(Draft Outline of Perspective Plan Document)
B. Higgins.

THE ECONOMIC DEVELOPMENT OF BRAZIL

1967 - 1977

Part I - THE PRESENT: Brazil 1965

Chapter 1 - Introduction: the Brazilian economy and its problems.

Chapter 2 - Resources:
(a) natural resources; (b) human resources.

Chapter 3 - The educational system.

Chapter 4 - Public health and social security.

Chapter 5 - Leading and lagging regions in Brazilian development.

Chapter 6 - Monetary and fiscal system and the problem of containing inflation.

Chapter 7 - The balance of payments, capacity to import and development potential.

Chapter 8 - Agriculture: need for structural change.

Chapter 9 - Industry: import substitution versus export promotion.

Chapter 10 - Transport: a bottleneck in the development process?

Chapter 11 - Power.

Chapter 12 - Urban development and housing.

Part II - THE PAST: Brazil 1500-1965

Chapter 13 - Peculiarities of Brazilian economic history:

(a) chronic inflation; (b) "boom and bust" pattern of development; (c) failure to generate spread effects; (d) how leading regions and sectors became lagging regions and sectors; (e) emergence of technological and regional dualism-failure to produce the "ratchet effect"; (f) post-war industrialization: a new era?

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Part III - THE FUTURE: Brazil 1967-1977

A. THE ECONOMY AS A WHOLE

B. THE MAJOR SECTORS

Part IV - AN INVESTMENT BUDGET

Comments on:

Prof. Higgins' Draft Outline of Perspective Plan Document.

O. Menezes

Part I:

It would seem that the current and recent situation in regard to the majority of topics mentioned has been discussed in the Program of Action. Perhaps the Perspective Plan could include some further analysis of these matters.

Part II:

Perhaps main emphasis should be on the period 1940-1965.

Chapter 13:

Possible additional aspects:

e) channeling of agricultural profits, particularly in coffee-growing, into industry:
  (i) voluntarily
  (ii) by forced transfer, i.e. exchange rate over-valuing the cruzeiro, for agricultural exports and, correspondingly, for imports of capital goods and raw materials for industrial development.

f) fragmentation of Brazilian capital: relative lack of concentration of large volumes of capital in a few hands; and consequent difficulty of development of very large-scale industries, i.e. particularly basic and heavy industries, in the private sector.

g) poor development of the stock market.

Chapter 14:

Such need for new patterns of growth might be studied, inter alia, in regard to the following specific questions:

a) will monetary stabilization and elimination of distortions in exchange rates result in a net reduction or net increase in rate of domestic savings (as compared with the earlier phase of inflation, up to 1961, when the savings rate was high)? If the result is likely to be a net reduction, what measures (consistent with stability) should be taken to stimulate savings?

b) will it be appropriate to have greater emphasis on development of basic and heavy industries?

c) Appropriateness and possibilities of export promotion, particularly of manufactured goods. For the latter, possibilities offered by the ALALC (LAFTA) market (export promotion is advocated in the Program of Action).

d) correction of regional imbalances? - generally accepted, some measures already in effect.

e) reorientation of industrial location towards smaller towns?

f) development of agricultural frontier and agricultural resettlement?

g) agrarian reform and/or other measures to stimulate growth of agricultural production (both mentioned in the Program)?

h) management of balance of payments:

(1) counteracting cyclical fluctuations, e.g. due to those in coffee market?

(2) foreign capital and foreign debt: measures seeking to stabilize and to attain an appropriate level of inflow of foreign capital and volume of foreign debt?

i) change in emphasis on sectors with relatively great social welfare content: health, education and housing? (In regard to the third a positive stand is taken in the Program of Action).

j) employment: switch to more labour-intensive methods of production? (Program is favourable)

Part III:

Chapter 16:

First two would seem to belong largely to sectoral planning.
Inclusion of an additional chapter? Relative rates of public and of private enterprises: in aggregate investment, and particular sectors.

Part IV:

Chapter 29:

"c) an inflationary gap approach". Perhaps the phrase "investment-savings gap" (excess of required investment over feasible savings) would be more explicit.

(the need to cover an inflationary gap merely due to bad management of the public finances would not be an acceptable criteria for long term foreign aid).

THE BRAZILIAN ECONOMY AND ITS PROBLEMS:

Prolegomena to Planning

B. Higgins.

It is becoming clear that while underdeveloped countries have common characteristics, the problem of national poverty - and still more the remedy - is not always and everywhere the same. The countries lumped together as "underdeveloped" or "developing" vary a great deal in levels of productivity and income, in current rates of growth, in product-mix, in occupational structure, climate and resource base, in ratios of investment to income, in standards of education and health, in culture and religion, in relative roles of public and private enterprise, in the role of foreign trade, in forms of government, and in many other characteristics. They are alike in being poorer than the advanced countries of North America, Europe and Austral-Asia and in being poorer than they want to be. But these facts alone hardly provide guidelines to policy.

In preparing a perspective plan the first task is to characterize the economy, to determine the special features of the Brazilian economy which distinguish it from other economies and inform its peculiar nature. Only in this way can the specific policy requirements be isolated, as distinct from platitudinous generalizations applicable to all countries wishing to accelerate their rate of growth - "raise the ratio of investment to income; reduce the incremental capital: output ratio by raising skills, improving management and techniques; improve the resource allocation" - and the like.

Brazil: an Underdeveloped but Developing Economy

The polite term "developing" which is replacing the less readily accepted term "underdeveloped", in United Nation circles and elsewhere, is unfortunately, a misnomer for many countries which are both poor and stagnant, such as Indonesia, Argentina, Chile and pre-Castro Cuba. Brazil, however, has enjoyed rates of increase in per capita income since World War II which clearly entitle her to the label "developing", although the level of living and other characteristics of Brazil are such that the country obviously belongs still in the "underdeveloped" category.

Some international comparisons will serve to locate Brazil on the scale of economic development, to "bracket" the Brazilian economy. First, in terms of the rate of growth measured in the usual way increase in per capita gross product - postwar Brazil ranks in the upper class but not among the elite. With an average rate of growth of 19,6% between 1948 and 1960 (or 20,9% between 1950 and 1960) Brazil was a fast developing country in comparison to the United States, Canada, and Australia, or to most countries in Latin America, Asia or Africa; but Brazil lagged well behind such stars in the development firmament as Japan, Venezuela, West Germany, Italy, Greece, U.S.S.R., Jugoslavia and Poland. Considering that Brazil had no strong export comparable to Venezuela's oil, and had no opportunities for achieving very low capital: output ratios through reconstruction of widespread war-damaged productive facilities, Brazil's rate of growth since World War II was highly respectable. It was not, as we shall see, as high as it might have been if development policy had been better designed; but the target rates of growth in many development plans are no higher than those actually achieved in Brazil. On the other hand, it should be noted that the rate of growth fell considerably during the years 1961-1963, with per capita income actually declining in the last of these years. Even if earlier rates of growth might have been acceptable as targets, the recent rates were not. (See Table I).

This growth of per capita gross product took place with limited structural change; and structural change is sometimes regarded as a better measure of true development, especially as a harbinger of future prosperity, than the rise in per capita income as such. In 1947, 27% of net domestic product was produced in the agricultural sector, and % of total employment was in this sector. Industry (the secondary sector) accounted for 21% of income and % of employment, while the tertiary sector (services) produced 52% of income and provided % employment. By 1961, the relative share of the agricultural (primary) sector had declined to 22% in terms of NDP and % in terms of employment, while the industrial sector had increased to 34% and the tertiary sector declined to 44%. The tertiary sector in 1960 accounted for 46% of income and % of employment (See Table II).

In terms of level of per capita income in 1963, Brazil might be regarded as lower middle class. The existence of multiple and variable exchange rates makes the translation of Brazilian per capita incomes into dollars somewhat difficult; but it was somewhere in the $250 - $300 range. Thus Brazil is clearly out of the range of genuinely poverty-striken countries, with per capita income below $100, such as India, Burma, Pakistan, Indonesia, and Bolivia. It is somewhat better off than other aspirants to the lower-middle ranks such as Ceylon, the Phillipines, Paraguay, and Egypt. It is roughly comparable to Malaya, Mexico, the Lebanon, Turkey, or Portugal. But is clearly less prosperous, in the aggregate, than Venezuela, Argentina, Israel, Chile or Italy. (Table III).

Roger Vekemans, Director of the Bellarmino Centre of Research of Santiago, has attempted a classification of Latin American countries in terms of a broader index of levels of development (see Table IV). Countries are grouped from " first class " to " tenth class " in terms of five economic indices, 5 social indices, 7 cultural indices, 4 indices of social development, and two relating to the etnographic structure. Taken across the board, Brazil ranks with Mexico as a "third class" country within the Latin American community. At the top of scale are Argentina, Uruguay and Chile. Next comes a heterogeneous group, including Cuba, Venezuela, Costa Rica and Panama. These countries are a rather mixed lot, ranking high on some criteria and low on others. Venezuela, for example, stands in solitary splendor in first class,with respect to per capita income, per capita electricity comsumption and per capita cement consumption; but Venezuela slips to 8th class in news print consumption and calorie intake, and is 9th class in terms of percentage of labour force in the primary sector or in terms of secondary school and university enrollment.

In terms of per capita income Brazil and Mexico are both 7th class, together with Colombia. On the other economic indices Brazil ranks even lower, except for caloric intake and percentage of labour force in agriculture, where Brazil is also 7th class.

Except for industrial employment, where Brazil is 3rd class, Brazil ranks low on all the social criteria. On the cultural indices Brazil has a very mixed record, ranging from 5th class in terms of literacy and 6th class in terms of cinema seats to 9th class in terms of secondary school and university enrollments.

Similarly, in the "standard of living" bracket Brazil is 2nd class in terms of number of hospital beds per capita, but 8th class in terms of number of doctors or in terms of birth rates and death rates.

It is clear that despite the relatively rapid development of the last 20 years, Brazil remains underdeveloped country from the broad economic and social point of view.

It is also true, however, that if the high growth rate of the 1950's were sustained and if the rate of population growth decreased as fertility rates adjusted to the recent drop in death rates Brazil could emerge from the category of "underdeveloped countries" by the end of the century. That being so, is there really any need for active government intervention in the economy in order to accelerate economic growth? What are the problems which might be solved and the bottlenecks which might be broken through governmental action? Just why is a "new look" in development policy needed?

<u>Regional dualism</u>

Perhaps the most obvious evidence of the need for an active development policy on the part of the Brazilian government is the fact that the overall growth of the economy still leaves half the population in poverty, and shows little sign of improving the lot of this submerged half of the population. The development has been concentrated in certain sectors and regions, leaving the rest of the country virtually untouched. Indeed, Brazil is the classic case of a country where technological dualism takes the form of regional dualism. The state of São Paulo might be regarded as having already emerged from the category of underdeveloped regions, with a per capita income of dollars, 62,8% of the population living in urban areas and only 37,2% of the population left in the agricultural sector, where productivity is in any case relatively high, the State of São Paulo has many of the characteristics of a middle-ranking European country. At the other end of the scale is Piaui with a per capita income of barely $60,00, only 23,6% of its population in the urban area, and 76,4% of labour force still engaged in agriculture, mostly of a rather rudimentary and small-scale type. *

As may be seen from Table V the region of Northeast taken as a whole has a per capita income of about $120, less than half the national average and only of the level for the South-Central region. In the Northeast % of production and 64% of employment are accounted for the agricultural sector, as compared to % and % for the South-Central region (Table VI). It is true that vestiges of the traditional sector can be found even in the advanced regions of Brazil; poverty exists among landless agricultural workers, among small farmers, fishermen and unskilled industrial workers, even in the South and South-Central regions. On the other hand, elements of the modern sector have appeared in the North and Northeast, notably in recent industrial development in Recife and Salvador. (1) Nonetheless, the striking contrast between North and Northeast on the one hand and the South and South-Central regions on the other have been noted by all students of the Brazilian economic and social structure.

Unfortunately in Brazil the poor regions are quite heavily populated. With over 24 million people in the Northeast and perhaps 13 million in the North, these poor regions account for nearly 40% of the total Brazilian population. Adding the pockets of poverty in other regions it is clear

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* In 1960, per capita income in Piaui was only 16% of that of São Paulo.

(1) "Northeast" is here defined to coincide with the area under SUDENE jurisdiction and so includes Bahia.

that at least half of the Brazilian population is living under unacceptable conditions. In this respect Brazil is perhaps less unfortunate than Indonesia, which has 2/3 of its population - a number of people almost equal to the total population of Brazil - crowded onto the small island of Java. There are nonetheless some common characteristics. In the sugar area of Recife, current population growth sustained for another generation would produce a population density comparable to that of Java today. In Brazil, as in Indonesia, people tend to remain in relatively high rain fall areas, where employment opportunities were at one time better than elsewhere, despite subsequent changes in economic and social conditions.

Sugar was the first really important export product in Indonesia as in Brazil, and the population explosion in both countries was launched by development of the sugar industry. However, the population explosion has gone less far in Brazil than in Indonesia, relatively to the available lands and other resources. Moreover, industrial investment in the modern sector (and rich region) has been relatively high. Thus at the end of the Dutch colonial period (1949) only 7% of the Indonesian labour force had been drawn into the modern sector. In Brazil perhaps half of the labour force might be regarded as being employed in the modern sector. Moreover, in Brazil the dualism is less sharp; there is a sizable sector of middle sized operations with reasonably high productivity both in industry and agriculture, which provides a kind of bridge connecting the traditional to the modern sector and leading region.

Moreover, the Indonesian modern sector and leading region was almost completely export oriented. It is therefore submitted to the vagaries of the world market. The principal growing points during the period 1890-1930 can no longer be counted upon to provide the impetus for growth of the economy as a whole. While the same may be said of coffee, in Brazil only 6 or 7% of national income derives from foreign trade (either as export or import). Much of the modern sector consists of new industrial enterprises which provide the base for new export industries, as the scale of their operations grows and their efficiency is raised.

On the other hand, Brazil is worse off, in term of the proportion of population struggling for a living in the traditional sector and lagging regions than many other under-developed countries, such as Argentina, Chile or the Phil-lipines.

The relationship between overall underdevelopment and wide gaps between productivity and incomes of major regions of a country has become a familiar part of the theory of underdevelopment. The recent stress on "balanced-growth" in developing countries has included emphasis on the importance of narrowing these gaps. The development programs of a good many such countries include special measures to accelerate growth of their poor and lagging regions. Professor Gunnar Myrdal, looking at European experience, was perhaps the first to suggest that underdeveloped countries are characterized by large and increasing gaps in productivity and income among major regions, advanced countries by small and diminishing ones. The correlation between the degrees of regional integration and maturity of the occupational structure, and between both of these and per capita income, is indeed very high. Even small underdeveloped countries like Ceylon, Guatamala and Greece have sharply defined rich and poor, leading and lagging regions; while in larger countries like Brazil, Chile, Indonesia, Italy, and Mexico the regional contrast are dramatic. One might even be tempted to define underdevelopment in these terms: an underdeveloped country is one with large and increasing differences in per capita income among major regions, and with a large proportion of the population living in the poor and lagging regions; an advanced country has small and diminishing gaps among regions, and only a small proportion of the labour force is employed in the poorer and relatively lagging regions.

Economic growth of any country involves leading and lagging sectors, frequently identified with leading and lagging regions. Health growth, however, seems to require that the lagging sectors and regions be converted into leading ones before too much time has passed. Otherwise the agglomerative pull of the leading sectors may become so strong that lagging sectors are converted into poor ones, like the Italian or Mexican South or the Brazilian Northeast. The problems seem to be especially acute when sectors and regions overlap, as they do in many underdeveloped countries. At best, identificat ion of lagging and leading sectors with lagging and leading regions aggravates the problem of reallocation of resources. In many cases the leading sector is identified not merely with a region but with a few cities. Latin American countries are already substantially urbanized and are rapidly becoming more so. Asian cities have grown fantastically since 1940.The agglomerative pull of the capital cities is particularly strong, but in some cases (such as São Paulo, Medellin and Bombay) there are commercial, financial, and industrial centers in addition to the capital city that show rapid rates of growth.

Technological Dualism

The sharp division of underdeveloped countries into two distinct and contrasting sectors, frequently identified with two distinct regions, has been labelled "technological dualism". The general theory of technological dualism and the population explosion has been presented in some detail elsewhere (1). A very short summary of it must suffice here.

In most underdeveloped countries investment has been concentrated in the "modern" sector: plantations, mines, oil fields, and the financing, transport, and processing operations associated with these. Because of the highly capital-intensive nature of this investment, it has provided less increase in employment than in output and exports. Yet it was accompanied by a "population explosion" because industrialization brought public health measures, law and order, and improved transport which reduced the dangers of famine. Thus the process of industrial investment meant rapid growth of the number of people who had to be employed in the other main sector: peasant agriculture and the small or cottage industries, plus the finance, transport, and processing connected with these, together labelled the "rural" sector.

While good land was abundant the rural sector could absorb increased numbers without a fall in per capita income

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(1) Benjamin Higgins, Economic Development: Problems, Principles, and Policies. New York 1959, Chapre.

or unemployment. But as good land gave out, diminishing returns to labour on the land, work-spreading devices, underemployment and disguised unemployment appeared in the rural sector. Technological progress was increasingly confined to the industrial sector, where skilled labour was scarce and labour-saving innovations worth while. In the rural sector, where labour was redundant, there was no incentive for introduction of labour-saving devices. Productivity and incomes in the two sectors grew farther and farther apart. The level of investment in the industrial sector was frequently sufficient to create inflationary pressure in markets where monetary transactions predominate, without reducing unemployment in the rural sector.

Under conditions of technological dualism it is possible to have very substantial investment in the modern sector and quite satisfactory increases in per capita income in that sector, without making any dent in the problem of poverty in the traditional sector and region. That is precisely the situation in Brazil, Italy and Mexico today. Impressive though it is, the investment taking place in the modern sector does not provide new employment opportunities at a rate high enough to permit even a relative decline in the proportion of population living in the traditional sector and region, which may prove necessary for a solution to the problem of poverty in that region. In Greece, on the other hand, thanks to large scale emigration from the country as a whole, even the absolute level of population in some poorer areas is declining.

In the worst cases the lagging sectors and regions are associated with less highly developed social groups as well. In these cases, moving people from low-productivity occupations to more highly productive one is not only a matter of moving them from one socio-cultural framework to another. For a Brazilian peasant in the Northeast or a Mexican peasant in the South, both the geographic and cultural distances that many people must move to obtain jobs in the progressing sector of the society may be very great indeed. Once technological and sociological dualism set in together, a "feedback" mechanism tends to appear, for the simple reason that the pattern of emigration tends to dilute the quality of the population - without sufficiently reducing its quantity. The best educated, best trained, most progressive, most ambitious, men and women - those with the highest level of "need-achievement" in McClelland's terminology - will be the ones who will leave the lagging region for the progressive one. Thus the lagging region is denuded of the very qualities that are needed to reconstruct it and reverse the trend, launching a process that will narrow the gaps in productivity and income. Meanwhile, at the other end of the migratory route, underdeveloped countries suffer from urban congestion, slums, urban underemployment and urban parasitism.

Areas and Regions

If an underdeveloped country is one where the lagging region absorbs a large share of the population and where the index of dispersion is rising, is a lagging region one in which a large proportion of the population lives in "depressed areas", and in which the index of dispersion between depressed areas and growing points in the region is rising? Certainly some recent programmes and legislation seem to rest on the assumption that it is. The "trial and demonstration zones" of the European Productivity Agency were implicitly, if not explicitly, based on the assumption that lagging or poor regions are haphazard collections of depressed areas. The Area Redevelopment Act in the United States provides for technical and capital assistance from the Federal Government to designated "development areas" defined mainly in terms of chronic unemployment. The underlying rationale of the Act is that the unemployment problem in the United States consists of a collection of rather small areas with peculiar employment problems, and that the solution is to create jobs in precisely those areas.

The American "depressed areas" which are so much in the public eye are not large "regions" like the Southwest, but cities or counties with particularly high or chronic unemployment, or chronic agricultural poverty. What is the relationship between the relative rate of growth of a "region" such as the Southwest, and the incidence of "depressed areas" in the form of small pockets of concentrated unemployment or rural poverty?

Up to 1960, after which there are no official national and regional income figures, there was no clear sign of improvement in the regional distribution of income in Brazil. Between 1947 and 1960 the share of national income going to the Northeast was virtually unchanged while the South and Middle West gained at the expense of the North and Middle East. When income is broken down by States it can be seen that in both Amazonas and Pará the per capita income fell in relation to the national average. (Table - Table 53 of Baer). The relative per capita income of Maranhão and Ceará was almost constant, Piaui and Pernambuco declined relative to the national average, and the other Notheastern States registered slight relative gains. In the South, Paraná shows a charp gain and the other states losses relative to national per capita income (these are the states with the heaviest net immigration), Goiás registered a relative gain, while Mato Grosso just held its own on the national scale.

The pattern of structural change reveals a similar picture. In the Northeast the share of income generated in the Agricultural sector actually increased between 1947 and 1960, and the share from commerce, industry and services declined (Table - Table 54 from Baer). The North did enjoy modest development in terms of structure of income, but half the decline in share of agriculture is accounted for by the increased share of government. The East, too, shows relatively little structural change. The South, with its high-productivity agriculture oriented to the export market, did not generate any decline in the share of agriculture, but industry gained on both commerce and services. In the Middle West the share of agriculture actually increased.

In terms of foreign trade, the North and Northeast both suffered a decline in relative shares between 1947 and 1960. The East enjoyed an increase in the share of exports but a decline in share of imports; in the South this pattern was reversed. The share of the Middle West in foreign trade is insignificant. It is also of interest that the Northeast has a large and increasing import surplus from the Center-South (Table - Table 57 of Baer).

Preliminary figures for 1960-1963 indicate higher growth rates for the Northeast than for the country as a whole. (1) However, this convergence was partly the result of retarded growth elsewhere in the economy (in 1963 national per capita income actually fell) and partly to a favourable swing in the rainfall cycle of the Northeast. The experience of these three years can hardly be accepted as clear evidence of a break in trend.

"Boom and Bust" pattern of growth

The fact that the rapid growth of the Brazilian economy as a whole has left half of the population in the traditional sector and lagging region is related to the "boom and bust" pattern of economic development, which has also been noted by many writers on Brazilian economic development. Each era of Brazilian development has had its own special growing point - sugar, livestock, minerals, rubber, coffee, and manufacturing. However, until recently each of these sources of growth has produced a limited period of expanding activity, followed by stagnation or decline, with only limited impact on the rest of the country. Sugar production in the Northeast, - the first source of economic expansion in Brazil, - is now a problem industry, hardly able to hold its own in competition with sugar in other regions of Brazil and elsewhere in the world, with a world market which fails to expand with world income. The livestock industry, similarly, lags behind rather than leading the growth of national income as a whole. The mineral boom has passed, leaving ghost towns in its wake. The most spectacular of all "boom-and-busts" was the short rubber bubble, which has left behind only empty opera houses. Coffee today remains the major export, but it too has become a problem product, rather than a generator of growth for the economy as a whole.

The new industrial development is more hopeful,but should be carefully studied for symptoms of the pattern of development which has been characteristic of Brazil in the past.

In comparison to the other large countries of recent settlement (Canada, US, and Australia) what is striking

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(1) cf. Stephan Robock, The Brazilian Northeast a Developing Economy.

about Brazil is the failure of each successive wave of develop ment, each based on a new commodity, to generate "spread effects" to the rest of the economy and to move population into unsettled areas. The "ratchet effect", so essential to the wide-spread diffusion of high rates of growth among all sectors and regions of a country, with development in one sector and region encouraging growth in another, that growth in turn providing a basis for new expansion in the sector and region which started the process, seems not to have ocurred in Brazil. Except for a modest contribution of capital and entrepreneurship from the coffee sector to the recent industrial development, each new wave of growth has been almost entirely discrete. There has been very little transfer of profits and skills of the "leading sector" of one era and area to the "leading sector" of the next. The outcome is regional disintegration and "hollow frontiers", in contrast to the movements into the interior of the other large, new countries mentioned above.

In Brazil the most recent phase of frontier develop ment has transported the modern sector almost intact from the east coast to the far West, leaving nothing but empty space in between. The problems of transport, communication and power transmission resulting from this kind of frontier development are enormous.

Role of Foreign Trade

In Brazil foreign trade has been an "engine of growth" with very low horsepower rating. Most of the profits and much of the expertise generated by the successive waves of development were transferred abroad, particularly in the early phase of Brazilian development. More recently, much of the profits has gone into luxury consumption rather than into investments in other sectors. The terms of trade, if not clearly deteriorating over the long run, have at least been submitted to fluctuations in the postwar period, during which the capacity to import declined and thus the capacity to finance development have declined on occasion. (Table -). Thus since the War the index of terms of trade (1953 = 100) ranged from 44 in 1948 to 134 in 1954, falling to 82 in 1963. Population growth, including immigration, and the transfer of capital from abroad has probably been a more significant stimulant of economic growth in Brazil than has the expansion of exports. Indeed during the postwar period of rapid growth exports may have played a negative role; the index of quantum of exports (1953 = 100) fell from 131 in 1948 to 114 in 1962. As a result Brazil has emerged in the mid-20th century with one of the lowest ratio of exports and imports to national income of all underdeveloped countries (Table -).In this respect indeed, it is comparable to the US rather than to typical underdeveloped countries. While this fact may be welcomed as a source of strength in the Brazilian economy, providing as it does opportunities for growth independently of the world market, it is also a source of weakness;increasing imports can not be avoided, if high rates of development of the Brazilian economy are to be resumed. In terms of the efficiency of resource allocation, Brazil is probably already more self sufficient than it should be. To finance import requirements for growth Brazil must find new strong exports.

In recent decades the structure of Brazilian exports shows little change. The share of particular commodities in total exports has fluctuated substantially, with changes in world market and crop conditions, but the general pattern has remained essentially unchanged over the last three decades. Coffee, while less important than in 1925-29, when it constituted 71.7% of the value of exports, remains by far the most important export, accounting for 53 per cent of total exports in 1962. Cotton shows radical changes in importance from one period to another, rising from 2.1% in 1925-29 to 18.6 per cent in 1935-39, falling to a 2.7 in 1957-59, and recovering 9.2% in 1962. Cocoa ranged from 3.5% in 1925-29 to 5.6% in 1957-59 and dropped to 2% in 1962. Sugar shows some recovery in relative significance, from 0.4% in 1925-29 to 3.2% in 1962, with the development of the South-Central plantations. Tobacco remained relatively const nt, in the neighbourhood of 2% during the all period. Rubber exports were still of some importance in the late 1920's when they constituted 2.9% of the total, but have since dwindled to insignificance. Pine wood shows far steady growth from 0.4% to 3.2%, and iron ore a relatively late arrival on the export scene, grew in importance from 3.3% of the value of exports in 1957-59 to 5.7% in 1962. Thus in 1962 Brazil remained dependent on coffee and a small range of other agricultural products and raw materials for its foreign exchange earnings.

Much the same may be said for the geographical pattern of Brazilian exports. The dependence on the US market has scarcely changed. In 1925-29, 45.3% of the value of Brazilian exports went to the US, and in 1962 the figure was still 40%. Germany also remained unchanged at 9.1% over the whole period. France showed a fairly steady decline in importance, from 10.3% in 1925-29 to 3.4% in 1962. The Latin American market remained relatively unimportant for Brazil. Even Argentina, a relatively advanced and nearby country, took only 6% of Brazilian exports in 1925-29 and 4% in 1962. Neighbour Uruguay is even less important as a market for Brazilian commodities.

The import structure showed somewhat more change. Food, drink and tobacco, which accounted for 14.9% of the value of imports in 1938-39, still constituted 13.5% in 1961. However, the industrialization of Brazil has been reflected to some degree in the sharp decline in the role of manufactured consumers goods, from 10.9% in 1938-39 to 1.5% in 1961. Raw materials (other than fuel, lubricants, and coal and petroleum derivatives) fell from 30% to 26.3%, while the latter group increased from 13.1% to 18.8%. Capital goods exports also showed an increase in relative importance from 29.9% to 39.8%.

The decline in the role of exports in Brazilian economic growth is indicated in the falling ratio of agricultural exports to domestic income, from 10.5% in 1947 to 5.7% in 1960 (in current prices) or at constant prices, from 14.9% in 1947 to 6.1% in 1961. As a proportion of total agricultural output, exports declined from 43% in 1947 to 23.3% in 1961 (current prices).

This experience is shared by most of the individual major exports. Thus the ratio of exports to total coffee production fell from 101.4% in 1948 to 48.8% in 1960. For cocoa the equivalent figures were 87.1% and 62%, for cotton 21.2% and 7.8%, for rubber 23.3% and 16.1%, and for tobacco 27.2% and 23.5%. On the other hand, in iron ore production grew from 36.2% to 54.9%. Exports were an insignificant share of sugar production in both 1948 and 1960 - 0.5% and 1.3% respectively.

Brazil's share of the world market has declined for its major exports. In 1934-38 Brazil enjoyed 52.8% of the world market for coffee; in 1961 the figure had fallen to 37.6%. For cocoa, the figures are 16.5% and 10.2%. In tobacco and cotton Brazil has held its own in the world market, but its share is not large (5.8% and 6.3% respectively). Brazil has increased its share in the world sugar market, but the proportion remains low, only 4.3% in 1961.

Human Resources

At the beginning of 1965 Brazil had a presumed population of about 80 million people. Brazil is therefore one the 6 or 7 largest countries in the world in terms of population as well as in area. Considering Brazil's vast empty spaces, not all of which can be dismissed as clearly useless in terms of agricultural or potential mineral resources, there is no clear evidence that the population is above optimum. That is, with the given level of technique, the existing pattern of tastes, the given world market for exports, etc., it could not be said with assurance that a reduction in the total population would in itself inevitably raise per capita income. On the contrary, the size of the internal market, combined with the rate of increase in national income, provides opportunities for a wide range of profitable investment, and for "balanced growth" of the Nurkse type, - opportunities which many smaller countries lack. The level and distribution of income, moreover, is one which brings a high income elasticity of demand for a good many manufactured goods.

The rate of population growth, on the other hand, may be above optimum. That is, the rate of increase in per capita income may well be higher if the rate of growth in population were lower. Population growth can be a favourable factor in raising per capita income, if the rate of capital accumulation is high relative to population growth, so that there is danger of a fall in the marginal efficiency of capital through labour scarcity; or if the increase in population if translated into an immediate and proportionate increase in effective demand. It is not clear that either of these conditions prevails in Brazil. On the contrary, the pressure of population growth imposes a heavy burden on the economy in terms of investment requirements. This statement is particularly true of the poorer regions, where natural rates of population growth were high and ratio of savings to income relatively low.

Brazil has one of the highest rates of population growth in the world, about 3.2% annually during the 1950's and probably somewhat higher today. In the present phase of Brazilian development, when much of the new investment must be allocated to such capital-intensive sectors as transport, power, housing, and heavy industry, this rate of population growth imposes a severe strain on the Brazilian capacity to save and invest.

Moreover, the distribution of fertility by sectors and regions is unfortunate. Birth rates are higher in the rural areas and poorer states than they are in the richer and more urbanized states. It is true that death rates are also higher in the more rural and poorer areas; but this difference in death rates does not entirely offset the differences in fertility rates. The recorded rates of population growth are lower in the poorer regions than in the richer ones, because of migration from the former to the latter. However, the higher fertility of the poorer regions, combined with improved public health everywhere, aggravates the problem of transferring people from low productivity agricultural employment and urban underemployment in the poorer regions to high productivity occupations, whether in the modern sector of the same region or in the richer regions.

The main problems with regard to human resources, however, are two: an age distribution which imposes a severe burden on the active labour force, and an inadequate educational system. These two factors are inter-related, and reinforce each other.

As may be seen from Table   , in comparison with other countries Brazil has a very high proportion of its population in the 0 to 4 age bracket, a high proportion in the 5 to 14 and 15 to 19 brackets, and a very low proportion in the most productive age group ranging from 20 to 64. Brazil is not, however, afflicted with the high proportion of aged people characteristic of the populations of the more advanced countries.

No country which is classified as "developed" in Table , has as high proportion of its population in the 0 to 4 years range as Brazil. Indeed, in this respect Brazil resembles the poorer countries of Africa and Asia; even in Latin America, only relatively poor countries such as Peru have comparable figures for the proportion of infants in its population. Generally speaking, the same is true of the 5 to 14 and 15 to 19 age groups, although here Brazil's relative disadvantage is more striking. The differences in numbers in the lower age brackets are of course mirrored in relatively small proportion of the population in the more productive age groups. Of all countries listed in Table , only Morrocco, Pakistan and the Philippines have as small a proportion of their populations in the more productive age brackets.

This situation is of course reflected in a low labor force participation rate. As may be seen from Table , with only 33% of its population in the labour force, Brazil is more unfortunate in this respect than any of the major groups of countries in the Table taken as a whole. It is far below the developed countries of the OECD (43.2%), still farther below the communist countries (46.2 to 54.5%) somewhat below Asia and Africa (40.0 and 39.3%) and slightly below the Latin America average (34.5%). Indeed, of the individual countries listed, only Ceylon, Vietnam, and Mexico are worse off than Brazil on this criterion.

The Decision Function

Perspective planning requires, fairly early in the process, the determination of a long-run "decision function". That is, the planner must be informed by the Government as to the long run objectives of development policy, with at least some idea of the relative weights to be attached to each objective.

The more precisely quantified the decision function can be, the more closely can perspective planning reflect the wishes of the Government. The Action Program for 1964-66 sets forth five fundamental objectives:

(1) to accelerate the rate of economic growth, interrupted in 1962/63;

(2) to progressively curb the process of inflation during 1964/65, so as to obtain reasonable equilibrium of prices at the beginning of 1966;

(3) to alleviate regional and sectorial inequities and tensions created by social imbalances, through improvement of social conditions;

(4) to assure through investment policy adequate conditions for productive employment to absorb the continuous ly expanding labour force;

(5) to correct the tendency toward uncontrolled deficits in the balance of payments which menaces the continuity of the process of economic development through estrangulation of the capacity to import.

These objectives are by now the orthodox aims of development policies and are stated in nearly all development plans. Presumably these are long-run objectives of the Brazil ian government as well as the objectives of the Action Programme. However, if price stability is achieved and the previous rates of economic growth restored by 1966, in accordance with the Programe, objectives (1) and (2) might be rephrased for Perspective Plan purposes as: "To sustain a high rate of economic growth while maintaining reasonable price stability." In this context "high" rate of growth presumably means a 7% per annum average increase in real gross national product. Over a period of a decade or more as suggest ed in the Action Program. This rate of growth would increase per capita real income by nearly 4% per year, doubling per capita income in 17.5 years. Considering the rate of growth in per capita income that have been achieved in Japan,Greece, West Germany and some Soviet Block countries, despite obvious imperfections in government policies and in the allocation of resources, this target increase in per capita income does not seem at all unreasonable.

Such a statement of income targets is, however, excessively simplified. There is no _a priori_ reason for aiming at a certain constant rate of increase in per capita income. More thoughts and analysis should be devoted to selecting a pattern which would be optimum under Brazilian conditions.

It would also be desirable for the Government to form its views as to what constitutes "reasonable" price stability. In early 1964 the need to check cumulative inflation was clear. It is less clear that complete price stability should be accepted as a long run objective of Brazilian economic policy. The interaction of price movement and the balance of payments; resource allocation; distribution of income among regions, sectors and groups; and economic growth in general, needs further analysis. Presumably, however, the interpretation of "reasonable" stability, in a world where the general tendency in all countries is for prices to increase, would be somewhere between zero and 12% per year.*

Objective (3) also needs restatement for purposes of long-run planning. In its present form it is slightly ambiguous; it suggests that continuing discrepancies in productivity and income among regions and sectors will be off-set by social welfare policies. The long-run objective, however, must be to narrow the gaps in productivity and income among regions and sectors. Alleviation of continuing gaps by social welfare policies should be stated as a separate objective, and perhaps should not be included as part of the aims of economic development policies as such.

Objective (4) might also be stated in stronger terms. In the long run, mere absorption of the increase in the labour force is not acceptable as an employment policy. The elimination of open unemployment, underemployment, and low productive employment (sometimes called disguised unemployment) is also part of the usual employment objective.

Similarly, objective (5) leaves open the question as to how the balance of payments position is to be improved. In a short-run implementation program (like the 1964-1966 Action Program) the improvement has to come in large measure from the side of capital inflow, through foreign aid and investment and rescheduling of external debts. In a long-run the balance of payments problem will be mainly by development of new strong exports, perhaps with some continuation of the process of import replacement, where the comparative cost

* The concept of "optimal rate of price increase" is discussed in my chapter of the OECD volume on Public Finance and Economic Development - Paris 1964.

situation together with "linkages" clearly justify it.It would be better to recast the balance of payment objective in these terms.

Transport

Development policies in the Transport sector, as in all other sectors, must be cast in terms of the decision function. In other words, investments in the field of transportation must be evaluated primarily in terms of their direct and indirect contribution to the growth of national income,taking account of their inflationary impact as well, secondarily in terms of employment creation; thirdly in terms of contribution to reducing regional and sectoral disparities; and fourthly in terms of the impact on the balance of payments.

Transport as a "bottleneck"

All analysis of Brazilian transportation, and most analysis of Brazilian economic development, refer to the transport sector as a "bottleneck" in Brazilian economic growth. The precise meaning of this term, in the specific context of the interactions between investment in the transport sector and general economic development of Brazil, is seldom spelled out. It seems to me that there are two fundamental questions that must be asked with regard to the Brazilian transportation system. (1) What is meant by "inefficiency" of Brazilian transportation? (2) What would be the effect (in terms of the decision function) of eliminating "inefficiency" and providing cheap transport?

Nearly all discussion of Brazilian transports referred to its "inefficiency". Apart from the fact that most Brazilian transport operates at deficit, however, the meaning of the term is not immediately clear. The existence of a deficit is not in itself evidence of inefficiency, in either an economic or a technical sense. A government may decide to subsidize roads, railroads, airlines, or shipping, even though they are constructed, managed and operated in a highly efficient manner and could yield a profit, because of the external economies and "linkage effects" that cheap transport might bring to the rest of the economy. It is therefore important to make absolutely clear the precise origin of the deficits in Brazilian transport.

The Minister of Planning has referred to the railroads, for example, as "political parties and social security organizations". If indeed deficits arise solely because the labour force is excessively large, the real question is whether this form of social security is more expensive, both directly in terms of money cost and indirectly in terms of the impact on the technical efficiency of railroad operations, than straightforward unemployment insurance, or work relief, or some other form of social security. The cost of supernumeraries may actually be quite low.

If the numbers employed are not excessive, but deficits arise because the "political parties" are successful in getting excessively high wages for their members, the problem is really one of income distribution rather than of inefficiency in the transport system. The policy question then is whether this particular group deserves to earn incomes above productivity, thus requiring incomes of some other groups to be reduced below productivity levels. The question is one of social justice rather than efficiency, except to the degree that excessively high wages in the transport sector attracts a redundant labour force into the sector, bringing us back to the first question.

If, on the other hand, the deficits arise from genuine inefficiency of operations, it is still necessary to isolate the source of inefficiency. Is it a result of bad management? Of inadequate training labour? Inappropriate allocations of resources? Or a combination of these? Under the heading of allocation, among the questions that arise are: are railroads used where roads, ships, or airlines would be more efficient in a strict economic sense (that is, in terms of contribution to the objectives in the decision function)? Are the roads, railroads, ships and airlines in use in the wrong place? Are they of the wrong design? etc. In other words, analysis may show that geographic points (a) and (b) are better connected by roads than by railroads; but even if roads are built in accordance with this analysis, the roads may be of the wrong kind.

Turning to the second question, assuming that there are inefficiencies in the transport system which can be eliminated, bringing sharp reductions in transport costs, what would be the effect? Ultimately the effects must be evaluated in terms of all the elements in the decision function.

First of all, what will be the effect of cheaper transport on aggregate investment, and thus on income, output, and employment? The direct impact of cheaper transport on investment in transport itself should be fairly easy to calculate. The indirect effect of cheap transport on investment in other sectors may be more difficult to obtain, but if necessary previous estimates, taken from studies in other countries where conditions are more or less similar, might be applied to the Brazilian case. This analysis should, of course, be broken down by type of transportation and by region. Secondly, the effect of cheap transport of various kinds and in various places on the general price level could be estimated. The direct contribution of transport costs to total costs would be fairly easy to ascertain. The indirect effect on the price level could be estimated on the basis of the previous estimates of the contribution of cheaper transport to increased employment and output.

Thirdly, and perhaps most important, the effect of cheap transport on interregional relations should be analysed. Investment in transport is by definition a means of achieving closer regional integration. It is by no means clear, however, that regional integration will bring immediate gains to the poorer regions. The North and Northeast have enjoyed industrial development and some agricultural development, behind a protective "tariff barrier" in the form of high transport costs. The population of the North and Northeast is bigger than that of Canada or twice as big as that of Australia, in terms of number of people, and is concentrated in a smaller area. Even if incomes are relatively low, such a market cannot be ignored. In the short run, opening this market to the more efficient production of the East Central and Southern regions could seriously aggravate the problem of providing satisfactory employment and incomes in the North and Northeast. In the long run, of course, when the product-mix and occupational structure of the North and Northeast have been adjusted, cheap transport would presumably bring gains to the poor regions.

However, there is clearly need for careful study of the delicate problems of the timing of investment in transportation, so as to achieve the long-run gains with as little short-run disturbance as possible.

Finally, the effects of cheap transport on exports and imports, and thus on the balance of payments should be studied. Once the other studies have been completed, this appraisal should not be very difficult.