or not the Rs 10,000 crores figure turns out to be approximately correct. If it were too small, the Indian people would have to tighten their belts even further. With the level of income as low as it is this would mean hardships similar to those imposed on the Russian people in the 1920's, something that the planners emphasize they wish to avoid. Moreover, a voluntary increase in savings cannot be counted on. In view of these circumstances, and judging from the existing propensities of the planners, resort would be taken to even heavier reliance on inflationary measures. And since the inflationary danger is already very real in the original

plan, this would certainly court disaster. Run-away inflation in some European countries after World War I, particularly in Germany, and in Nationalist China after World War II, have shown that production and economic incentive in general can be severely paralysed when the value of money evaporates too rapidly.

There is another point which casts some doubt on the controversial Rs 10,000 crores. The figure for the desired increase in national income is obtained by using 1931-39 figures as a base and by multiplying them by three. In order to arrive at a value for the total volume of investment which would be necessary to produce this, the planners assume an average ratio of capital to output (capital intensity) of 2.4 for the Indian economy. In other words, an investment of Rs 2,400 would be necessary to produce an output of Rs 1,000. How the authors arrive at this figure, they do not explain. They merely assert that it is low in comparison with other countries. But the mere assertion that it is low, taken by itself, is of no particular merit. The question remains whether with such a ratio India will be able to boost her production to the desired goal.

The expenditures earmarked for industry as a whole are allocated in such a way that basic industries get Rs 3,480 crores and consumption good industries Rs 1,000 crores. This means that expenditures on the former would be about three and a half times as much as those on the latter. Now it can

be argued that the capital-output ratio cannot for technical reasons vary widely in certain basic industries from that of advanced countries, even when we take the great abundance of labour into account.

There would be considerable room for the adoption of labour intensive techniques, that is with a low capital-output ratio, in the consumption goods sector. But that sector will make up only a quarter to one third of total new investment under the Plan and thus may not be able to bring the capital intensity factor down very much for industry as a whole.

In consideration of this we can agree with the planners that the capital intensity factor is likely to be lower in India than in other countries, but not very much lower. As far as our evidence is concerned, it is inconclusive whether the 2.4 ratio is correct or not. But the mere fact that we cannot have sufficient trust in this figure adds another element of doubt to the analysis used in the Bombay Plan.

To summarize: Although the Plan is more a statement of objectives, there can be no doubt that the figures given in it represent an attempt to assess in terms of money the real costs involved as well as the real physical resources available. As far as the cost aspect is concerned, some serious omissions in its derivation (the treatment of recurrent expenditures) and the lack of allowance for price

increases since the base period 1931-39 (which should be between 50 and 100 per cent) account for too low a total.

It is true that a higher price level changes not only the cost side of the picture, but also the value of total output achieved under these higher costs. But in one respect the change in price level fails to bring about a similar proportionate change, and that is in the finance side. It is true that the higher the post war price level, the higher the proceeds from hoarded wealth are likely to be. But this item does not figure very largely in the total, it is only Rs 300 crores out of the Rs 10,000 needed.

With respect to a much more prominent finance item, the price level correction will not affect it at all, and that is the amount in Sterling balances. This item stands on the books at Rs 1,000 crores. It is questionable, however, if it will be available to the full for development purposes. For one thing, some of these Sterling balances are still blocked. But even if they were all freely at the disposition of the government, this would not ensure their full and optimum use for the import of capital goods. The biggest supplier of such goods at present is the United States. But India will not be able for quite some time to use her Sterling balanced for purchases in the United States because of the inconvertibility of Sterling into dollars. She will have to rely exclusively on supplies available from the Sterling bloc. And here her buying opportunities are not the best.

England, the only country of the Sterling bloc with substantial heavy industries is still in great need of capital goods for her own rehabilitation. Whatever she is able to export, will have to go mainly to the dollar area in order to lessen the strain on her dollar position. How soon she will be able to improve her position sufficiently to be able to export capital goods to India on a larger scale is hard to say.

But it seems quite clear that India cannot postpone her development plans until the time has come in the uncertain future when she can make free use of her sterling balances. Consequently India will have to look around for other sources of foreign finance with which she can make up whatever part of the Sterling balances she is not able to utilize.

We have seen that on the cost side we would have to revise the stated figure upwards; it would probably be nearer to Rs 20,000 crores (£15,000 mill). But that leaves a considerable gap on the finance side which does not appear in the Bombay Plan. If the planners were still to insist on no increase in foreign borrowing, this gap would have to be filled with increased savings and even more with created money.

To the extent that the latter is used, the figure would no longer be Rs 3,400 crores out of Rs 10,000 cc, but rather Rs 8,000 to 10,000 crores out of Rs 20,000 crores. In other words, inflationary credit creation would make up about

50 per cent of the total funds required. That this could completely defeat any development project can hardly be disputed. This again points to a much heavier reliance on foreign borrowing if the scheme is to have a chance of being successful.

To what extent the inflationary sources should give way to foreign borrowing, is again hard to judge. Certainly the use of created money cannot be altogether condemned, especially since heaviest reliance would be placed on it toward the end of the planning period when most of the planned capacity has already become a reality. Theoretically, if credit expansion were to go hand in hand with the utilisation of newly erected capacity, no inflation need occur at all. But some mild inflationary pressure might even be desirable as a "lubricant" of the expansionary process.

Unfortunately it does not somehow seem possible to interpret this beneficial variety of inflation into the Bombay Plan, even if we advocate heavy foreign borrowing; for the Plan seems to be erring also on the part of expected increases in productivity. According to the Economist[16] it has been estimated that the 130 per cent increase in agricultural output, as stated in the Plan, is perhaps four times too high. Now since expenditures out of created money do not follow increases in productivity but have to be made quite independ-

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16. Articles in the Economist in 1944, particularly: March 1, 1944, also May 13, 1944.

ently, such a shortcoming would be simply another contributor to the inflationary danger.

CHAPTER III

Population Growth and the Bombay Plan[17]

Criticisms of the Bombay Plan as they have been discussed so far have been mainly in terms of finances necessary for the Plan. Now we shall turn to a more fundamental problem. How will population growth affect economic development? The authors of the Plan assume that population growth will remain over the planning period what it was over recent decades. That would mean that annually 5 million people more have to be reckoned with. Over the planning period of fifteen years this net addition to the population would be large enough to allow for a double increase income per head while total productivity has increased threefold. What we examined in the last chapter was the question whether this threefold increase actually will come about under the existing finance scheme. We found that this is not so and indicated in rough outlines in which direction changes have to be made in order to achieve the original goal.

Now we shall try to discover whether an increase in average real income is possible, even if the goal of a threefold productivity increase can be reached. Of course it will be impossible to make any quantitative estimates, but I do

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17. Statistics on which this chapter is based are taken from: Kingsley Davis: The Population of India and Pakistan. Princeton, 1951.

think it should be possible to discover what forces are at work, and in which direction they exert their influence.

In order to judge whether it can be assumed that the present rate of growth will not change significantly, which is the assumption of the Bombay Plan, we have to examine in greater detail the historical and cultural background of population growth in India. India's population has grown in recent decades at a fairly constant rate about 1.2% per annum. In comparison with other countries, this rate is not exceptionally high. Nor is it a phenomenon of long standing. A look at India's more distant history shows us that hardly one tenth of this rate could have been in evidence for any great length of time.

There is sufficient reason to believe that three or four thousand years ago India was already densely populated and was also showing signs of a highly developed culture[18]. Buddhistic literature reveals that between the seventh and third century b.c. large parts of India were comparable to Europe of the later middle ages with widespread commerce and a well developed monetary system. While some areas were quite densely populated and others were not populated at all, the total figure for India around the year 300 b.c. must have been between 100 and 140 million[19]. From that time on, for

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18. K. Davis: op.cit., p. 24.

19. K. Davis: op.cit., p. 24.

almost a thousand years, the population figure did not deviate from this magnitude for any length of time. It fluctuated considerably at times, but the population gain of a few prosperous years was invariably wiped out again by war, famine, and epidemics. These factors not only prevented any positive trend of growth, but led even to a moderate decline, for the population in the year 1600 A.D. is estimated to have been between 100 and 120 million[20].

The year 1600 is in-so-far of some interest here since the population of Europe and that of India were then approximately the same size. Since Europe including Russia west of the Ural covers a greater area than India, the latter was more densely populated. Since then, however, population growth in both areas has begun to take on a more significant magnitude with Europe showing an overall increase nearly twice as large as that of India. The reasons for this departure are most likely to be different in the two areas.

In India it is probably due to a good extent to Western influence. Her own conditions, culturally speaking, were not conducive to change, and the status quo would have probably been maintained for another few centuries. While in Europe tendencies were at work which eventually led to the industrial revolution, Western influence in India, mainly through the reign of the British, began to affect the death rate by gradually curtailing bandit warfare with its serious tolls

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20. K. Davis: op.cit., p. 25.

of lives, and by eventually establishing a better organized and more peaceful set-up. The same influence has also begun in more recent decades to diminish the death toll from epidemics and famines. This, it should be noted, was a fairly slow process coming to its climax only quite recently; but it was sufficient even in the earlier period to account for an increase in population from 100 million in 1600 to about 250 million in 1871.[21] Since then it has increased to 390 million in 1941, which means a 52 per cent increase in seventy years. Significant as this may be for Indian conditions, the change is much smaller than its counterpart in the U.S. for the same period, where it was 230 per cent; nevertheless, it is a remarkable change when compared with the rate of growth which prevailed until 1800.

For the world as a whole, the momentous population increase, was undoubtedly one of the phenomena that accompanied the industrial revolution. In Europe, this sharp increase has eventually settled down, leaving Europe with a constant rate somewhat higher than that prevailing before the industrial revolution. India still seems to stand at the

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21. Unfortunately, estimates for all periods up to 1871 are more or less hazardous guesses since the Indian Census did not start until that year. The acceleration referred to above in the text gains somewhat in momentum after 1870 partly, it has to be suspected, because estimates as to the actual population prior to the beginning of the census were mostly too low. But that would explain the acceleration only to a minor extent. There was also an actual increase in population all over the world, including India.

beginning of this cycle with plenty of potential growth before it.

One fundamental difference between the two cases, as they have been discussed above, must be kept in mind in order to save us from fallacious analogies[22]. This difference has to do with an interesting feature of recent Indian population growth, the rather extreme fluctuation from one decade to the next. This can be seen as follows:

	Per cent Increase
1871 - 1881	.9
1881 - 1891	9.4
1891 - 1901	1.0
1901 - 1911	6.1
1911 - 1921	.9
1921 - 1931	10.6
1931 - 1941	15.0

This indicates that the century old pattern of having gains alternating with losses is still in evidence, although now the former losses have turned into very small gains. Around the year 1920, however, this pattern ended abruptly. Since then a high rate of increase is no longer followed by a low one, but rather by one of the same magnitude. The main reason for this is that since 1920 great improvements have taken place in the field of emergency relief for famine and epidemic, on a national as well as on an international scale.

Now what conclusion can we draw from this historical survey of the problem of productivity increases, our starting point? In order to answer this we have to realize that the

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22. See p. 48 above.

present discussion of percentage increases serves merely as historical illustration; what we are actually concerned with is not so much the rate as such, but the absolute increment hidden behind it. For instance, the moderate rate of growth of 1.2 per cent has - owing to the very size of the population of nearly 400 million - added within two decades 83 million people to be fed and clothed. That is, the increment alone is almost six times the population of Canada, or about half the population of the United States.

It is the pious hope of the authors of the Bombay Plan that the net addition of people to the total will not exceed/this magnitude, at least for the period of the Plan. With that, of course, the whole Plan stands and falls. Supposing that the birth rate does not actually increase, will the death rate be the same as it is now, and if not,will the birth rate oblige and decline sufficiently to offset any drop in the death rate? These are questions of crucial importance not only to the Plan, but to economic development in general.

By looking at the above description of the growth trend, we can see that the time the Planners have taken as their base period is only the beginning phase of an entirely new trend. The reasons given for this trend would suggest that it will not settle where the table happens to break off, but that it will rather surge ahead for quite some time to come. But of course this impression is not conclusive, and we need some further evidence before we can put it on firmer

ground. Let us therefore examine separately the two components of the rate of growth, the birth rate and the death rate. Birth statistics for the period 1881-1941 are as follows:

1881-1891	49
1891-1901	46
1901-1911	48
1911-1921	49
1921-1931	46
1931-1941	45

For the layman, this table is inconclusive, but the expert[23] tells us that it points towards a slight decline in the birth rate, for the following reason: Statistics covering this period started out to be very inexact, improving more and more to such an extent that they are now quite reliable. But when they were inexact, they tended always to err on the lower side through inadequacy of birth registration methods. Consequently, the more removed from us the decades appearing in the table are, the higher the figures corresponding to them should be; that correction would give us a more noticeable trend of decline.

The question now is: "Will this declining trend continue, or perhaps become even stronger?" Here again we have to rely on the opinion of the population expert. In his extensive population study of India and Pakistan, Prof. Kingsley Davis[24] raises exactly this question, but comes reluctantly to the conclusion that we cannot hope for an even further decline in the birth rate. On the contrary, he fears,

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23. K. Davis: op.cit., p. 69.

24. K. Davis: op.cit., p. 90.

the present trend might even reverse itself in the future.

It will be recalled that in the development of Western countries population growth stayed within manageable proportions. Firstly, it followed rather than preceded the need for labour, secondly, whatever excess did develop was drained away through emigration to other areas, such as the Americas; and thirdly, rapid urbanisation resulted in a rapid decline in the birth rate for the masses of people who had flocked in great numbers from the land to the cities. All three conditions are not sufficiently strong enough in India to promise similar results. In the first place, emigration is ruled out from the beginning as a possible solution. Secondly, statistical comparisons of urban with rural fertility have shown that a certain small differential between the two does exist, but it is not very significant and has shown no sign of change over the last 50 years. An interpretation of fertility trends for India as a whole seems to support quite strongly the view that a general and far reaching decline in fertility has not yet begun.

Prof. Davis' study brings another fact to light. Fertility in India is inversely related to social position. There tend to be less children in the higher than in the lower classes and castes. To the layman, this could be a glimpse of hope. For, he could argue, as more and more people are emancipated into higher income groups, they will cease to have so many children. Since the biological fertility

in the higher strata of society is pretty much the same (so the experts tell us), the layman could be led to think that the principle of birth control is beginning to take hold. This would be an extremely hopeful sign, for if this idea has gained a foothold in Indian life, it could be quite possible that it would soon gain acceptance more widely. But alas, this is not the case.

Fertility among married couples in all castes and classes in India is quite uniform. What accounts for the difference in percentage of births between the two classes is rather a social taboo which prevents widows from re-marriage. It is this which is strictly enforced in the higher. but not in the lower classes. Taking the fertility picture as a whole, the widow taboo stands out as the only deterring factor. And even this is crumbling under Western influence. The taboo has never been very strong among the muslims and the tribesmen, and it now begins to show signs of weakening among the more Westernized Hindus as well. In other words, the only thing which could exert a dampening influence on the birth rate is likely to lose its significance.

When discussions about the population problem in connection with development have reached this stage, somebody is invariably going to throw birth control into the debate. Unfortunately, birth control appears to be the most impossible of all solutions. Cultural and especially religious taboos appear to be so insurmountable; and no attempts in this

direction will be possible for many years.[25]

Now that we have shown that there is not much hope for a declining birth rate, let us turn to the death rate. We have seen that, since the nineteen twenties, a constant decline is in evidence. Former fluctuations in the rate of growth have transformed themselves into a stable trend. First, one of the earliest factors leading to this stability, and what actually initiated it, was the cessation of large scale bandit warfare. Second, since the last half of the 20th century, an era of aroused world conscience, famines are more likely to be met on an international basis.

A case in point is the famine of 1950/51, when the U.S. aided the Indian government substantially with relief shipments of grain.[26] Third, we are left with epidemics, diseases, and malnutrition as factors which still keep up the death rate. But here any development project is likely to produce the most immediate results. It is quite clear that such a scheme can only hope for eventual success only if immediate and large scale improvements in health and nutritional conditions are

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25. I base this conclusion mainly on personal discussions on the subject with Indian students at the University of Michigan and at McGill University.

26. Although advocated by many Americans for purely humanitarian reasons, it has also political motives to take the wind out of Communist sails. But whatever the motive, grain was actually shipped and millions survived who would have starved in similar catastrophies twenty or thirty years ago.

undertaken. These will immediately result in a sharp drop in the death rate, particularly since modern science has made available very effective and inexpensive means of mass inoculation.

In the light of this evidence, we have now to question seriously the assumption underlying the Bombay Plan: viz., that population growth will not exceed 12 per cent per decade. It appears as almost certain that the future rate of growth, especially under a development project with its productivity increases, will be considerably above the 12 per cent anticipated by the Bombay planners. How much this differential will be it is impossible to say. But it is likely to be large enough to increase the extent of crushing poverty in spite of the gains in productivity.

Summary: In order to evaluate the points made in connection with the Bombay Plan we have to consider that the Bombay Plan also has to be taken as an example for development projects in general. This may justify us in discussing it so extensively. Our reason for choosing this particular plan is mainly that it is one of the most prominent among those which place heavy reliance on self finance. And furthermore, India is fairly representative of most other backward areas which we propose to consider here. It has sectors of a fairly well developed monetary economy together with areas of primitive barter exchange; it also has some industries with plenty of potential and untapped resources to draw on in the future

(such as hydro-electric power). In other words, India has the characteristics of both an extremely undeveloped area and of a more advanced one. We may be justified therefore in the assumption that India's problems are a fair and representative cross section of the problems of most other underdeveloped countries, as we have defined them in the context of this paper[27].

In the case of the Bombay Plan we had seen that heavy reliance on self finance implies extensive resort to inflationary finance. And with such corrections of productivity estimates as we found necessary further adherence to the principle of self finance would magnify the inflationary problem to such a magnitude that it would be almost insolvable. Also, as we attempted to show in the last chapter, the problem of population growth will be of greater magnitude than the Bombay Planners have assumed.

With respect to the possible over-optimistic estimates of productivity increases, especially in agriculture, the only conceivable way out could be rigid price controls, a device which the planners themselves feel will have to be employed. Unfortunately, prospects for success in this field are very gloomy. Increases in agricultural production, as provided for in the Plan, are very small indeed in comparison with expected increases in industrial output. In addition, actual realisa-

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27. Note the definition of the countries under consideration on pp.9, 10 above.

tion of these planned magnitudes may easily fall short of the goal[28]. An insufficient increase in agricultural production will have as its financial counterpart an enormously increased quantity of money. The question arises: "Will the government have any chance of success in curbing the resulting inflation?"

Since the enactment of the new constitution in 1947 the government has the unprecedented legal power to enact price controls on a federal level. But both previous experience with price controls during and after the war and a consideration of present conditions and attitudes on the part of the rural population make it appear most unlikely that even the most rigidly handled price control mechanism will be successful. In order for price control to be effective, a highly organized state with far-reaching authority (such as an effective policy system) is required. But in India, these prerequisites do not exist[29]. The Indian government may have some success in controlling prices in certain key industries because they are comparatively few and wide open to control.

By means of highly organized control agencies on the local level (mainly through severe punishment), a country like Germany could also have fair success during the last war in

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28. See p. 35 above.

29. This point has been brought to my attention by Prof. Keith Callard, McGill University.

suppressing at least the more excessive type of price control evasion. But even there, where all the conditions were so favourable to controls, the system broke down eventually.

Where physical need for bare survival becomes too powerful, the fear of punishment does not any longer deter. And beyond a certain point the size of a controlling agency - besides becoming too expensive to maintain - becomes unmanageable. In India, no authority could be conceived which could control hundreds of millions on minute transactions carried on in thousands of primitive villages scattered over a whole subcontinent.

Consequently, if there is such a serious danger of price control being ineffective, the only alternative remaining is a reconsideration of the nature of the finance scheme. This has been lately recognized in India by placing heavier reliance on foreign borrowing than originally envisaged in the Bombay Plan. The official estimates of the Indian Government for the Year 1952, pertaining to the initial Five Year Plan of the Government of India, are in the neighbourhood of $2,500.00. These funds will have to be forthcoming from foreign sources.[30]

This shift in emphasis towards foreign borrowing opens up a new field of problems for development planning, that arise from the foreign trade position of the country under consideration.

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30. Based on figures used in a speech by His Excellency Mr. B.R. Sen, Ambassador of India at the Conference on World Economic Development, University of Delaware, Newark, Del., April 25, 1952.

First, where should the money come from? Second, can the supply of such funds safely be left to the sometimes erratic patterns of behaviour on the part of private foreign investors? And third, which direction should domestic investment take in order to guarantee a stable foreign exchange situation? These questions will be now taken consecutively in the following two chapters.

CHAPTER IV

Nature of Private Foreign Investment

The traditional theory of international trade explains the moving forces behind long term international capital movements mainly against the background of Western advanced countries. Political factors aside[31], the principal moving forces of international capital flows were differentials in the rate of interest.

It has been the famous premise of writers like Adam Smith and David Ricardo that factors of production are next to perfectly immobile between different countries and highly mobile within a country's national borders.

But already Ricardo, who never gave up this belief in principle, could conceive of some possible exceptions. In his chapter on "Machinery"[32] where he discusses the possible

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31. Capital may move across international borders even in the face of heavy losses of revenue when political conditions in the home country are unfavourable. Fear of war and fear of personal persecution by the Nazis accounted perhaps for most of the capital flight as it could be observed prior to World War II. But political factors determining capital movements are by no means a phenomenon of recent years. Carl Iversen in his Aspects on the Theory of International Capital Movements, Oxford, 1936, points out that during the nineteenth century the extent to which French loans were granted to Russia increased and decreased in direct proportion to the political relations between the two countries. Furthermore, France, which had been at that time the traditional exporter of capital, deliberately abstained from the public flotation of German securities for reasons of national sentiment.

32. David Ricardo: The Principles of Political Economy and Taxation, Ch. 31.

effects of the introduction of new machinery on the demand for labour, he points out that the remuneration on machinery is so attractive that any governmental discouragement of its use could have harmful consequences for the economy. For, if the capital owner is prevented from reaping the greatest net profit possible from his capital within his own country, he will be tempted to move his capital abroad. This is quite consistent with an earlier statement of Ricardo's in the chapter on "Taxes and other commodities than Raw Produce"[33] where he maintains that excessive taxation of capital may very well induce the capitalist to emigrate together with his capital to a more congenial economic atmosphere elsewhere.

John Stuart Mill[34] goes one step further in showing that "capital is becoming more and more cosmopolitan; there is so much greater similarity of manners and institutions than formerly, and so much less alienation of feeling, among the more civilized countries, that both population and capital now move from one of these countries to another on much less temptation than heretofore".[35] He also strikes a similar note in his chapter on the "Tendency of Profits to a Maximum", where he explains the failure of the rate of profit to decline

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33. David Ricardo: op.cit., Ch. 17.

34. John Stuart Mill: Principles of Political Economy, Book III, Ch. 17.

35. Quoted by C. Iversen, op.cit., p. 98.

in England as being due to the perpetual overflow of capital into colonies and foreign countries.[36]

Since then, and especially since the end of the nineteenth century, it has become generally recognized that the original classical notion of factor immobility between countries was no longer valid in an unqualified form. Since then it has been generally held that international capital movements are no longer out of the ordinary, that they take place, however, only when there is a higher return on capital invested abroad than there is on capital invested domestically, provided that the element of risk involved is not so great as to offset the differential.[37]

Iversen[38] points out that this differential remains important for the evaluation of past capital flows (late 19th and early 20th century) although recent investigations have thrown some doubt on this. It is true, for example, that in the year 1900 coupon interest on foreign issues in France was higher than those paid on domestic issues only to such a negligible extent that the difference could not reliably explain the purchase of these foreign issues. But the explanation of this apparent contradiction to our previous statement is very simple: foreign securities have often sold for prices far below face value while domestic securities at the

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36. Carl Iversen, op.cit., p. 99.

37. That of course has to be understood mainly in connection with long run capital movements.

38. Carl Iversen: op.cit., pp. 105.

same time sold either very close to or at face value. Consequently the actual return or yield on sums spent on foreign issues were much higher than statistics covering the rate of interest would suggest.

The type of foreign investment considered so far has been mainly portfolio investment on the part of capital owners who sought out the highest possible return on their capital. It was mainly the type of investor representative of the French rentier class who would embark on this kind of foreign portfolio investment. Where high tariff walls impeded direct trade between two countries, manufacturing firms in the export industry have often undertaken direct investment in the other country, erecting branch plans there in order to open new markets for their commodities which would otherwise be fenced off by the tariff wall. One obvious example of investment of this kind is the construction of U.S. branch plants in Canada.

In the past, direct foreign investment in underdeveloped countries by private firms and concerns has also been made to some extent. There are certain fundamental differences, however, between, say U.S. direct investment in Canada, and direct investment in the Near and Far East by advanced, industrialized, nations. In the latter case the purpose was hardly ever the production of finished goods for consumption in the country where the investment was made. The purpose was mainly to develop and exploit raw material resources for immediate export to the investing, or to other

advanced countries. The predominance of this kind of private direct foreign investment was primarily responsible for fundamental differences in the basic structures of the economy and the foreign trade position of the capital receiving countries, such as Egypt, on the one side, and the structure of the economy and the foreign trade position of a more advanced capital receiving country, such as Canada.

For one thing, it helped to develop the economies of oriental countries in a very one-sided way. Since these countries entered the foreign trade market mainly as specialized producers of one or a few raw materials[39], they were much more sensitive to international fluctuations. Furthermore, owing to the lack of diversity of the industry that did develop within their borders, any international fluctuations had more far reaching consequences than in countries with a well balanced, diversified industry.

Strangely enough, the significance that foreign trade had, and still has, for underdeveloped countries has often been widely underestimated.[40] It has been pointed out by Mr. Singer that this may be mainly due to a logical confusion between the absolute amount of foreign trade as an increasing function of national income on the one side and the ratio of foreign

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39. Such as Egypt with its primary export commodity, cotton; and Malaya with tin and rubber, etc.

40. H.W. Singer: "The Distribution of Gains between Investing and Borrowing Countries". American Economic Review. Papers and Proceedings, Vol. XL, 1950, p. 473.

trade to national income on the other. In the latter sense, the impact of foreign trade is the greater the lower is the national income.

This is another way of saying that international fluctuations tend to have a greater impact on an underdeveloped economy than on a more advanced nation.[41] In the case of international fluctuations, both volume and value of internationally traded goods change more drastically for a backward, export specialized economy. This fact has very significant implications for such an economy with respect to its ability to form capital. For if income is greater than subsistence by only a narrow margin, an export surplus as the major source of capital formation can be wiped out easily by even moderate fluctuations in foreign trade.

This holds true also if there are substantial pockets of barter economy outside the monetary sphere which are likely to be unaffected by fluctuations at all. It is true that in more advanced nations international fluctuations may spread more widely through all parts of the economy, but they also spread more thinly. In contrast, where these fluctuations affect the monetary sector of a primitive economy, the impact will be greater because domestic capital formation usually takes place in this sector, and not in the self-contained pockets of barter economy.

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41. See also: A.I. Bloomfield: Capital Imports and the American Balance of Trade 1934-1939. Chicago 1950, pp. 265.

There is another factor that bears upon the relative significance of foreign trade in the two cases. In an advanced country the spread of the productivity of various factors of production, particularly of labour in different lines of employment, although quite noticeable, usually stays within fairly narrow limits.

Taking two cases at extreme ends of the scale, the productivity of migratory farm workers in the Southern United States is notoriously lower than that of unskilled assembly line workers in the automotive industry of the Detroit area. But for the U.S. economy as a whole, labour productivity in all employments taken together is usually grouped quite closely around a certain average. And this average is pretty much the same for factors employed in export industries as for factors employed in industries producing for domestic consumption.

Underdeveloped countries, however, show a striking dissimilarity here. Export industries (e.g. mines, oil fields, plantations, etc.) are often highly capital intensive, supported by much of the latest foreign technology. Productivity of labour in these sectors therefore tends to be quite high. Production for domestic consumption, on the other hand, is mostly highly labour intensive with very little or no application of advanced technical knowledge. Cases in point would be cottage handicraft industries so commonly found in India. Thus in underdeveloped countries we are likely to find an export industry of fairly high productivity with low produc-

tivity, subsistence industry in the rest of the economy.

This, incidentally, is probably the main reason for the underestimation of the significance of foreign trade in backward areas. National income figures are difficult to compile in such countries, and the number of people gainfully employed is statistically much more accessible. The result in terms of mere numbers is that relatively less people are employed in export industries of backward areas compared with advanced countries. Taking the number of employed persons as an indication of their significance in economic activity as a whole may be justified in the case on an advanced country; it is not justified in the case of a backward area, because here the productivity of a worker in the export industries is a significant multiple of that of a worker employed in the rest of the economy. Thus, although their numbers may be relatively small, the economic significance of export workers in terms of their contribution to general productivity is much greater than a mere numerical ratio would suggest.

It would be hasty to conclude from the above findings that private direct foreign investment has been mainly detrimental. Productivity was raised in at least parts of the economy, additional ground has been gained from the barter sphere for the monetary system, and knowledge of more productive techniques has been introduced. It turns out in this context, however, that the question of foreign vs. domestic ownership of capital is of considerable importance, and that foreign

owned capital appears, for reasons given later in this chapter, to be inferior to domestic capital as a means to economic development.

Traditional economic theory tells us that any investment made within a given area, whether by natives or by foreigners, promotes further growth of income and further capital accumulation through multiplier effects. Mr. Singer[42] points out that, though this may be true for advanced countries, it fails more often than not to hold true in underdeveloped countries.

Private direct foreign investment, which bulked so large in past total investment in such areas, has the peculiarity that except in the merely geographic sense, it has never really become an integral part of the economy receiving the investment. If American capital develops rubber plantations in Malaya, or British capital opens up the oil resources of Iran, these islands of high productivity are merely outposts of the advanced, capital supplying countries. In as much as these investments result in immediate re-export, and that has been mainly the case, the secondary multiplier effects which we are accustomed to expect from investment do not take place in the geographic region in which the investments are made, but rather in the country from which the capital comes.

Consequently, if we take into account the cumulative effects on income, employment, capital growth, etc., such

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42. H. W. Singer: op.cit. p. 475.

private "foreign" investment is actually "domestic" for the country of origin. This is especially true where the investment was made with the express purpose of finding new outlets for the expansion of productive capacity in, and new sources of raw materials and food for the advanced countries. Whatever external economies such investment did create in the receiving country was more or less an incidental byproduct, insufficient to lead to further expansion. That explains why high and low productivity sectors could be co-existent in backward areas for such a long time.

So far we have explained why traditional foreign investment in underdeveloped countries was of lesser benefit than it could have been under more favourable circumstances. We can go even further, however, and argue that this type of investment may have been actually harmful to the receiving countries.[43] This point has to be explained mainly in terms of the structure of economic organisation resulting from a high degree of specialisation. Although the production, say, of tea in Ceylon may be more efficient than domestic agriculture, it is likely to be less efficient than the domestic industries that might have developed as part of a less artificial economic pattern. Of course it is a debatable point whether domestic industries would have developed and were actually prevented from growth. But even if we have to deny

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43. H. W. Singer: op.cit., p. 477.

that, it can still be argued that the present economic structure resulting from direct private foreign investment now presents an obstacle to the systematic development that is now generally considered desirable by the backward nations themselves.

In the light of the newly awakened desire to set up a diversified economy, it is quite clear that previous foreign investment offers little in the way of a "crystallisation point" around which other sectors of the economy may grow. The principle of comparative advantage tells us that the people must have gained from their specialisation in international trade, but there can be no doubt that such industries are by far inferior to manufacturing industries, and especially basic industries, as growing points for the development of domestic skills, general level of education, etc. The detriment to the traditional investment pattern can therefore be summarized as follows: Where foreign investment did lead to increases in productivity, it so directed these improvements that after a certain point, they were ineffective for the economy as a whole, thus preventing the kind of expansion that would have affected the economy in a wider range of sectors.

One further point has to be made in connection with private foreign direct investment. We saw earlier that any large scale development project needs heavy foreign exchange requirements. It is clear that the type of foreign investment discussed in the previous section of this chapter runs contrary to the goals of an industrialisation scheme on a more general level. Although foreign exchange becomes available, it accrues

almost exclusively to the group of foreign investors that use it largely to transfer profits to their country of origin.

We can observe here a close connection between a particular investment project and the foreign exchange accruing to it. If this investment had been made by, say one large foreign company, all of the foreign exchange is placed at its disposal. The economy of the receiving country as a whole cannot use it for the finance of additional investment projects. If the latter were undertaken by the government or by private individuals of the backward area, the gains for the whole region would be clearly greater than in the former case. This fact has been recognized by economists of underdeveloped countries long ago, but it was not until recently that it became also generally accepted by economists of advanced countries.

After the war, when the development consciousness had grown even on the part of the advanced nations, an international lending organisation, the International Bank for Reconstruction and Development (IBRD) was set up to facilitate foreign borrowing on the part of firms in underdeveloped (and war devastated) countries. The type of lending operation the IBRD made possible was clearly a step forward in the direction of the development of backward areas where the initiative is now taken by these countries themselves, rather than by advanced countries seeking new outlets for their capital funds.

But in one sense, the principles embedded in the charter of the IBRD still adhere to traditional concepts of private foreign investment. Before going into this we should perhaps

mention here that no exhaustive discussion of the IBRD is attempted here. We will also have to keep in mind that the positive aspects of the Bank are that it facilitates indirect, or portfolio, private foreign investment. As pointed out in the discussion above, this is more desirable on the part of underdeveloped countries than direct foreign investment because secondary multiplier effects work themselves out within the country where the investment is made and are thus conducive to further expansion.

We should note that we can regard portfolio investment as superior to direct foreign investment only when we put emphasis on the multiplier effects. With respect to the amount of foreign exchange proceeds made available by the two types of foreign investment, the result is less conclusive. Portfolio foreign investment constitutes a fixed foreign exchange drain to cover interest and dividend payments. Direct foreign investment, on the other hand, must make profits before it can burden the exchange reserves, and usually they make profits by earning foreign exchange.

From the point of view of overall economic development it would be desirable to have the total "pool" of foreign exchange reserves available for the developing economy as a whole, a point which we shall try to sustain further below.[44] The IBRD, however, still adheres to the principle of linking foreign exchange

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44. International Bank for Reconstruction and Development. Fourth Annual Report, 1948-1949.

requirements to particular investment projects. Of course as a mediator between private lenders and borrowers the Bank could not conceivably abandon this principle. After all, it's main function is to guarantee the lender that he will be repaid and will have his loan serviced in his own currency. Consequently the Bank is more or less forced to link foreign exchange requirements to a particular investment project.

So far the practice of the Bank is perfectly sound within the framework of what the functions of the Bank are conceived to be. It appears, however, that the Bank does not clearly realize the limitations vested in the nature of its organisation with respect to overall economic development. The Bank argues in its Fourth Annual Report, in connection with the scarcity of domestic capital in developing countries, that "external expenditures are only a part, and usually a minor part of the cost of a development project; the remainder must usually be derived from sources with the country concerned".[45] The Report goes on to say that providing finances is a necessary, but not sufficient condition for economic development. In order to be effective, it has to go hand in hand with well worked out plans for development.

All this sounds very convincing, and is actually no more than a restatement of generally accepted views. Upon closer inspection it seems, however, that the Report reveals

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45. IBRD, op.cit., p. 9, 10.

between the lines a conception of how capital is formed with which we cannot agree. A.E. Kahn[46] must receive credit for focusing attention on this rather hazily expressed point in the report of the IBRD. He makes the quite valid observation that what the Report obviously has in mind is the notion that economic development has to come largely from "on-the-spot" expenditure[47], using to a great extent domestic factors of production (e.g. labour) and local raw materials. Foreign financing, according to this school of thought, is limited to the role of providing finished machinery once a plant has been erected. If we accept this argument, we have to envisage fairly narrow limits within which foreign financing may play a part in economic development. Strangely enough, this view enjoys wide acceptance.[48]

There seems to be a misunderstanding at the root of the statement on the validity of which the IBRD bases its position. Apparently, there is a confusion about two different meanings of the word "capital". a) It may be used to describe physical capital goods, and in this sense the IBRD statement is quite correct. b) It may also be used in a more general sense to mean savings or purchasing power resulting from income not

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46. A.E. Kahn: "Investment Criteria in Development Programs". Quarterly Journal of Economics; Vol. 65, Nr. 1, February 1951, p. 48.

47. Term used by N.S. Buchanan in; International Investment and Domestic Welfare. New York, 1945.

48. The role of foreign capital in economic development will become clearer in the next chapter.

spent on consumption. The latter interpretation goes back to N.S. Buchanan[49] who maintains that foreign finance does not necessarily have to mean the supply of physical capital goods. He holds that purchasing power abroad lends itself very well to the construction of "on-the-spot" projects through indirect assistance in the nature of "grub-staking". The main criteria for private foreign investment have to be profitability and the possibility of repayment in the case where foreign loans were used. But that is not necessarily restricted to the supply of foreign "capital" in the former (a) sense. Mere "grub-staking" may be just as much or even more profitable. If foreign finance were limited to capital imports as described above under (a), the scope for economic development would be seriously narrowed.

As we have seen in connection with the Bombay Plan, often substantial investment in certain basic industries, such as power, transportation, etc., figure quite predominantly within an industrialized economy. But this kind of investment, although of such importance, would hardly qualify for the foreign loans necessary to the import of capital in the (a) sense. It is usually quite capital intensive, often of only low or even negative returns, at least in terms of direct marginal productivity, while it's indirect marginal productivity

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49. N.S. Buchanan, op.cit., Ch. 6, p. 95.

for the economy as a whole, its social marginal productivity[50] is likely to be quite high.

If this kind of lending policy on the part of the IBRD were maintained also in the future, it could very well facilitate the advancement of investment in sectors - such as light manufacturing, at the expense of basic industries, this would result in a onesidedness of expansion similar to that of traditional foreign direct investment. To the extent that domestic savings are insufficient for the finance of capital intensive, low productivity projects, resort must be had to inflationary domestic finance. And that in turn will strain the country's foreign exchange reserves through an increase in the demand for imports. We can therefore conclude that the predominance of foreign finance policy as followed by the IBRD may in the end strain rather than alleviate a country's balance of payments position.

If we want to avoid undue criticism of the IBRD, we have to realize that the Banks attention after World War II was quite naturally directed mainly towards the reconstruction of war devastated, advanced countries. Here the difficulties pointed out above would not be nearly as important. As reconstruction comes to an end and development moves more into the foreground, the shortcomings of a policy linking foreign exchange requirements to specific investment projects are

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50. Term used by A.E. Kahn: op.cit., p. 39.

more and more recognized.[51] The Fifth Annual Report of the IBRD, for instance, states that it now makes a distinction between two types of foreign exchange expenditure in connection with a development project: "One, the direct cost of the imported equipment or services used in the project, the other, indirect foreign exchange expenditure resulting from the fact that local expenditure on labour or domestically produced equipment will usually give rise to an increased demand for imported consumers goods".

This statement shows a clear recognition of the need for indirect foreign finance as discussed above.[52] There

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51. To avoid misunderstanding we should clearly distinguish between direct and indirect foreign investment on the one side, and direct and indirect foreign exchange requirements on the other. Direct and indirect foreign investment refer to portfolio investment and the actual construction of plants in the receiving country by a parent company, respectively. Direct foreign exchange requirements refer to the foreign exchange requirements of a particular construction project, e.g., for the purchase of machinery from abroad necessary for the operation of the plant. Indirect foreign exchange requirements refer to increases in imports owing to higher incomes as created by new investment. In other words, this latter category covers the imports of those members of the community whose incomes have increased through the investment. There is no longer a direct link between imports and a particular investment project (Indirect foreign exchange requirements).

52. In a later section of the same report the Bank states that it "..recognizes that a country may be in such a position where it's domestic savings are reasonably fully employed in productive investment and where the most advantageous kind of additional investment for it to make would be in such projects as roads, irrigation, or housing which call primarily for expenditure in domestic currency. If this investment is likely to lead in a few years to a correspondingly higher level of domestic savings, the provision of foreign exchange to finance the indirect foreign exchange requirements would serve to tide the country over in the period of expansion without inflation. Provided that the expansion of investment activity is in line with the natural growth of the country, a loan for this purpose would generally be justifiable".

is also one case on the record where this new principle has been applied. The Bank has recently given assistance to the government of El Salvador in the flotation of bonds issued by the Rio Lampee Commission to finance local currency expenditure of a hydro-electric project for which the Bank had granted a loan to cover the foreign expenditures involved. But, the Bank points out, such a loan is only permissible under "exceptional circumstances". It grants that there is some theoretical validity to the claim that such lending operations are sound, but the Bank's practice is still to concentrate on projects with direct foreign exchange requirements.

In summary of the present argument we can say that the traditional pattern of private foreign financing definitely show an evolutionary tendency to become more beneficial to the whole economy of an underdeveloped country. But in its present stage private investment is still not as useful as it could conceivably be. A large scale development scheme calls for large scale synchronized financing. Private investment, as it is forthcoming through the assistance of the IBRD will probably remain only of supplementary value to a complete development scheme.

As far as a development project is concerned, we can see in connection with the Bombay Plan that specific and very large foreign exchange flows are needed over specific periods of time in order to guarantee the smooth working of the scheme. A sudden drying up of foreign lending during the planning period

would be disastrous, and investment up to that point, with millions of dollars, could go to waste. It is therefore quite essential to guarantee the continuity of any foreign exchange flows made available.

That this goal will be ever achieved through private lending alone, even with the assistance of international institutions like the IBRD, is most unlikely. It is rather more probable that any development scheme of major proportions, such as the Bombay Plan for example, will have to turn to foreign governments, mainly to the U. S. government, to secure the required continuity of foreign capital.

CHAPTER V

Allocation of Investment and Indirect Foreign Exchange Requirements

We have criticized the policy of the IBRD for concentrating on loans covering direct foreign exchange requirements only, and we have tried to establish the superiority of loans that also cover indirect foreign exchange requirements. With respect to the required degree of continuity of foreign exchange forthcoming, we have concluded that emphasis should be given to inter-government borrowing. This is especially true since, as the present line of argument purports to show, indirect requirements of foreign exchange are likely to be of great magnitude. Here it is the direction of investment within a country, as well as the types of financing chosen which greatly influence the indirect foreign exchange requirements. This point has been mainly treated by two authors, J.J. Polak[53] and N.S. Buchanan[54], whose postulates we shall now consider.[55]

The problem at hand is the following: An underdeveloped country embarking on a development project faces essentially two types of foreign exchange problems. We have

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53. J.J. Polak: "Balance of Payments Problems of Countries Reconstructing with the help of Foreign Loans". Quarterly Journal of Economics, February, 1943, p. 208.

54. N.S. Buchanan: op.cit., Ch. 6.

55. Reference is made in the following mainly to Polak who was the first one to present the concepts involved here.

called one the direct foreign exchange requirements, resulting from the actual import of machinery etc., for the construction phase. The other, which we called the indirect foreign exchange requirements, results from increases in income generated by the original expenditures on investment working through the income multiplier in combination with the marginal propensity to import.

What we shall attempt to deal with is the question: "How much can be borrowed from abroad for a given volume of investment without endangering the solvency of the debtor country, either during the period of construction or during the period of operation of this investment?"

As we stated before, in the case of a country with extreme scarcity of capital, extensive development appears to be possible only with capital imports from abroad. These capital imports, however, include more than actual imports of capital equipment from abroad. We shall use the term here in a wider sense, meaning the process of making available additional purchasing power from abroad. The physical form which these capital imports take may be consumption goods as well as capital goods proper.

The suppliers of these foreign exchange funds may be either private lenders or foreign governments, or a combination of both. The nature of the source, whether private (e.g. bond issues floated abroad by industrial companies, banks, etc.) or public (intergovernment borrowing) is only of importance

with respect to the guarantee of continuity of the flow of foreign capital.

Although a government as a creditor cannot a priori be considered more sound than private individuals, it is conceivable that loan arrangements between two governments can successfully provide a certain constant amount of foreign exchange over a period of time, even under temporarily adverse conditions. If foreign exchange is forthcoming from a great number of private lenders, there is much less guarantee for the continuation of a constant flow of foreign exchange annually, since even a minor recession in the lending country is likely to entail a sharp decrease of private funds made available to development.

In order to forestall serious setbacks of the development project which relies heavily on private foreign funds, the political climate making possible private lending must be sustained throughout in order to prevent sudden and unexpected changes in the flow of foreign capital. Such changes could very well occur if for instance a depression were to spread in the lending country, or if there were any substantial changes in the degree of protection in the countries concerned. Furthermore, for the sake of simplicity we shall assume that, as new exports are made available through the investment, they can all be absorbed by the world market.

Let us start with the consideration of the construction period. The question is: "How much expansion can go on for a given volume of foreign borrowing? Do investment ex-

penditures, as far as they are not financed by real domestic savings, have to be equal to foreign borrowing?" We can answer this by following the payments stream which has become income to the factors of production engaged in construction. Barring inflationary bidding for existing goods and services (no additional goods become available during the construction process), the newly created income will either be saved or become demand for imports. For the sake of simplicity we assume that the marginal propensity to import comprises consumption goods as well as investment goods.

If the marginal propensity to consume is equal to unity, all money put into circulation through the investment expenditures will in part immediately, the rest eventually drain away as payments for imports. In such a case, the rate of expenditures on investment projects should not exceed the rate of foreign borrowing. But that is not likely to be the case even in countries with a very low standard of living. We can expect therefore that for the normal case with values for the marginal propensities to consume and to import smaller than one, induced imports will fall short of the rate of investment. Or, in terms of a numerical example:

mpm = $\frac{1}{4}$	L = 1
mpc = $\frac{3}{4}$	I = 2

where "L" is the amount of foreign loans, and "I" the credit expansion for investment purposes. Mpm and mpc refer to the marginal propensities to import and consume respectively.

All of I is spent, thus becoming income directly to the full amount. The ultimate increase in y, through the working of the multiplier k, will be $\Delta y = 4$. (y = Income)

$$\text{For } k = \frac{1}{1 - \text{mpc} \neq \text{mpm}} = \frac{1}{1 - 3/4 \neq 1/4} = 2$$

$$\Delta y = I \cdot k = 2.2 = 4.$$

Since mpm = 1/4, 1/4 of Δy will be demanded in the form of imports which equals one. That also is the amount of foreign exchange available (L = 1). The ratio of investment to foreign exchange available in this case is 2/1, which is the "maximum expansion ratio".[56]

It appears that in the cases of extensive foreign borrowing after World War I the rationale behind the maximum expansion ratio was not clearly recognized. At that time the reconstruction programs of countries such as Austria and Hungary were planned in such a way that the government deficit incurred for the expenditures on investment projects was equal to the amount of foreign loans made available. Since the values for the marginal propensities to consume and to import were below unity, the volume of foreign loans tended to be too large for a given level of investment expenditures. Although this may not necessarily entail harmful repercussions, the extent to which reconstruction was actually possible for a given amount of foreign loans was not fully utilized, and

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56. This example is of course true only for the simplifying assumption that there are no "foreign repercussions" on exports.

servicing the debt was unduly burdensome.

Foreign lending for development programs, provided all the foreign exchange is not withdrawn immediately, would lead to further expansion of domestic investment, even if the government pursued a neutral monetary policy instead of actively stimulating further domestic expansion. The recipients of foreign exchange will usually sell it to the banking system for domestic currency to finance their investment. The banks will have to part at least with some of the foreign exchange proceeds to the extent that domestic investment leads to increased demand for imports. The rest, however, will improve the liquidity position of the lending institutions, thus making possible further credit expansion.

While increased liquidity in an advanced country may lead to further expansion only incidentally, in the case of a country suffering from acute capital scarcity it is most likely that all the additional reserves will be utilized. For a given amount of foreign exchange which is actually available for reserve increases, there is no automatic guarantee that the ratio of

$$\frac{\text{investment financed by foreign loans}}{\text{foreign proceeds}} \quad \text{to} \quad \text{investment financed by the banks}$$

will not exceed the maximum expansion ratio. This danger is especially imminent because the banks may not be aware of the possibility of further import leakages. They consider in connection with credit expansion only their reserve ratio, say

20 per cent, and any foreign exchange still available after a "reasonable" time. That would lead to an expansion of credit four times the amount of the balance of foreign exchange proceeds.

It appears that such an expansion possible in excess of the maximum expansion ratio, may lead to disastrous consequences if additional demand for foreign exchange comes due conceivably after a considerable time lag.[57] If such a situation could not be remedied by immediate foreign loans, the banks would have to enforce a very harmful contraction of credit, leading to greatly reduced investment, or perhaps even disinvestment. It is highly questionable whether the private credit mechanism could, and should, be left to its own devices. A central authority may have to control credit expansion in such a way that, for given values of the marginal propensities to consume and to import, the maximum expansion ratio is not exceeded.

We come now to a more important aspect, and as we shall see, a more problematic one, in connection with expansion at home and capital required from abroad. So far we have been concerned with capital inflows, investment, and the balance of payments problems it may produce. When these

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57. Increases in income will not immediately lead to increases in imports. And where the demand for imports becomes effective, a certain time will elapse before newly ordered goods actually are shipped and reach the consumer. And then there may still be a payment lag for goods received if the buyer had been granted credit by the foreign seller.

investments are made, however, they will, as Polak pointed out, lead to new problems. It is not only the total extent of investment which creates foreign capital requirements, but also the direction of the investment and its subsequent operation. In his approach to the problem, Polak considers three different types of operation which "for convenience"[58] he associates with three different types of product.

(1) Goods[59] additionally sold for export, or sold on the domestic market replacing goods previously imported; (2) goods sold on the home market replacing similar goods previously sold on the home market, and goods sold abroad replacing similar goods previously sold abroad; (3) goods sold on the home market in addition to those previously sold, and in excess of the increase in demand owing to the rise in incomes. We shall consider each of these in turn.

(1) Goods additionally sold for export, or sold on the domestic market replacing goods previously imported. Any investment in this sector will in its operational phase add to the amount of foreign exchange available to the extent of the value of the commodities produced. This, however, is only a gross addition. These additional exports will create income for the factors of production engaged in the industry which will lead through the familiar multiplier process to an in-

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58. We shall see below that this "convenience" unfortunately glosses over some crucial difficulties.

59. Including services.

crease in income and thus in imports. The latter could, for the hypothetical values used above, use up about 50 per cent of the gross foreign exchange revenue. We would therefore get a net value for the additions to the foreign exchange available amounting to about 50 per cent of the original proceeds from exports.

(2) Goods sold on the home market replacing similar goods previously sold on the home market, and goods sold abroad replacing similar goods previously sold abroad. The type of investment in this sector would be mainly for the purpose of large scale replacement of obsolete capital and capital in run down condition. The latter would perhaps mainly apply to advanced countries, particularly in Europe after the Second World War, while the former would be of primary significance in underdeveloped countries. Here the state of technique used in production is usually far below that used by advanced countries: Here it would be mainly the task of applying modern techniques to the production process which uses additional capital.

Investment in this direction, both by existing and by newly created firms for the production of commodities similar to those already produced, is, for example, envisaged in the Bombay Plan. Most of this investment would be in the consumption goods sector. It may result in somewhat lower prices owing to the economies of large-scale production or, if the commodity is of improved quality, in somewhat higher prices.

According to Polak, and we shall disagree with him in due course, it is, unlike the previous case, indeterminate whether or not the actual volume of output increases. Unless there is an increase in demand in other industries, there is no reason to expect the volume of goods produced to go up. The point here is that, as we saw in case (1), investment in itself does not expand output, through increases in sales to consumers outside the system. If output expands, it is rather due to an increase in demand which in turn results from increases in income in other sectors of the economy. By the same token, it cannot be predicted whether more, less, or the same amount of labour will be used. In general terms, investment of this type has to be labelled neutral with respect to its operational aspects and consequently with respect to its effects on the foreign exchange position of the country.

(3) Goods sold on the home market in addition to those previously sold, and in excess of the increase in demand owing to the rise in incomes. A case in point would be investment to produce durable consumers' goods which are sold by means of an extension of consumers' instalment credit. Or investment by a municipality in capital intensive projects, such as public utilities and transportation, without covering this expense out of taxation. The characteristics of type (3) investment therefore are that it tends to induce imports through an increase in disposable money income and thus impairs the foreign exchange position of the country.

Polak concludes from the foregoing that, given approximate values for the marginal propensities to consume and to import, it can be deduced whether an overall investment project will result in a net export surplus or a net import surplus. In other words, operation of type (1) investment may yield foreign exchange up to 50 per cent of the value of its output, and the operation of type (3) investment may yield an import surplus amounting to 50 per cent of the value of its output provided that the operation of type (2) investment is zero. It follows that in order to avoid balance of payments difficulties, Type (3) investment must not be more than 50 per cent of the total when type (2) is zero, and if the latter is positive, it must not be in excess of $\frac{1}{2}$ [100% - the share of (2)]. And since the share of (2) may figure quite prominently in a development scheme, severe restrictions have to be imposed on type (3) investment.

This is the core of Polaks thesis which has found so wide an acceptance in recent literature[60]. Notwithstanding the originality of the argument, there are certain shortcomings to it which force us to modify at least some of the conclusions drawn from the original argument.

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60. Among those who have accepted Polaks analysis in principle are N.S. Buchanan, as already mentioned, and P.T. Ellsworth: The International Economy, New York, 1950. Ch. 29. A.I. Bloomfield: Capital Imports and the American Balance of Payments 1934-1939. Chicago, 1950.

It should be noted that Polak no longer is concerned with the effect of foreign capital requirements for particular projects on the balance of payments position of the investing country. He is concerned with any investment carried out within its borders, whether financed by foreigners or by nationals. He also tries to prove, however, that investing countries will have to shun type (3) investment as much as possible, and, more generally, that any increase in income, regardless whether caused by the operation of type (3) investment or type (1), will result in import leakages. We shall try to show now that, in connection with the multiplier, some oversimplification, and, in connection with type (3) investment, a misconception, appear to be involved.

Much of the validity of Polak's argument depends on whether or not he can use without qualification the traditional multiplier theory in combination with the marginal propensity to consume. He states that he is: "fully aware of the valid objections which can be raised against this method in general. The marginal propensity to consume is not a constant, neither is the marginal propensity to import. The magnitude of both depends on a host of special circumstances. The geometrical progression over time produced by dynamic multiplier analysis seems extremely appropriate for the subject under consideration. Investment increases, money income expands, consumption and imports rise".

Perhaps this statement has some justification where advanced countries reconstructing after the war are concerned. But this is not the place to show that. In the case of underdeveloped countries, however, it is unfortunate that Polak ignored the warnings voiced against the use of a simplified multiplier. It is conceivable that investment may yield additional products for domestic consumption and increase national income without making additional money income available for imports. It is also conceivable that such investment may increase money income as well as real income without necessarily increasing imports.[61]

First, it has been pointed out by Kahn that in underdeveloped countries it is a widely observed phenomenon that increases in output (especially in agriculture) are often consumed by the factors producing them without ever entering the market. In that way real income goes up without an increase in monetary distributive shares. Clearly, in such a case the principle expressed in Polaks statement above must be regarded as inapplicable.

Second, where an increase in real income is accompanied by an increase in money income, some lowering of prices can be expected if the former increase is of greater magnitude than the latter. But falling prices may even lead to a reduction of imports. Such production for the domestic market would, it appears, apply to what Polak termed goods

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61. A.E. Kahn: op.cit., p. 43.

forthcoming from type (2) investment. We recall that Polak maintained here that it was inconclusive whether prices would go down for a given output, or whether output would increase. The investment referred to is, according to Polak's own account, that which replaces worn out equipment and applies more modern production techniques.

Leaving aside the more anthropological problem of actually educating illiterate people who still use century old techniques, the substitution of modern for medieval techniques cannot but be of enormous consequences to productivity. In the light of such revolutionary "innovations" Polak's reluctance to assume increases in productivity seems quite unreasonable.

If investment of type (2) which would seem - according to the way it is defined - mainly in agriculture and light consumption industries, did not result in productivity increases, there would not be much point in employing any additional capital at all. And such increases in productivity, as it will be shown below, will more likely than not lead to the reduction of certain imports. Viewed in this light, type (2) investment comes so close to type (1) investment that the line of division between the two becomes almost indistinguishible.

So far we have dealt with cases where an increase in real income is accompanied by an increase in money income, and where the former increase is greater than the latter. But even if increases in real and money incomes are the same,

so that prices can be maintained under new output, it still does not follow of necessity that imports will have to go up. Kahn attempts to show this with the following illustration. Let us suppose that the factors of production employed to produce the additional goods (call them F) are paid in the initial stage by money created through bank credit expansion for this purpose, such that the additional money income is sufficient to maintain prices for the new level of output. And let us further suppose that the additional purchasing power of F is not matched by an equivalent reduction in the earnings of other factors. Under these assumptions, we can expect that at least part of the additional purchasing power will become demand for imports.

However, after the initial stage of original finance, F is dependent for further income on the sale of the goods produced to other income recipients, say G. Supposing that the investment is undertaken by the government, which supplies its services free of charge, G become not voluntary purchasers but tax payers, provided that the government does not finance its operations with deficit spending. Or, if the government or G purchases the goods, but not in an inflationary manner by reducing their customary savings, (or activating idle balances), or by borrowing, F's expanded disposable money income must be matched by an equivalent diversion of purchasing power on the part of G from goods previously bought.

This is the point where we part company with Polak.

He assumes that a constant proportion of any increase in real income will leak away partially into imports.[62] It seems to be more realistic, however, to maintain that it is indeterminate whether the net effects of additional purchases on the part of F will lead to increased imports or to purchases from a third party in the domestic economy, say H. It is also indeterminate whether G's diversion of purchases from imports or from H's products to F's products will increase or decrease imports, or keep them at the same level.

Whether the net change in the marginal propensity to import for the economy as a whole turns out to be negative or positive depends on whether F's or G's propensity is greater. Under the assumptions made here, F's purchasing power after the initial stage is only increased through an appropriate decrease in the purchasing power on G's part. Now if G has a higher marginal propensity to import than F, the net effect of this transfer is a decrease in the marginal propensity to import for the economy as a whole.

For the present assumptions, the yield of investment comprising additional goods and services for domestic consumption and the increase of factor income going with it on the one side, and increased national expenditure for these goods (as made by purchasers or taxpayers) on the other, are equivalent and mutually interdependent. As a matter of fact,

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62. Polak maintains that mpm = .25 would be a reasonable assumption for the average value.

these additional goods are what makes up the increase in real national income, and the increase in national money income takes them off the market. This means in more general terms that any increase in gross national product resulting from an expansion of productive capacity in the economy requires a proportionate increase in total outlays on the part of the community, if prices are to be maintained.

We should note here that the increase in money income referred to above should increase the total quantity of money in the economy such that the average propensity to spend on the part of the community can rise proportionately to the increase in gross national product. In our analysis this requirement is met if the factor income accruing to F, from G's diverted expenditures, is all spent. That would imply that F's marginal propensity to consume is unity. The distribution between spending and savings need not change, for the increase as a whole would so absorb the additional output, after the initial injection of money. But since F's marginal propensity to consume is not likely to be unity even in an underdeveloped country once it passed the initial stages of a development project, a decrease in savings may be allowed on the part of G (offsetting F's enhanced savings) and still no multiplied expansion of national income with resulting increases in imports will occur. If G's savings were not reduced, F's enhanced savings could be offset by additional investment or government expenditures.

The important point is that none of these alternatives, whether the incremental output is absorbed in part or completely, allows for multiplied expansion of national income. It does, not follow of necessity, therefore, that we have to expect an increase in imports. In the case discussed here, we can expect an increase with certainty only if the marginal propensity to import goes up. But that is clearly not the point Polak was trying to make.[63]

This criticism of Polaks unqualified use of the multiplier analysis brings us to the second main point of criticism; viz. that his type (3) investment includes a misconception. We recall that Polak associates three different types of investment with three different types of product. Our contention is that he is quite justified in doing so with respect to type (1) investment from whose operation additional exports and import replacing commodities are forthcoming. Here it is quite clear that a certain type of product affects the foreign exchange position of a country.

The same does not hold true, however, for type (3) investment. Here, as we now proceed to show, it is not the type of product, but rather the method of financing the operation that is reflected in the foreign exchange position of a country. Polaks definition[64] seems to imply, in terms of

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63. See also A.E. Kahn: op.cit., p. 45.

64. J.J. Polak: op.cit., p. 217; see also p. above.

the above analysis, that the additional demand for these goods does not come from a diversion of expenditures but rather from a decrease in national savings. Then of course we would have direct multiplier effects weakening the balance of payments. It is unfortunate that this point has been so widely neglected in the literature of the type (3) concept. Clearly, if Polak is right, the only real threat to the balance of payments is inflationary finance.

In summary of the present argument we can now say: Type (1) investment and that part of the original type (2) investment which reduces imports affect the balance of payments by virtue of their product nature. Since type (2) does not replace goods previously imported, it is at least neutral with respect to the balance of payments. Apparently, the nature of type (3) product is very similar to (2) in that it is a truly "unexportable" commodity. But its unfavorable effects on the balance of payments are not due to the nature of the product but due to the method of financing its sales.

Thus we may redefine Polaks categories in the following manner: (1) includes also most of what Polak had classified under (2), and in as far as the operation of type (1) does not lower national savings, we would not expect to have import leakages, as Polak does. The redefined category (2) would now include those goods which do not add to foreign exchange available, but contribute to gross national product without impairing the foreign exchange position through a lowering of

national savings. And category (3) would include those projects which are clearly not exportable (e.g. schools, transportation, public utilities, etc.) and the operation of which is made possible either through a lowering of national savings, or through inflationary credit creation (allowing those who already consume all of their disposable income to exceed this limit). In both instances we would have direct increases in imports.

Such increases in imports through an increase in the quantity of money over and above what is necessary to absorb additional output may come about in the following manner. Part of the additional money will directly be used to buy foreign exchange for additional imports. But even that part which is spent domestically will drive up prices, increase money incomes, and will thus lead to additional imports eventually. Assuming a constant level of prices abroad and a constant rate of exchange, foreign goods become relatively less expensive. We can safely deduce from such conditions that imports will increase since the demand for imports is likely to be fairly price elastic.

The exact amount of the increase in imports depends on the price as well as the income elasticity of the demand for these goods relative to the prices of domestic goods and to changes in money income. If the demand for imports were highly inelastic, we could not expect an increase in imports, a very unlikely case, especially in underdeveloped countries.

By the same token, the balance of payments will be adversely affected through a decrease in exports. But again we will have to modify this statement with reference to the elasticities involved. Given a constant rate of exchange, the prices of export goods in the foreign markets will go up.

The elasticities of demand on the part of foreign buyers may be such that the increase in prices will be offset by a decline in demand in such a way as to leave the total foreign exchange available to the country unchanged. Or, if the foreign demand is more inelastic than that, prices may rise more than demand diminishes and foreign exchange proceeds go up. But if the elasticity is greater than in the first (and in the second) case, a rise in the prices of export goods in the foreign market will call forth a more than proportionate decline in demand, and foreign exchange proceeds will decrease.

It is quite obvious that the latter case is the more realistic one. With a few exceptions[65], we can say that even where the demand in a particular country A is highly inelastic, the aggregate foreign demand facing country B, the supplier of commodity X, is often highly elastic. This is so because of the high degree of substitutability that can be found in

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65. Such as manganese for steel production where it can happen that one country is the sole or the main supplier. Here of course aggregate foreign demand facing that country would be highly inelastic.

international trade. If B's price for commodity X goes up in the face of a highly inelastic demand for X on the part of A, A will be induced to take its trade to country C which also supplies commodity X, but at a slightly higher price than B's original price.

After this short digression on elasticities of the demand for exports, let us return to the original argument. Polak's claim regarding the adverse balance of payments effects of type (3) investment in combination with his contention that extensive investment of type (2) narrows the limit within which type (3) investment can take place (maximum expansion ratio must not exceed $\frac{1}{2}$ [100% - the share of (2)] leads to the conclusion that investment for the production of domestic goods (type (2)) has to be limited as much as possible. This advice imposes serious limitations on a large scale development project. We have seen in connection with the Bombay Plan that inflationary finance is likely to be of substantial proportions. Imposing severe restrictions on it would seriously slow down the speed with which such a project could be carried on.

There is no doubt that the dangers of inflationary finance are very real, but we cannot follow Polak in his contention that investment for the production of domestic goods would have to be seriously restricted in order to facilitate maximum expansion of type (3) investment, which is inflationary in character. Our contention is, however, that this is

not so. There seems to be a much wider scope for investment, financed domestically or by foreigners, to produce additional goods for the home market. Contrary to Polak, we maintain that this is even necessary for rapid economic expansion.

High values for the propensity to import in underdeveloped countries is due to a great extent to an undiversified, narrow domestic market. Eugene Staley[66] has pointed out that the most effective remedy for a high propensity to import is the supply of additional and more diversified products for the domestic market[67]. We have argued that additional goods can be produced without leading to import leakages. Those in type (2) would directly reduce imports by replacing commodities previously imported. But even those goods which we attributed to type (3) investment may eventually have more indirect, largely immeasurable effects on imports through changes in demand patterns. A greater variety of domestic goods is likely after a certain point to lower the propensity to import.

Undoubtedly, for a development project on the whole, such gains might be easily wiped out by inflationary finance and by decrease in the rate of savings stimulated by new consumption patterns catering to a higher standard of living. But if the government succeeds, say, through taxation, in

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66. Eugene Staley: World Economic Development. International Labour Office, second edition. Montreal, 1945.

67. E. Staley, ibid., p. 173, as quoted by Kahn, op.cit. p. 47.

keeping these two causes within bounds, the change in the net marginal propensity to import may be quite low. In conclusion we can say then that the severe limits which the Polak analysis imposes on an expansionary program err on the pessimistic side.

Before we leave the subject of the direction of investment with respect to the balance of payments, we will have to take up another point which has entered into the literature on underdeveloped countries. It has to do with the problem of how much capital should be employed in an investment project, whether it be financed domestically or by foreigners.

It has been argued by writers like Polak and Buchanan that underdeveloped countries with a great scarcity of capital should concentrate on capital light investments. The rate of capital turnover[68] should be high, or, the same thing, capital intensity should be low. Stated in this form it is a truism, too general to be of much value. In order to evaluate it more properly, we have to analyse the rationale behind it. In doing so - if we may anticipate so much from our findings below - we shall find again that a certain degree of oversimplification and even of misconception is involved.

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68. Defined as the value of annual output over the value of the capital used to produce this output.

According to Polak, it is desirable from the point of view of foreign exchange in connection with type (1) investment to maximize output and thus the rate of turnover for a given amount of capital, or, for a given output of goods, to minimize the amount of investment in order to keep the service of the debt down. On the other hand, for a given volume of investment of type (3)[69] it would be desirable for the same reason to minimize output and thus the rate of turnover. However, for a given output forthcoming from type (3), it would be desirable to maximize the rate of turnover which would again comply with the general principle stated above.

The postulate that, in the case of limited investment funds, it would be prudent to undertake first those investments having a high value of annual output relative to the value of the capital producing that output, appears to be based on dangerous reasoning. It has been pointed out by A.E. Kahn that the adequate criterion for the extent to which capital should be used in certain production processes is not capital intensity, but rather marginal productivity; or, in a more general sense, social marginal productivity. (SMP).[70]

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69. Used here in the meaning as we have re-defined it. It comprises the operation of investment for additional goods for the domestic market whose sales are financed in an inflationary manner.

70. Social marginal productivity is the total net contribution of the marginal unit of capital to gross national product in contrast to that portion of the contribution which may accrue to the private investor, which we call marginal productivity of capital proper.

From the point of view of marginal productivity it is inconclusive whether or not a production process with a high rate of capital turnover makes more efficient use of capital than one with a low rate of capital turnover. This point can be illustrated by a numerical example[71]:

	A	B
Investment	$ 100,000.00	$ 100,000.00
Annual data:		
Output	60,000.00	20,000.00
Depreciation	50,000.00	10,000.00
All other costs	10,000.00	10,000.00
Capital turnover	60%	20%

Here production process A has a rate of capital turnover of 60 per cent, production process B one of 20 per cent. This difference between the two rates merely reflects a higher rate of capital consumption in case A. Barring any significant elements of risk and uncertainty there is no a priori reason for preferring case A to case B.

In a general way, the rate of capital turnover may, however, have some validity as a guiding principle for investment in as much as it is related to marginal productivity of capital. The more scarce one factor is relative to the others, the higher it's marginal productivity is likely to be. Consequently, an underdeveloped country should generally concentrate on labour intensive production with a higher average

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71. A. E. Kahn, op.cit., p. 39 footnote.

labour capital ratio than can be observed in advanced countries.

If there actually is a choice between an investment with a high rate of capital turnover and one with a low rate of capital turnover, the decision does not necessarily have to be made in favour of the former. We had discussed in connection with the Bombay Plan[72] that certain capital intensive projects have to be made even where capital is extremely scarce and labour extremely abundant.[73] The increase in external economies, or in Kahns terms, the social marginal productivity, of such projects may be so momentous that their construction is imperative. The problem for a development scheme is where the limit should be drawn for capital intensive projects and to what extent labour intensive methods should be used. The capital intensity criterion does not bring us nearer to any solution. It is only the marginal productivity of capital (and the social marginal productivity) which can indicate the extent of substitution.

In countries with heavy disguised unemployment, especially in agriculture, the transfer costs of labour may be negligible[74]. In such a case any application of capital

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72. See page 29 above.

73. The case where capital is infinitely scarce, in other words where there is no capital available at all; and where labour is infinitely abundant, is unlikely even for the most backward areas.

74. See page 18 above.

to production processes where it would be technically possible to employ labour instead would be wasteful. Or, if for example the purchase of picks and shovels is required before any labour at all can be used, say for excavating work, such capital expenditure would have a very high marginal productivity.

Beyond this initial point, however, capital expenditures on such things as bulldozers and tractors may be wasteful. For the more general case, in order to embark on a full scale development project with the objective of absorbing excess labour from agriculture, heavy expenditures on the training of would-be industrial workers may be unavoidable in order to give them a certain minimum skill necessary for their use in industry. In other words, heavy outlays are necessary before the excess labour force can actually be absorbed by a newly created industry.

It could be argued, and in fact it has been[75], that insofar as there are labour transfer costs, it would be desirable to substitute capital for labour if the outlay on capital would be less than the transfer costs of labour. In other words, labour should be employed only where its costs do not exceed those of capital.

It seems that this line of thinking still stays too much in terms of one particular investment project, or

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75. The argument criticized here was maintained by A.E. Kahn: op.cit., p. 41.

at least in terms of a group of such projects. We have to recall here our original goal for economic development, the increase of average real incomes in combination with a reduction of the absolute extent of poverty prevailing. Average real incomes might be increased if capital is employed where it is cheaper than the transfer costs of labour. But the poverty of the labour force in agriculture will not be reduced that way. Therefore, even where marginal productivity is somewhat higher for capital in the short run, transfer of labour out of agriculture should be undertaken provided that it is technically possible to employ it.

That only apparently violates our marginal productivity principle, since the social marginal productivity of trained labour is likely to be quite high in the long run, especially in the final stages of an industrialisation program. Here the benefits of social marginal productivity should overrule the short run marginal productivity considerations of a particular investment project.

In spite of all this reluctance to use the capital turnover criterion as a guiding principle and in spite of the obvious favouritism displayed towards the marginal productivity criterion, we should not reject the former altogether. With the exception of capital intensive projects of a bottle-neck kind, such as hydro projects and transportation, where the SMP has to remain the guiding principle, the

capital intensity criterion has considerable usefulness as a rule of thumb. In general, owing to the economic circumstances prevailing in underdeveloped countries (e.g. the great uncertainty especially of long run projects) SMP is particularly hard to assess. And as we suggested in our criticism of the Bombay Plan, estimates of productivity increases tend to err on the optimistic side. Considering the fact that the percentage of waste and failure in a development project may be quite high, the less capital becomes exposed to it the better.

Taking the sector of light consumption industries, it is undoubtedly prudent not to impose on an oriental nation too much of a change to what are often new and alien patterns of production. This is apparently one of the points the Bombay Planners had in mind when they committed themselves very little with respect to the nature and direction which the expansion of the consumption sector should take. They felt that great changes in demand will have to be expected under the impact of the various stages of an overall development project. In a society settled culturally in its own ways for so many centuries, changes in demand patterns may be so revolutionary and unpredictable that any investment made too much ahead of time in anticipation of such changes is likely to result in a waste of capital. For that reason fairly quick adaptability to changes in demand is called for in the consumption goods sector; and this can only be accomplished with a high rate of capital turnover.

Summary: In a large scale national development project, financed in part by foreign capital, expansion of investment to produce goods for the domestic market need not lead to a weakening of the balance of payments of the expanding country. On the contrary, increased diversity and a greater quantity of goods in the domestic market is likely to reduce previous imports substantially. In Polaks terminology, most of the production of "unexportable" commodities, considered by him under type (2), actually turn out to be type (1) import reducing commodities. These reductions in imports are not likely, however, to be net, since the accelerated dynamics of an expanding economic system will tend to exert great pressure on the community's propensity to save of the community. But, it has been argued above, much of this danger can be avoided through a prudent monetary and fiscal policy on the part of the government.

The real threat to the balance of payments is not in the actual direction of investment, but in the method of financing, or more specificly, in inflationary financing. And this danger, as we had seen in connection with the Bombay Plan, might easily be of superlative proportions. What schemes like the Bombay Plan allow for in the way of foreign exchange is exclusively regarded as necessary for the initial period of construction as such. No allowance seems to be made for indirect foreign exchange requirements resulting from

large-scale inflationary financing of many investment projects as well as inflationary finance of the sale of their products. Unless the inherent threat to the balance of payments resulting from inflationary finance is clearly recognized by the master minds of a development scheme, very serious, and perhaps disastrous, surprises might be in store for them.

Secondly, with respect to the extent to which capital should be directed into the various investment channels, we concluded that the capital intensity criterion is of help only where it does not conflict with the criterion of social marginal productivity. A policy of a high rate of capital turnover should be adopted in consumption goods industries because this would a) comply with the rule of marginal productivity, b) facilitate the process of absorbing excess population from agriculture, and c) allow for greater flexibility of output in response to changes in demand patterns.

As far as capital imports are concerned, a high rate of capital turnover, minimizing the danger of major failures and waste of capital, helps to sustain the confidence of private foreign lenders. Although we have shown that only large scale intergovernment borrowing will be able to build a solid foundation for an industrialisation program, private investment is unlikely to lose its significance altogether. Once the general framework of economic development has been set, private capital will always be welcome to contribute its share within the overall framework. And furthermore,

in so far as a high rate of capital turnover helps to prevent major failures, it also saves the economy from serious burdens which would be imposed on it if projects financed by inter-government borrowing were to default.

CHAPTER VI

The Mechanism of Transfer and the Terms of Trade[76]

We have so far been mainly concerned with the effects that investment and foreign borrowing may have on the balance of payments. But we have not dealt at all fully with the particular effects that the international capital transfers as such have. In other words, we have almost lost sight of the hero in this plot, the foreign capital on its way from country to country.

An analysis of the impact that foreign capital has on an expanding economy once it enters the domestic sphere is not alone adequate in a discussion of capital imports and balance of payments problems in underdeveloped countries. Problems arise out of the actual transfer of capital and these have been the subject of an extensive and growing body of literature. It is on this literature that we shall base our present argument to complete the picture.

When we now proceed to throw some light on the working of the transfer mechanism, it is not in the way of a digression,

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76. According to Iversen (op.cit., p. 338), the terms of trade were defined by Pigou as the amount of foreign goods that a country can get for its exports, when the sale of the exports and the purchase of the imports take place simultaneously. Or more exactly, the terms of trade is the ratio of exports to imports in physical terms (barter terms of trade).

but an attempt to come to a conclusion about the foreign trade position of a capital importing country as affected by the transfer of funds from abroad. In particular, we shall attempt to single out in the discussion the effects of the transfer mechanism on the terms of trade, and we shall try to answer the question, "to what extent can we apply the traditional transfer theory to underdeveloped countries?"

It is by now generally acknowledged that the classical theory of international transfer stems essentially from David Hume[77]. Although it had received substantial treatment in the hands of Henry Thornton[78] and David Ricardo[79] it was John Stuart Mill[80] who was the first writer to state what we have now come to regard as the "classical" theory in a clear cut and unambiguous form[81].

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77. David Hume: Essays of the Balance of Trade.

78. See Iversen, op.cit., p. 209.

79. David Ricardo: The High price of Bullion. See Iversen, op.cit., Ch. 5, also Viner: Canadian Balance of International indebtedness 1900-1913. (Cambridge, Mass. 1924) Ch. 9.

80. John Stuart Mill: Principles of Political Economy, Book III.

81. Mill himself seemed to have thought that his findings are mainly a line of continuation from Ricardo. But the latter's standpoint with respect to the actual means of transfer (gold as international money as opposed to commodities) differed from that of both Thornton and Hume before him and Mill after him. Mill's ultimate findings are consequently more a development of the argument advanced by Hume and Thornton, rather than Ricardo. Since the difference of opinion between Ricardo and the three other writers mentioned does not pertain to the problem under consideration in this paper, no discussion of it is attempted. For an extensive treatment of this point see: Viner, op.cit., Ch. 9, pp. 191: and also Iversen, op.cit., Ch. 5, pp. 209.

In his discussion of balance of payments adjustments, Mill distinguishes between temporary changes in the rate of exchange which are mainly self-adjusting, and those that call for an adjustment through prices. The temporary disturbances take into account minor fluctuations in the actual quantities of foreign exchange demanded and supplied every day. These fluctuations around the equilibrium rate of exchange vary only within such narrow limits that in the case of an excess of imports over exports a moderate change in the rate of exchange (the price of foreign bills) encourages exports and discourages imports sufficiently to bring about an adjustment[82].

In the case of permanent disturbances of equilibrium, however, a more fundamental adjustment is needed. Mill exemplifies the type of adjustment involved for two barter as well as two money economies. In the barter case the transfer can be affected only if the remitting country induces foreign buyers to absorb more of its exports by offering them on cheaper terms or, which is the same thing, by paying dearer for foreign commodities. Thus the capital exporting

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82. Mill also suggested that the adjustment in the case of temporary disturbances could come about through an extention of short term credit allowing the debtor to postpone his remittance until the balance of trade show an export surplus. Since Mill's analysis usually runs strictly in terms of a rigid quantity theory of money, Iversen (op.cit., p. 199) infers from this statement that here is a first indication of regarding credit as a means of adjustment apart from gold flows.

country's goods sold to foreigners increase by the amount of the remittance while its imports remain the same. Then the international values (physical volume of exports over physical volume of imports) will find such a level that the excess of exports over the former equilibrium quantity (before the beginning of the remittance) becomes a permanent one.

Essentially the same holds true if the two countries involved use money as a means of exchange. It is stated by Mill in the following famous passage: "Commerce being supposed to be in a state of equilibrium when the obligatory remittances begin, the first remittance is necessarily made in money. This lowers prices in the remitting country, and raises them in the receiving. The natural effect is that more commodities are exported than before, and fewer imported, and that, on the score of commerce alone a balance of money will be constantly due from the receiving country to the paying country. When the debt thus annually due to the tributary country becomes equal to the annual tribute or other regular payment due from it, no further transmission of money takes place; the equilibrium of exports and imports will no longer exist, but that of the payments will; the exchange will be at par, the two debts will be set off against one another, and the tribute or remittance will be virtually paid in goods. The results to the interest of the two countries will be as already pointed out: the paying country will give a higher price for all that it buys from the receiving

country while the latter, besides receiving a tribute, obtains the exportable produce of the tributary country at a lower price".[83]

This process of adjustment thus includes the following stages[84]:

(1) The remitting country experiences a rise in the price of bills in the receiving country up to the gold export point. Conversely, in the receiving country, the price of bills on the remitting country will fall to the gold import point.

(2) Gold flows from the remitting to the receiving country.

(3) Prices fall in the capital exporting country and rise in the capital importing country thus leading to:

(4) An increase of imports (and a reduction of exports) in the receiving country, and an increase of exports (decrease of imports) in the remitting country.

(5) This gold flow and the change in relative price levels continue up to the point where the import surplus of the receiving country (and the exports surplus of the remitting country) become equal to the amount of payments transferred.

After this final stage, the relative prices settle at their new levels and the rate of exchange returns to its

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83. Mill, op.cit., Bk. III, Ch. 21, p. 421.

84. See also Viner, op.cit., p. 146, and Iversen, op. cit., p. 201.

original position. The result will be both a permanent redistribution of gold resources between the two countries and a permanent change in the barter terms of trade in favour of the capital importing country.

It may be noted that Mill's argument is logically conclusive only on the assumption that there is no shift in the demand. Mill maintains that the consumers of the capital receiving countries will in fact not consume more for a given price. The adjustment in the balance of payments comes about only through a relative change in the export and import prices which induce more imports (whose prices have fallen in the receiving country) and reduce exports (whose prices have gone up abroad). These changes in quantities, consequently, are due to a movement along an unchanged demand curve. If that is true, it follows by necessity that the terms of trade turn against the capital exporting country.

This assumption, however, on which the Millsian conclusion with respect to the terms of trade rests, has been questioned as early as 1890 in an article by C.F. Bastable[85]. Bastable does not go along with Mill in assuming that demand will remain essentially unchanged. He claims that the transfer of funds from A to B in the first instance leads to an increase of purchasing power in B. But such an increase in purchasing

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85. C.F. Bastable: "On Some Applications of the Theory of International Trade". Quarterly Journal of Economics 1890, p. 1-17.

power also increases effective demand. Translated into modern terminology, this means that an increase in disposable spending power will lead at least partially to a shift of the demand curve.

Unlike Mill, Bastable feels that owing to the transfer more will be bought by B from A at a given price. And in so far as this increase in demand also leads to additional demand in B for A's products, that fraction of A's loan to B which is spent by B in A will not change the relative export and import prices and will thus leave the terms of trade unaffected. By the same token, exports from B to A are likely to decline to a greater extent than in Mill's model because a decrease in purchasing power caused the downward shift in A's demand curve for B's exports.

Both movements of the demand curves, an upward shift in B and a downward shift in A, result in immediate balance of payments adjustments without setting in motion the indirect adjustment via price changes.

In the light of the accomplishment of modern contributors[86] to the theory of international transfer it is difficult to understand why the literary discussion of the

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86. Bertil Ohlin: Interregional and International Trade, Cambridge, Mass, 1936, Prt V, Ch. 20. R.F. Harrod: International Economics. Cambridge, 1939. Joan Robinson: Essays in the Theory of Employment, Oxford, 1947. L.A. Metzler: "Unemployment Equilibrium in International Trade". Econometrica, X 1942, pp. 97-112. F. Machlup: International Trade and the National Income Multiplier, Philadelphia, 1943, and others.

subject follows until the early 1930's, Mill's assumption of constant demand rather than Bastable's postulates concerning income effects and the resulting shift in demand. Jacob Viner[87] who has written perhaps the most polished restatement of the classical doctrine, adheres in essence to Mill's concept. His work, however, already contains modifications which appear on closer inspection to be inconsistent with the traditional line of argument and which come closer to a more modern interpretation.

The point with which Viner attempts to buttress his position is that a balance of payments adjustment will ultimately be brought about by gold flows and subsequent price changes. He concedes to his opponents[88] that part of the foreign exchange proceeds will be spent directly in the lending country and will therefore not be transferred to the borrowing country. He goes even further by admitting that the funds actually transferred will also assist a direct adjustment of the balance of payments (that is, not through a relative change in export and import prices) since this purchasing power

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87. Jacob Viner: Canada's Balance of International Indebtedness 1900-1913.

88. Mainly Wicksell in the QJE Vol. 33, p. 405, who follows Bastable's original argument in claiming that balance of payments and adjustments are possible without gold flows merely on the basis of a shift in purchasing power. See Viner, op.cit., p. 205.

is now spent by the capital receiving country on goods previously exported, thus making less exports available to foreign buyers.

He maintains, however, there is no reason to believe that the two factors mentioned above, leading to direct adjustments, will be exactly equal to the loan. On the contrary, under reasonable assumptions he feels he can prove that the major part of the loan must be transferred in the form of money. In the absence of changes in prices consequent upon gold movement and special circumstances, Viner claims that theoretically we can expect the borrowers will increase their purchases of foreign goods in the same proportion that they had allocated their expenditure before the loan was made.

Suppose a country imports annually $1,000,000 of foreign goods. It has a domestic production of goods amounting to $10,000,000 for the same period. Of this total, $2,000,000 by value are exportable goods of which equal parts (i.e. $1,000,000 respectively) are exported and consumed domestically. Now the country borrows $1,000,000 for general purposes. For Viner's assumptions, in the absence of price changes, commodity imports will increase by a $100,000, and exports will decrease by the same amount. Eight hundred thousand dollars would therefore have to be taken in the form of gold[89].

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89. In this illustration, total domestic consumption in the absence of loans is $10,000,000 of which one tenth ($1,000,000) consists of import commodities and an equal amount of articles which have an export market.

The validity of this statement depends of course on the contention that out of the additional spending power purchases of the different groups of commodities are made in the same or at least in similar proportions as before the flotation of the loan. Viner believes that this would be so "in the absence of special circumstances". But it can very well be that these "special circumstances" are the rule rather than the exception. Loans, and especially foreign loans, are contracted for specific purposes. A loan granted by a person within the same country can be expected to be spent domestically by the recipient in most of the cases. Foreign loans, however, are often made for purposes requiring extensive purchases abroad.

It has been pointed out by H.D. White[90] that borrowers in the international capital market are often agricultural countries engaged in an expansion of industry. In such a case, although imports may be only a minor fraction of total expenditures, most of the foreign loans proceeds are likely to be spent on foreign capital equipment etc. It has become quite clear in the context of this paper that this is precisely the kind of pattern we have to expect in underdeveloped countries. Foreign exchange proceeds will be used

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90. Harry D. White: The French International Accounts 1800 - 1913. Cambridge, Mass., 1933. See Iversen, op.cit., p. 231.

almost exclusively for capital imports as required by the industrialization scheme. As a matter of fact it is the upward shift in demand for foreign capital equipment due to the needs of a development project which makes foreign loans necessary. Clearly, the ratio of foreign over domestic purchases out of loan proceeds is far higher than the original ratio before the loan. Furthermore, even if the foreign loan proceeds were spent in the way indicated by Viner we still would have to account for secondary income effects[91].

Still adhering to the view that international borrowing raises prices, Viner resorts to an explanation in terms of total purchasing power which could easily be developed into a theory stressing a shift in demand. He admits that domestic expansion financed by domestic savings would mean a voluntary shift of purchasing power from consumer's goods to producers' goods. Although the general price level for the country as a whole would remain unaffected, relative prices would have to be expected to change. And, he continues, if such an expansion is financed by borrowing from abroad, there will be still available the normal supply of consumers' goods with the additional goods and services being supplied directly or indirectly by the lending country[92].

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91. See below, p 136 .

92. Viner, op.cit., p. 249.

Iversen[93] comments on this point that the modern school of thought would have no objection to this. They would only maintain that the case of expansion with foreign borrowing is analogous to the case of expansion with domestic borrowings. However, in the latter case purchasing power shifts within the country while in the former case it shifts in the same fashion between the two countries involved in the lending operation. In other words, here the total purchasing power of the two countries taken together would be unchanged, but there would be a shift in demand from the borrowing to the lending country, just like the shift from consumption to investment goods in the case of domestic borrowing. Consequently the total price level for the two countries taken together need not change. This is of course not the point Viner had in mind. He does not develop this train of thought to its logical conclusion, and revert to his original position.

In this context let us consider Viner's treatment of sectional price levels[94]. He shows that the first results of borrowing will be an increase in demand deposits. That in turn will lead to an increase in the prices of domestic goods and services. Prices of imports, however, will not be influenced substantially through this domestic monetary ex-

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93. Iversen, op.cit., p. 232.

94. The terms signifies the special price level of exports, import, and domestic commodities.

pansion since they are determined by conditions prevailing on the world market. This change of relative price level will entail the substitution effect whereby purchases of domestic goods decrease and those of imports increase.

On the export side, forces will work in the same direction. An increase in purchasing power without an immediate increase in production will lead to increased purchases of goods previously exported. Therefore exports will go down. The export industry will experience a loss of some of its labour force which will be attracted by higher wage rates to new investment project for which foreign borrowing has been undertaken. And since there will be a rise in the domestic prices that determine the export industry's costs, rise, this industry will experience a further contraction; for its selling prices are determined on the world market in the same way as import prices, which means that its prices will remain the same even in the face of the higher costs of production.[95]

This formulation is another case in point where Viner - apparently believing that he is still on the same ground as orthodox classical theory - "restates" classical concepts in such a way that he actually rejects what he is trying to prove. It will be recalled that the classical notion of the barter terms of trade clearly depends on the ratio of prices of

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95. Viner, op.cit., pp. 227.

export over import goods. But according to Viner this ratio may remain essentially intact. For him such an adjustment, however, is only effective to a minor extent. It is still the upward movement of the domestic price level which brings about an adjustment. Yet in spite of these modifications of the classical notion Viner feels that ultimately adjustments will come about through changes in the prices of international goods.

He attempts to prove this empirically with the Canadian case where in fact export prices did rise relative to import prices.[96] Upon first inspection it seems that these relative price changes were much less than should be expected. This is due, Viner points out, to the high elasticity of world demand for Canadian goods caused by the fact that most of Canada's export goods are also supplied in sufficient quantities by other countries. Canada at that time was the predominant world producer of only two or three minerals, and these did not bulge very large in her total exports.

So far we have been discussing the classical concept of adjustment under gold standard conditions. Strangely enough not until Taussig[97] was attention focussed also on the process of adjustment under inconvertible paper currencies. In his analyses of this problem, Taussig points out that the

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96. Viner, op.cit., pp. 295.

97. F.W. Taussig: International Trade, New York, 1936 (1st ed. 1927).

chief difference between gold standard and paper currency adjustments is that in the latter case money of either country can no longer enter into the circulation of the other country. Purchasing power can no longer flow in the form of money, goods alone can move across international borders. Gold may still flow in the adjustment process, no longer as money, but as a commodity just like tin or copper.

Suppose two countries, the U.S.A. and Great Britain, are in equilibrium domestically as well as internationally. In other words money supply is constant, no inflationary or deflationary tendencies are at work, and at a given rate of exchange exports equal imports. This equilibrium is now disburbed by heavy U.S. borrowing in Great Britain. Borrowing begins abruptly and goes on over several years at a constant rate such that annual remittances from London to New York increase by 25 per cent. If all foreign exchange transactions take place in New York this means that 25 per cent more of Sterling exchange is offered in New York. According to Taussig[98] this 25 per cent increase in Sterling exchange is not met by an increase in U. S. demand for British goods, and consequently no greater remittances are due in London from New York. What this contention amounts to is the now familiar orthodox assumption that in the borrowing country there is no upward shift of demand for the goods of the lending country. Then of course the rate of Sterling

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98. Taussig, op.cit., pp. 343.

must fall with the increase of the supply of Sterling offered in the exchange market.

The next step in Taussig's analysis deals with the effects on commodity trade. Assuming that all transactions are made in the borrowing country's currency, the British exporters now obtain more Sterling for a given amount of dollars received from the sale of their goods. Provided that the supply is fairly elastic, movements of goods from the lending to the borrowing country is stimulated. Conversely, the movement of goods from the receiving country will be checked. U.S. exporters will realize less dollar revenue for a given price of their goods in terms of Pounds.

We have seen in the discussion of the mechanism under gold-standard conditions that domestic prices in the two countries change inversely. In the present case, on the other hand, they can be expected to remain at least initially constant. This follows from Taussig's premise that the quantity of money remains fixed. The stability of domestic prices is regarded as the result of the fixity of the total money income of a population which itself remains the same throughout. This is the point at which conditions a under paper standard differ most drastically from those under a gold standard system. In the latter case the exchange rate cannot go beyond the two gold points while in the former case domestic price levels remain constant but the exchange rate is free to vary.

Prices of imports of course will vary, becoming c cheaper for the U.S. and more expensive for Great Britain; their prices in the importing countries will be changed automatically through alterations in the rate of exchange. Exports on the other hand (in terms of the currency of the exporting country) will experience a temporary fall in the U.S. and a temporary rise in Great Britain. Eventually, however, they will move along with the prices of domestic goods since the prices of both groups of goods are determined by the same costs and general supply conditions. But this will be the case only after the period of adjustment.

When he considers possible effects on the domestic price level, Taussig modifies his original contention that demand conditions remain unchanged. If the elasticities of demand for export and import commodities are not equal to one, some shift in buying power between international and domestic goods has to be expected. And until domestic production has adjusted itself to an increase (or decrease) in demand, some price changes will be the consequence. By assuming constant cost over a range of output changes, so that no good will go up or down in price if its output is extended or contracted, the only permanent price change within a country will be that of imports. After an appropriate adjustment in the production of exports and domestic goods their prices will return to the original level.

This line of reasoning brings Taussig to the conclusion that in the long run only imports change in price, while exports and domestic goods remain the same. This seems paradoxial, since the exports of one country are the imports of the other. It should be noted however, that this is only apparent because the price of imports in both countries are solely altered by the new rate of exchange while the unchanged export prices (for the country which produces them) are translated into the currency of the importing country on the basis of the new rate of exchange[99].

The question remains, "What will be the ultimate outcome with respect to the terms of trade?" According to Taussig, they will have to turn against the lending country, subject to modifications. Exports from Great Britain are stimulated while U.S. exports decline.

Owing to the loan, more pounds have appeared in the exchange market, while the amount of dollars remains the same, at least initially. Americans can now buy more pounds with a given number of dollars than before, or, which is the same thing, they can buy a British commodity (the domestic price of which is constant) with less dollars. But since this in effect means that Great Britain offers its exports to Americans at more attractive prices, the terms of trade must turn against England.

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99. See Iversen, op.cit., p. 307.

The extent to which the terms of trade deteriorate depends on how much the rate of exchange goes down. Instantaneously it will fall by 25 per cent, but it is not likely to settle permanently at this level. It will be less, but where exactly it will come to rest, cannot be determined without reference to the elasticities of demand involved. It is the elasticity of British demand for U.S. exports which determines by how much they have to contract, and it is the elasticity of U.S. demand for British goods which determines by how much they will expand.

At the conclusion of this argument, when he considers the effects of price changes as discussed above on an index number comprising domestic as well as international goods, Taussig finds that in the case of inconvertible paper currency such an index would show a fall of prices in the U.S. That is the opposite of what we have found under the gold standard, where prices would fall in Great Britain and rise in the U.S. But this is a difference only in the mode of adjustment. While under gold standard conditions the British consumer has to pay higher prices out of a reduced money income, with inconvertible paper currencies he has to pay still higher prices out of a constant money income. The two cases are essentially the same in that one country always gets either more or less imports for a given volume of export commodities.

By now it should have become sufficiently clear that Taussig does not question the basic validity of the classical transfer theory; he stands essentially on the same ground as his disciple Viner. Like Viner and John Stuart Mill, Taussig assumes that the demand curves do not shift, but suggests that the terms of trade might change less than would have been maintained by Mill, if the elasticity of demand is not equal to unity. However, this would be only a modification in degree, Viner goes further than this in his discussion of sectional price levels. He comes close to suggesting that demand actually shifts, thus bringing about an instantaneous adjustment of the balance of payments without affecting the terms of trade. But as we have pointed out, Viner does not follow his modification to its logical conclusion and remains firmly on classical ground.

It would be difficult to attempt in this context an exhausting critique of the classical theory of capital transfer as we have outlined it in connection with Mill, Bastable, Viner, and Taussig. The theory as presented by these authors has a number of serious short comings. For one thing, all these writers use the assumption of constant costs. Furthermore, the rather crude quantity theory of money employed in these models does not sufficiently allow for effects and complications which a more diversified credit mechanism might entail. Important as these points may be for a general evaluation of the classical theory, we shall concentrate here

mainly on the point that bears most directly on our findings concerning the terms of trade. For our goal is to analyse what possible changes in the terms of trade must be expected by an underdeveloped country which is floating loans abroad on a large scale.

The crucial problem is this: "In the case of foreign borrowing, will the terms of trade turn in favour of the borrowing (and against the lending) country?" Mill, Viner, and Taussig answer this question in the affirmative. They all maintain that for the most part there would be no shift in demand. Both Viner and Taussig[100] admit that insofar as borrowers use their increased purchasing power to buy commodities directly from the lending country, the adjustment would be instantaneous with no effect on prices and consequently no effect on the terms of trade. But the Taussig-Viner analysis is mainly one of comparative statics which leads them to neglect the strategic corrective influence of the increase in domestic incomes that arise from the expenditure of foreign loan proceeds on domestic goods.

This brings us to another criticism which is relevant to the terms of trade. We have already mentioned above that a shift in demand actually will occur, especially in underdeveloped countries with heavy demand for foreign goods. But even where the borrowings are transferred to the receiving

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100. Taussig, op. cit., pp. 399, also pp. 406.

country, for expenditures there, it is not conclusive whether the terms of trade have to change in favour of the borrowing country.

The first writer to take into account income effects and subsequent shifts in demand was Bastable[101]. It was not until Ohlin[102], however, that this line of argument, the kernel of the so-called "modern" theory, was worked out into a logically conclusive system. Ohlin[103] argued that the "causa efficiens" of balance of payments adjustments was a shift in buying power resulting from foreign borrowing. He admitted that in most cases some changes in the level of relative prices would be likely to occur. But he took issue with the classical school in that he maintained that relative price changes need not necessarily occur, and that if they do they are more in the nature of incidental "by-products" rather than essential parts of the adjustment process. To the extent that relative prices should occur, they would of course tend to change the terms of trade in favour of the borrowing country.

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101. See pp 119,120 above.

102. Ohlin: Interregional and International Trade. Ohlin presented a formulation which in some respect was still not completely emancipated from classical postulates. An example of that is his assumption of full employment. Later writers (see above, p. 120, footnote 86) corrected this deficiency and treated the effect of international trade on the level of employment quite extensively. But since they were primarily concerned with the spread of international fluctuations, their findings with respect to the terms of trade are more or less incidental. And since it is this we are interested in in this context, Ohlins presentation has been chosen in spite of its minor shortcomings.

103. Ohlin, op.cit., Ch. 20, pp. 406.

Suppose a country A borrows monthly from country B $100,000,000 in B's currency. A is likely to spend this additional purchasing power to some extent on imports (and on goods previously exported), say $60,000,000, and the balance on domestic goods ($40,000,000). Since domestic goods have to be paid for in A's currency, $40,000,000 worth of foreign exchange is sold to the central bank. It is clear that to the extent that A spent it's loan proceeds on international goods (B's exports and goods previously exported by A), the adjustment of the balance of payments will be an immediate one.

To the extent that the proceeds are spent domestically, income is created which again will be spent on international goods as well as on domestic goods, and the process repeats itself (primary effects). Furthermore, the $40,000,000 of foreign exchange sold to the central bank will increase reserves and lead to credit expansion, which again increases expenditures on international and domestic goods, thus widening the balance of trade gap still further. Such a trade gap may be of quite sizable proportions since credit can be expanded by a multiple of the original increase in reserves (secondary effects).

There is, however, a further increase in buying power of a somewhat different sort (tertiary effect). The banking system, on the basis of it's generally improved reserve position, is tempted to adopt a more liberal credit

policy, perhaps through lowering the interest rate and through expanding loans and investment. That in time would also lead to "secondary" expansion of the money supply.

The slower the adjustment process proceeds, and the more foreign exchange reserves grow, the greater is, of course, the probability that secondary increases in A's buying power will be brought about. That part of the borrowings which is used to buy international goods does not increase reserves. Thus to each increase in the sum total of primary buying power used to buy home market goods and services, there corresponds a proportionate increase in reserves. Consequently the incomes of home market producers rise more quickly the slower the instantaneous balance of trade deficit grows. Such an increase in the demand for home market commodities will eventually lead to an expansion of the industries producing them, necessitating further credit expansion which may even induce gold inflows from abroad. Furthermore, factors of production may be lured away from export industries and thus increase the trade balance deficit still further.

This process of increases in buying power in A accompanied by parallel decreases in B, and changes in domestic prices in A as well as in B relative to international prices, and perhaps a rise in A's export prices relative to those of B, will eventually adjust the balance of payments to the flow of borrowings.

Ohlin concedes that, for given demand schedules, a change in supply conditions resulting from foreign borrowing (increased demand at home causing somewhat higher prices) would make the terms of trade to some extent turn against the lending country. He also maintains that it is quite likely that important international capital movements imply a reduction in the demand for home market goods in the lending countries, which would be of similar effect on the terms of trade.

At this stage it would be hasty, nevertheless, to conclude from Ohlin's argument that changes in the terms of trade figure prominently in his reasoning. It is true that changes in supply conditions work in that direction. It is also true that these are not offset by changes in demand for international goods since such a shift could conceivably work either way. But there is another reason which Ohlin uses to buttess his contention that changes in the terms of trade as they do occur, are of minor importance.

Domestic-commodity industries and export industries, he argues, probably employ the agents of production in different proportions. Heavy foreign borrowing will undoubtedly make factors more scarce in A as compared with B. Greater demand for A's factors means higher factor as well as higher commodity prices. But, Ohlin points out, this holds true mainly for domestic commodities. There is reason to believe that export industries in the receiving country will use a

comparatively larger proportion than before of the factors becoming relatively cheap. Consequently, the money expenses of production, if they rise at all, will rise less in the export sector relative to home market industries. Ohlin concludes therefore that there is no justification for assuming that a noticeable change in the terms of trade in favour of the receiving country is the normal or even probable outcome, either at the beginning of the borrowing period or later.

Concluding this discussion of the theory of capital transfer we can now say that where foreign borrowings are transferred to the receiving country, and where secondary effects can be neglected, the terms of trade will change in favour of the borrowing country. This of course holds true only if the monetary system is left to its own devices. Discretionary government policy, monetary as well as fiscal, could conceivably offset or reinforce these automatic tendencies. Where foreign borrowings are not transferred, but spent directly in the capital supplying country, the adjustment is an automatic one without affecting relative prices and the terms of trade. We have already indicated that this is the pattern which we must expect to find in underdeveloped countries embarking on an industrialisation scheme.

To the extent that foreign exchange proceeds are transferred to the receiving country in such substantial amounts that secondary effects cannot be neglected, the ad-

justment will not be an instantaneous one. Credit inflation, as it will be unavoidable in any major development scheme, will not fail to rise prices substantially. And in so far as this is the case, a change in the terms of trade will have to be expected. An application of Ohlin's argument to this case would suggest that within the framework of such an expansionary process the prices of exports rise less (or not at all) as compared with the prices of domestic commodities. But such an explanation would be misleading.

The validity of Ohlins argument depends on whether or not export industries under such circumstances really employ in the main those factors which become relatively cheap. His argument would not be valid for backward areas. Their export industries are relatively more capital intensive than domestic industries and owing to better training and skills, the productivity of labour tends to be much higher in the export sector than in the rest of the community. If such a country wished to preserve its present pattern of exports, export industries would probably be more subject to cost and price increases than any other branch of industry because they employ not the relatively cheap but the relatively most expensive factors. Thus the terms of trade would in fact change in favour of the expanding country.

It should be noted, however, that such a change in the terms of trade is no longer linked theoretically to the inflow of money from abroad as the classical school conceived

of it. It is due rather to a domestic expansion more or less independent of the actual influx of foreign funds into the banking system. It is quite conceivable that a modern monetary system could "create" money on a far greater scale for a given amount of traditional reserves (gold or hard currency foreign exchange) than would be possible under the traditional gold standard system so familiar to classical writers. If industrial expansion therefore does change the terms of trade, foreign borrowing and changes in the terms of trade to a great extent merely coincide with one another, rather than one being caused by the other.

Another factor of much greater importance affecting the terms of trade comes into play in underdeveloped countries. These nations have traditionally been exporters of raw materials and food stuffs. And ever since the 1870's the trend of prices has been heavily against these commodities.[104] H.W. Singer[105] offers an interesting interpretation of this fact. That raw material prices have risen less than those of manufactured goods cannot be a reflection of changes in real cost. On the contrary, productivity has increased much more rapidly in advanced countries. An explanation in terms of cost changes can be disposed of by referring to the fact that the standard of living (largely governed by productivity

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104. United Nations Economic Affairs Department: Relative Prices of Exports and Imports of Underdeveloped Countries. Referred to by Singer, op.cit., pp. 477.

105. Singer, op.cit., pp. 477.

in manufacturing) has risen much faster in advanced countries than in underdeveloped countries. If a deterioration of the terms of trade, as it has been experienced by backward areas, were due to productivity increases and lower costs, the level of real income in backward countries should have risen much more substantially than it actually did.

We can therefore dismiss the argument that changes in productivity as such have led to a deterioration in the terms of trade. Nevertheless these changes have had this effect indirectly, through the way distributive shares resulting from productivity increases have been allocated. The fruits of technological progress can be distributed in either or both of two ways: a) they can be passed on to producers in the form of higher incomes, or b) they can be passed on to consumers in the form of lower prices. The former alternative has followed improvements in manufacturing industries, the latter can be observed mainly in the case of primary producers, in underdeveloped countries as well as in more advanced countries.

If we consider a closed economy, neither a) nor b) appears to be necessarily more advantageous. When it comes to international trade, however, the position is fundamentally changed. In a closed economy, the aggregates of producers and consumers are identical. In the trade between backward and advanced countries, the producers of manufactured goods is at home and the consumer abroad. If a rise in income of

producers of manufactured goods in advanced countries is in excess of actual increases in productivity, it is an absolute burden on the consumer abroad.

Even where increases in income are less than increases in productivity, the loss of a potential gain for backward countries is a real one, because such a country pays for its manufactured imports with exports of raw materials on which all or most of its own productivity increases are lost through lower prices to the advanced country. And where such increases in productivity in the production of raw materials have manifested themselves, a very low elasticity of demand for these products prevent a fall in price from being offset by greater total revenue[106].

This tendency working against the raw material producing countries has been even further aggravated by the fact that a rise in real income in the manufacturing sector usually tends to create a more than proportionate increase in demand for finished goods. Demand for food stuff, on the other hand, is highly income inelastic, and technological progress often lowers the quantity of raw material used per unit of manufactured goods. The substitution of synthetic for organic raw material has sometimes taken place to such an extent that

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106. It could be held against this view that after World War II there was a substantial increase in raw material prices, particularly so in 1948. (See Singer, op.cit., p. 481). But this was more than offset by an increase in prices of manufactured goods, especially textiles.

the absolute quantity of organic raw material demanded has fallen even in the face of a substantial increase in the production of manufactured goods requiring such raw materials.

We have seen above that an industrialisation scheme is likely to change relative prices through extensive employment of inflationary finance. We can now add that it will also change the terms of trade through changes both in the productivity in the export industries and through changes in the composition of the goods exported. Undoubtedly, the volume of raw materials made available for exports will be substantially decreased because they will be needed to a much greater extent by the industrializing countries themselves. At the same time these countries will attempt to capture new export markets for the manufactured goods produced by newly developed industries. It is likely that these countries will make every effort to increase the total of their exports, although these exports will eventually be made up more and more of manufactured goods. And in doing so, these countries will be more likely through higher real incomes to profit from increases in productivity.

The traditional pattern, in which productivity gains are lost through lower prices, will eventually disappear. For even if the countries in question continue to export raw materials, much less of these goods will be exported so that in the face of an inelastic demand for them, raw-material prices will go up.

We can state this conclusion in qualitative terms with confidence. Quantitative conclusions, however, would be possible only through a detailed study of one particular country, its position in the world market at a particular period of time, and the specific features of the development scheme the country proposes to put into effect.

Summary: The purpose of this chapter was to find out what the international trade position of an industrializing country would be. It turns out that we can end this investigation on a note of general optimism. We have seen in Chapter 6 that the actual volume of domestic expansion for a given volume of foreign borrowing is probably much larger than has been envisaged by some writers who have treated this subject[107]. In the present chapter we have seen that the international trade position of an expanding country is also quite promising[108]. While there may be some incidental improvements resulting from price increases due to inflationary finance, industrialisation will improve the international trade position by changing the composition of goods entering foreign trade.

We have also seen that the traditional type of private foreign investment deprived underdeveloped countries

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107. See above, Ch. 5.

108. I have deliberately omitted to deal with the problem of actually finding new markets for additional exports, especially problematic in the manufacturing sector. That would have to be the object of a separate study.

of beneficiary secondary multiplier effects. That along with the relative gains derived from international trade will change under the impact of a national industrialisation scheme. Advanced countries benefited not only from the secondary multiplier effects of their foreign investment, but from increases in real income and from relative price increases as well. In a sense, the advanced countries were able to have their cake and eat it too.

With the industrialisation of formerly backward countries, advanced countries will now be forced to share their trading benefits more equally. But in order for these optimistic predictions to come true, we would have to have a general development of a political climate conducive to free trade and multilateralism. If political conditions, especially in the advanced countries, were to usher in a new era of protectionism, the general outlook for countries in the process of industrialisation would indeed be much darker than under the happier conditions assumed throughout the argument of this paper.

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