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MA
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THE IMPORT SUBSTITUTION PROCESS AND ECONOMIC DEVELOPMENT: THE BRAZILIAN EXPERIENCE

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February 10th 1970

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1. PREFACE

The preparation of any research study on Brazil is fraught with special difficulties, and this thesis is no exception. The paucity of statistical data, and the fact that there is no organization for the centralized collation or registration of such information as exists, creates particular problems. The National Accounts system is prepared by the Fundação Getúlio Vargas, while statistics referring to foreign trade, for example, are found at the Ministry of Finance. The researcher has no access to a wealth of documentation such as exists at the Dominion Bureau of Statistics in Canada.

I am therefore particularly grateful for the invaluable help I have had in the preparation of this thesis. Most of the tables contained herein were calculated by Mr J. L. Paoliello, lecturer of the Faculty of Economics at Belo Horizonte, and at present in charge of the Economic Section of the Brazilian Embassy in London. My thanks are due to Mr Paoliello, not only for the work involved in preparing the tables, but also for the stimulation he provided in many of our discussions which helped to shape certain of my thoughts. I am similarly indebted to Mr Artur Candal, Director of the Institute of Research and Analysis of the Ministry of Planning in Brazil, for discussions relating to some of the theoretical aspects examined in this thesis.

To Mr Graham Connell, Miss Thaïs Vasseur, and Mrs Elizabeth Coy, my thanks and appreciation are due for

their patience and care in editing the manuscript. Miss Vasseur and Mrs Coy additionally I thank for the long task of typing the drafts and final version of the manuscript.

Finally, I must place on record my deep respect and gratitude to Professor O.J. Firestone, whom I was fortunate enough to have as my tutor. Without his sound guidance, and unstinting patience and help, this thesis would never have been written.

2. INTRODUCTION

The aim of this thesis is to describe and analyse the Process of Import Substitution in Brazil and its impact on the economy as a whole. The weakening of international markets for the type of product exported by Brazil gave origin to this process. This weakening was incompatible with the high rate of growth necessary for a country like Brazil, the fifth in the world in size, and with the second largest population (90 million people) in the Western hemisphere.

Exchange control, tariffs and other instruments for the regulation of foreign trade were introduced at first to cope with balance of payment problems, but their implementation created conditions for what could be called a "spontaneous" process of industrialization. It was only during the 1950's that Brazilian policy-makers consciously sought, by means of industrialization, to make the internal activity of the economy less dependent on the export of its traditional products. In other words, an industrialization of considerable depth resulted from policy measures brought in at first to restrain import consumption, but which were later specifically conceived to encourage industrialization. These, in a short space of time, created an economy within which most manufactured goods consumed in Brazil were domestically produced. Two examples illustrate the capacity of Brazilian industry: (a) the output of cars in 1969 reached

353 thousand units, entirely made and assembled in Brazil. This industry was first set up in 1957; (b) virtually all the equipment and know-how for the 4.6 million Kw hydro--electric complex at Urubupungá, São Paulo, which is reaching the final stage of construction, are of Brazilian origin. Urubupungá is surpassed in size only by the hydro--electric units of Krasnoyarsk and Bratsk in the U.S.S.R.

The overwhelming emphasis, however, on import substitution industrialization worked to the detriment, until 1964, of certain other sectors such as education. This led to a crisis in the years 1962 and 1963, and eventually to the military coup of 1964, which caused profound repercussions in the political, social and economic life of the country.

Chapter 8 contains estimates which represent the first systematic attempt to measure import substitution in relation to the Brazilian economy. Between 1947 and 1964, the coefficient was $|0.4516|$, signifying a very high coefficient of import substitution for the economy as a whole. In the period 1956-1964, which covers the years of the Target Plan of the Kubitschek administration, the coefficient of import substitution in the durable consumer goods group is $|0.8685|$, followed by the capital goods group $|0.7728|$, the intermediary goods group $|0.4947|$, and the non-durable consumer goods group $|0.4260|$.

The lack of interest in strengthening the export sector was another reason for the crisis of the early '60s. No attempt was made until 1964 to diversify exports in accordance with the changing internal economic structure, notwithstanding the existence of a substantial foreign debt that had to be repaid, and the need for essential imports of raw materials (such as fuels) and foodstuffs (such as wheat).

Industrialization accentuated the regional imbalances, although, until the early 'sixties, this did not constitute a restraining factor on growth.

The political and economic crisis of Brazil was, in part, the result of the very success of the industrialization effort of the 1950's. The growth of the modern industrial sector has served to highlight the backward state of agriculture, education, government administrative services, etc. The success of industrialization has aroused in many social groups an awareness of existing inequities in the country's socio-economic system.

The serious problem with which Brazil is now faced is how to achieve both high rates of economic growth and social justice simultaneously.

Until 1961 the first task was carried out by means of the import substitution process. In that year the Brazilian economy attained one of its highest growth rates of 8.5 per cent growth in real output. In the two subsequent years this coefficient fell substantially. This did not mean that import substitution had then reached its final stage. The process still had much to offer, the difference being that, at the stage of economic development then attained by Brazil, she could no longer depend on it exclusively. The external sector, which had hitherto been a lagging sector, must now become a leading sector of the economy, and, as such, perform the same role as it does in the economy of advanced countries. This was the aim of the economic policy adopted in 1964.

The combination of domestic changes (as, for example, agrarian reform), together with improvements in the position of traditional exports and the gaining of new markets for industrial products, will lead to a high rate of growth accompanied by social justice. Therefore, while external demand stimulates the traditional export and manufacturing sectors, the government is able to intensify the investment required to provide for the necessary expansion of the infra-structure. It can also, at the same time, give special attention to the infra-structure of basic services, and to the need for a large increase in investments in the primary sector and the under-developed areas. This, in fact, is already being done.

The foreign trade figures (exports & imports) for Brazil in 1969 were US$4.5 billion - a record in her history - against US$4.0 billion in 1968. Real output increased in 1969 by 9.0 per cent, also one of the highest figures in the economic history of the country, and one which already reflects the massive investment put into the under-
-developed

areas and other sectors, such as education.

Brazilian economic policy-making, with some exceptions, including that bias against exports which characterized it in the period from 1947 to 1964, can be considered to have had a positive influence in the development of the country. Development in Brazil did not follow an optimal pattern and it involved unnecessary costs caused by sacrificing opportunities offered by trade and comparative advantage. Mistakes were made which prevented the rates of growth being even higher. These instances should not, however, detract from the favourable overall picture.

> "In evaluating Brazilian economic policy-making, we should be clear about the standards used. In particular, many Brazilian or foreign observers appear to judge Brazil from a wholly unrealistic base-line. If we bear in mind the blunders sometimes committed in the economic policy-making of the advanced countries, both socialist and capitalist, the Brazilian record does not seem poor in comparison."[1]

A rough appraisal of what the expansion of foreign trade might do for Brazil gives the following picture. Let it be supposed that, on the basis of what occurred from 1967-1969, Brazil is able to increase exports at an annual rate of 20 per cent. By 1972 exports would then have reached US$3.9 billion. Supposing that Brazilian real output can increase by 8 per cent a year as forecast in the Triennial Plan of Development (1970-1972), which is

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1 Nathaniel H. Leff, Economic Policy-Making and Development in Brazil 1947-1964 (New York: John Wiley & Sons Inc. 1968) p.181.

already being implemented. This would lead to an import capacity of 10 per cent (ratio imports/GNP), in contrast to the 5-7 per cent figure of recent years. An import capacity of this size would affect all development in Brazil. Apart from the direct impact on export production, the enlarged flow of imports would help the economy to surmount constraints on output which were the result of reduction of imports of essential inputs.

Resource allocation more in line with comparative advantage would permit higher aggregate growth than would be possible under an increasingly income-inelastic supply of imports. Moreover, a growth pattern following this line would enable the industry and its suppliers to move their cost curves towards a more optimal scale, leading thus to lower unit costs.

The 10 per cent import coefficient, mentioned earlier as a feasible rate to be attained through improved export performance, is still lower than in many advanced countries. Compared with the 1968 figure of 8.6 per cent (it was 6.6 in 1964), it shows that the goal is not too remote. A higher Imports/GNP coefficient will enable the Brazilian economy to enjoy some of the benefits of international specialization, avoiding therefore the inefficiencies and constraints on growth imposed by the previous pattern of autarkic development.

3. FOREIGN TRADE AND ECONOMIC DEVELOPMENT. THEORETICAL AND APPLIED CONSIDERATIONS

The relationship existing between foreign trade and economic development have been studied intensively for a long time and from many points of view.

In this thesis no attempt is made to cover the entire range of these relationships. Instead a selection has been made of those aspects judged relevant to the understanding of the process of import substitution in fostering growth.

At this juncture, it should be briefly explained that the term "import substitution", which has been used to describe the new process of development taking place in the under-developed countries, is not to be understood as simply leading to the reduction of imports and their replacement by domestic products. Initially there may well be a reduction but this is the result of restrictions in the external sector rather than a goal in itself. These restrictions compel the under-developed countries to start producing goods that formerly were imported. As this process gathers momentum it calls for an increase in derived demand for imports of intermediary and capital goods capable of leading, paradoxically, to a greater dependence on the external sector than when the substitution started. This will be elaborated in greater detail in Chapter 8.

Under-developed countries vary greatly in their levels of development and rate of economic and social change. They have in common, however, certain economic characteristics: low per capita income; a relatively small percentage of the GNP devoted to investment; a high proportion of the labour force engaged in primary activities; low literacy levels, shortages of technical managerial skills, etc.

> "If, under these conditions, a country is poor and wants to become rich, it needs time and resources - - capital goods, a skilled work force, a modern technology, and so on."[1]

The inputs mentioned above are economic requirements for growth. The issues discussed in this chapter revolve round ways in which some of these inputs may be supplied by foreign trade. The contribution it makes to growth depends on the role it plays in the historical process of development of each country in the context of the international economic and trading policies of other countries, especially the advanced countries.

Foreign trade may be a lagging sector of the economy or a leading sector. In the first case, import substitution may become an important policy of development, drawing its impetus from domestic investment. In the second case the economy becomes heavily dependent on the external sector "both in direct terms and in terms of the effect of the foreign trade multiplier and the accelerator

[1] John Pincus, Trade, Aid and Development. The Rich and Poor Nations (New York: McGraw-Hill Book Company,1967)p.118.

on economic activity generally".[2] This dependence on events in the outside world is compensated by less dependence on the domestic market.

A third case could be considered and is an extension of the second one. It applies to those countries that are in transition from an import substitution model to a self-sustaining growth model in which foreign trade may play a more important role than heretofore.

In accomplishing the task of bridging the gap between the two models, the decisive variable will be the volume and composition of investment in both internal and external sectors.

The fact that part of this investment is, in practice, translated into import substitution does not imply a repetition of the "old model", since the increase in exports and imports will provide a better utilization of under-utilized resources, within the context of a relatively more developed economy. This point will be examined in greater detail at a later stage.

Foreign trade, then, whether as a leading sector, or as a lagging sector, or even as a gap-bridging instrument, may lead to economic development.[3] Development

[2] Professor O.J. Firestone, Problems of Economic Growth (Ottawa: University of Ottawa Press, 1965) p.57.

[3] Charles P. Kindleberger, "Foreign Trade & Growth: Lessons from Britain and France 1850-1913", Economic History Review (December, 1961) pp. 289-305.

is even possible in a closed economy, as the example of the U.S.S.R. clearly shows.

"Which is the appropriate model to follow, therefore, depends on circumstances. The question is, which circumstances? The answer must be skewness of resources, both human and natural. Where these resources are highly specialized, the potential gain from trade is large and justifies instability and risk. Where, on the other hand, natural resources are abundant and varied, and human mobility and skills permit labor to be productive over a range of tasks, the significance of the contribution of foreign trade is reduced. In the long run, the natural resources are the most significant, since workers can be trained to new tasks. In the short term, the quality of the labor force is a significant consideration."[4]

3.1. Trade as a Leading Sector

Great Britain, a classic example, and Canada are countries in which foreign trade exerts a strong influence on their economic growth. Other examples may be cited: Belgium-Luxembourg, the Netherlands, and Switzerland.

In Table 1, in which 15 developed countries are listed in descending order of GNP, the ratio of foreign trade to GNP tends to rise as GNP drops.

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4 Charles P. Kindleberger, Economic Development, Second Edition (New York:McGraw-Hill Book Company 1965) p.313

TABLE 1

Ratio of Foreign Trade to Gross National Product, Developed Countries, Annual Average, 1966-1967.

Countries in descending order of GNP	GNP Billion dollars	Exports as % of GNP	Imports as % of GNP	Foreign Trade as % of GNP
United States	782.2	4	- 3	7
Fed.Rep.Germany	120.6	17	-15	32
Francem	118.8	10	- 7	17
United Kingdom	107.6	16	-13	29
Japan	106.6	9	-10	19
Italy	64.3	13	-14	27
Canada	55.5	18	-17	35
Australia	26.0	13	-13	26
Sweden	23.1	19	-20	39
Netherlands	21.7	31	-37	68
Belgium-Luxembourg	19.6	36	-38	74
Switzerland	15.3	22	-26	46
Denmark	11.6	21	-28	49
Norway	8.0	20	-32	52
New Zealand	5.4	18	-18	36

Source: Calculated from: United Nations, Statistical Yearbook 1968 Twentieth Issue (New York, 1969) pp.390-7, 558-65.

The tendency for the foreign trade figure to be proportionately larger as the country's GNP is smaller is evident in the above Table.

"The proportion of foreign trade to national product is only a crude measure of a country's dependence upon the markets and supplies of the rest of the world; for its dependence is likely to be greater if its exports and imports are concentrated in a few key sectors rather than distributed equally among all. Furthermore, the foreign trade proportion is only a crude measure of the proportional advantages that a country derives from the international division of labour, for much depends also upon the substitutability of goods imported and the internal mobility of factor inputs into the goods exported - the gains being greater with low substitutability and mobility."[5]

One of the conclusions that can be drawn from Table 1 is that smaller developed countries, in general, must depend far more heavily on foreign trade than the larger developed countries. In other words, small countries may be able to attain rapid economic growth by encouraging their foreign trade sector - although this alone will not cause growth.

Table 1 also shows that larger countries can attain rapid growth with much lower proportions of foreign trade as in the case of Germany and, especially, in that of the United States.

In these two countries, however, foreign trade has in the past played a more important role in their general process of economic growth than is reflected in the proportions mentioned in Table 1. The external sector was really one of the dynamic centres of the economy and due to

[5] Simon Kuznets, Modern Economic Growth Rate, Structure and Spread (Clinton, Massachussetts, Yale University Press, 1966) pp. 301-2.

its integration in the whole system, growth took place steadily and rapidly. The economic growth of European countries, in general, occurred in this same way. Although foreign trade was, in the past, the leading sector of the economies of many countries and later remained an important part of the system, in Latin American and African countries it was incapable of imparting a process of growth to other sectors of their economies.

A country with an important proportion of national income originating in exports, becomes dependent on the rate of growth and the conditions prevailing in world markets. Income-elasticity, techonological prospects and short-run instability of the commodities concerned will condition that dependence. Products such as chemicals, watches, equipment and even oil, are "better" products, however, than coffee, cotton or textiles, as the following section will demonstrate.

3.2. Trade as a Lagging Sector

The tendency for foreign trade participation to be larger as the GNP is smaller is also found among under-developed countries.

In Table 2, in which thirty under-developed countries are listed in descending order of GNP, the ratio of foreign trade to GNP tends to rise as GNP drops.

TABLE 2

Proportion of Foreign Trade to Gross National Product, Under-developed Countries, Annual Average, 1966-1967

Countries in descending order of GNP	GNP Billion dollars	Exports as % of GNP	Imports as % of GNP	Foreign Trade as % of GNP
India	44.0	4	- 6	10
Brazil	28.8	6	- 6	12
Mexico	23.1	5	- 7	12
Argentine	18.9	8	- 6	14
Pakistan	13.4	4	- 8	12
Turkey	10.7	4	- 6	10
Philippines	9.3	16	-19	35
Venezuela	8.3	25	-18	43
Iran	7.1	21	-14	35
Greece	6.7	10	-18	28
Colombia	6.4	11	- 9	20
United Arab Republic	5.6	15	-16	31
Chile	5.2	13	-13	26
Thailand	4.9	16	-17	33
Nigeria	4.7	12	-12	24
Portugal	4.3	22	-26	48
Peru	3.5	15	-25	40
Panama	3.5	30	-33	63
Taiwan	3.5	18	-19	37
Malaysia	3.3	37	-33	60
Morocco	2.6	17	-16	33
Ghana	2.2	13	-20	33
Kuwait	1.9	20	-30	50
Libya	1.4	65	-60	125
Guatemala	1.4	13	-18	31
Lebanon	1.2	14	-15	29
Ecuador	1.2	13	-12	25
Kenya	1.1	11	-20	31
Jamaica	0.9	32	-34	68
El Salvador	0.8	20	-22	42

Source: Calculated from: United Nations, Statistical Yearbook 1968 Twentieth Issue (New York, 1969) pp.390-7, 558-65.

In effect, however, it is not the figures of foreign trade that are high. It is the small size of the GNP which accounts for the high proportion of foreign trade. In other words, under-development, in limiting the size of aggregate output, tends to raise the proportion of foreign trade.

In the developed economies, exports and imports were and are an important and dynamic factor in generating income and furthering its expansion. Although the growth of the economy does not depend exclusively on them, it is conditioned to a great extent by their behaviour. Exports (comprising a large number of products) and imports are tied in with autonomous investments coupled with technological innovations. The combination of these two internal and external factors enables the developed countries to seize all the opportunities offered by the external markets to diversify and integrate domestic productive capacity.

In the under-developed countries this does not happen.

> "Each economy in the course of development faces a cluster of problems specific to itself, although many of them individually may be common to other contemporaneous economies. The complex of natural resources, the migratory currents, the institutional order and the

relative degree of development of the dominant contemporaneous economies single out each historical phenomenon of development. Let us take Cuba as an example. Few economies have developed faster than Cuba's, thanks to her growing integration into international trade. However, few are today facing greater difficulties in emerging from stagnation due to the nature of the relationship of external interchange. Thus foreign trade appears as both a stimulating and a restrictive factor in relation to development."[6]

In the under-developed countries, exports are not necessarily integrated to the rest of the economy. This is so, for example, when the export sector is an enclave of foreign ownership, as in the case of petroleum extraction in Nigeria or Kuwait, the fish industry in Peru, rubber in Malaysia, or banana plantations in Ecuador.

The degree to which export activities consequently affect the economy of each under-developed country depends on a series of factors, in particular (i) the number and nature of the products that compose the export list, (ii) the nature of the process of their production in regard to the extent to which this process multiplies and distributes income, and (iii) the foreign trade multiplier. Since the exports of the under-developed countries rest on the narrow basis of only one or two primary commodities, their effect in diversifying productive capacity is somewhat limited.

Table 3 shows that the less developed

[6] Celso Furtado, Development and Underdevelopment. (Berkeley and Los Angeles, California: University of California Press, 1964) p.4. First published in Portuguese in 1954.

countries rely heavily on primary products for their exports and are dependent to a great extent on imports of manufactured goods.

TABLE 3

Composition of Foreign Trade of the
Under-Developed Countries

Group of Products	Imports % of total			Exports % of total		
	1957	1962	1967	1957	1962	1967
Raw materials	38	34	32	87	88	82
Manufactured goods	62	66	68	13	12	18

Source: Calculated from: United Nations Yearbook of International Trade Statistics (New York, 1966) and United Nations Monthly Bulletin of Statistics (New York, December, 1968)

Demand for primary commodities generally increases more slowly than demand for industrial products, for the following reasons:

(a) increased productivity in the developed countries, with a resultant decrease in the quantity of raw material by final output;

(b) changes in the industrial structure of developed countries, where production of goods which require less raw material has expanded more quickly than that of goods which require more. The chemical industry, for example, is developing more rapidly than the textile or shoe industry; and

(c) increasing competition from synthetic products.

At the same time, the prices of primary

products in world markets have fluctuated much more widely than the export prices of industrialized countries. In other words, slow demand growth and wide price fluctuations have adversely influenced the external earnings of under--developed countries.

> "Historically, fluctuations in commodity prices have been attributed to a major degree to cyclical movements in the economic activity of developed countries. The amplitude of these movements has been dampened considerably in the post-war period: at least since the Korean war, fluctuations in commodity prices have been less violent than in the first half of the present century. In 1901-51, average annual fluctuations in the prices of a sample of primary products amounted to 14.5 per cent; in 1953-65, this average was about 9 per cent.
> This comparison of year-to-year price movements may perhaps understate the reduction in fluctuations in the course of cyclical movements covering several years. Nonetheless, commodity price fluctuations in the post-war period have perhaps remained larger than might have been expected in these business conditions. The prevailing view for many years after World War II was that once the business cycle in the developed countries was brought under control, most of the violent fluctuation in commodity markets would be eliminated. It is now clear that this was an oversimplified view. Even relatively mild changes in business activity, accompanied, as they usually are, by relatively large changes in inventories in the major consuming markets, can cause major changes in commodity prices; while at the same time, supply variations in the face of unchanged demand, can result in sharp price fluctuations, partly as a result of weak response of final demand to short-run price changes and partly as a result of inventory fluctuations."[7]

The scope for switching from weak to strong commodity sectors or to industrial exports may be limited by problems related to investment levels, access to markets

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[7] International Monetary Fund, Stabilization of Prices of Primary Products, a Staff Study (Washington: Mimeographed, 1968) pp.33-4.

and to availability of financial and technical assistance, etc. Countries facing these constraints may therefore find themselves locked in an excessive dependence on certain primary products, with a limited possibility of shifting resources to more productive uses.

In the more advanced countries there is no clear dividing line between the two types of productive capacity, one to meet domestic and another to meet external market needs. There is no export sector as such: manufactured goods are both exported and consumed in large quantities within the country and any specialization for the external market that exists is in terms of specific products rather than of different sectors of production.

In most Latin American countries, however, there is, even today, a social division of labour between the external and internal sectors of the economy. The export sector is well-defined and specializes in one or two commodities of which only a small proportion is consumed within the country. The internal sector does not produce for the external sector but only to satisfy domestic needs. Even countries that have already a relatively more developed structure find it difficult to export the manufactured goods (such as textiles or shoes, or plywood, etc.) which are being produced internally.

The combination of this dual pattern of the division of labour together with, generally, a marked inequality in personal income distribution is therefore responsible for the difference between the structure of production and the composition of internal demand. This, in the final analysis, is of prime importance in understanding the problems that Latin American countries are facing.

3.2.1. Export and Import Constraints

Table 4 presents a summary of imports and exports of under-developed countries, during the period 1913-1967.

TABLE 4

Foreign Trade of the Under-Developed Countries*
1913-1967[a]

	Imports (CIF)		% of world total	Exports (FOB)		% of world total
	Billion dollars	58=100		Billion dollars	58=100	
1913[b]	3.5	12.6	19.5	3.8	15.4	22.7
1928[b]	6.5	23.5	20.8	7.6	30.8	25.4
1938	5.8	20.9	24.5	5.9	23.9	28.0
1948	18.6	67.1	31.1	17.1	69.2	31.8
1949	19.4	70.0	33.2	16.0	64.8	32.9
1950	17.4	62.8	29.5	19.1	77.3	33.9
1951	24.0	86.6	29.7	24.1	97.6	31.7
1952	24.3	87.7	30.5	20.9	84.6	28.6
1953	21.3	76.9	28.1	21.0	85.0	28.1
1958	27.7	100.0	27.3	24.7	100.0	25.8
1963	32.7	118.1	22.8	31.4	127.1	23.2
1964	36.1	130.3	22.4	34.6	140.1	22.7
1965	37.8	136.6	21.0	36.5	147.8	22.1
1966	40.3	145.5	21.1	38.9	157.5	21.6
1967	45.6	164.6	21.0	40.2	162.7	21.1

Sources: a Calculated from: United Nations, Statistical Yearbook (New York, 1966 and 1968).

b Paul Bairoch, Diagnostic de l'évolution économique du tiers monde 1900-1966 (Paris: Gauthier Villers, 1967) p.123.

* Communist countries are not included.

As the above table shows, the year 1950, insofar as exports are concerned, was the turning point of the period under study. The first phase is characterised by an expansion in the foreign trade of under-developed countries, in relation to the world total. During the second phase the reverse is the case. In 1950 exports from the under-developed areas accounted for 34 per cent of the world total; in 1967 this proportion had fallen to 21 per cent.

In general, income from exports per unit of production showed decreases over the long term, as can be seen in Table 5.

TABLE 5

Trends and Fluctuation Index of Prices, Quantities and Profits of Some Primary Products (percentage) (1953-1965)

Products	Fluctuation Index			Annual Growth Rate		
	Price	Quantity	Gain	Price	Quantity	Gain
Iron Ore	5.1	8.4	10.6	-0.7	12.6	11.8
Manganese	13.5	13.1	15.1	-2.4	2.9	0.4
Cotton	4.3	7.1	9.1	-2.8	2.5	-0.4
Jute	7.7	6.6	5.2	2.3	-2.1	0.2
Coffee	12.4	6.6	8.0	-5.2	4.0	-1.4
Tea	4.4	3.3	4.3	-0.9	1.9	1.0
Bananas	5.9	3.3	5.1	-2.5	4.7	2.1
Sugar	10.5	6.1	8.8	1.6	2.3	4.0
Groundnuts	5.3	8.8	6.8	-1.3	4.3	2.9

Source: International Monetary Fund, Stabilization of Prices of Primary Products, a Staff Study (Washington: Mimeographed, 1968) p.35.

Exports from under-developed countries go, mainly, to developed countries. Trade exchanges between under-developed countries reveal little of significance. Approximately 70 per cent of the exports from these countries are absorbed by the markets of the developed Western countries and Japan.

A study carried out by the United Nations in 1964[8], indicates that every 0.5 per cent differential between a desirable rate of growth and the actual rate of growth in the expansion of the economies of the developed countries in Europe means a loss of 1.3 billion dollars annually in imports from under-developed countries.

Although almost all these imports are primary products, their entry into the developed countries is hindered by tariff and other barriers, as shown in Table 6 hereunder.

TABLE 6

Imports of Major Primary Products by Developed Countries from Under-Developed Countries: Proportion Subject to Restraints.

(Percentage)

	All Types	Quantitative Restrictions
Foodstuffs and tobacco, weighted average	56	33
Sugar	100	82
Other basic foods	75	47
Vegetable oils	78	28
Fruits and vegetables	64	41
Oilseeds and feed	41	18
Beverages, spices and tobacco	38	17
Industrial raw materials, weighted average	22	5
Metals and minerals	21	3
Fibres, hides and rubber	10	2
Other agricultural raw materials	66	28
Petroleum Products	100	38
Total Products listed, weighted average	61	26

Source: Gertrud Lovasy, Effects of Reducing Barriers to Trade in Primary Products on Developing Countries' Exports, (IBRD August 1966-unpublished) quoted in International Monetary Fund, Stabilization of Prices of Primary Products, a Staff Study (Washington: Mimeographed, 1968) p.28.

8 United Nations, Towards a New Trade Policy for Development (New York, 1964) Chapter V.

In the case, for example, of Brazilian exports to the United Kingdom, which are made up almost exclusively of raw materials, 60 per cent of their total value incurs customs tariffs which can be as much as 33 per cent ad valorem, not to mention quota systems covering such items as textiles, sugar, bananas, etc.

At the same time as the developed countries restrict the imports of primary products from under-developed countries by tariffs, quotas and other means, they also pursue a policy of decisive support for the goods they themselves export, including raw materials. These commodities compete with those from the under-developed countries. Table 7 below shows the proportion of primary products exported by developed countries during the period 1963-1965:

TABLE 7

Exports of Primary Products (percentage exported by developed countries)
1963-1965

	Percentage of World Total
Sugar	22
Cotton	36
Wood	82
Rice	30
Cotton Textiles	74
Furs and skins	61
Iron ore	53
Meat (with and without bone)	68

Source: International Monetary Fund, Stabilization of Prices of Primary Products, a Staff Study (Washington: Mimeographed, 1968) p.31.

3.2.1.1. Effects of Export Constraints on Economic Development

3.2.1.1. Effects of Export Constraints on Economic Development

What are the effects of low or even stagnating exports on economic development, particularly of those countries that have already reached a more complex economic structure, such as some Latin American countries, including Brazil? If supply of the products affected by the export barriers (see Table 6) is at all price-elastic, then limitation of exports leads to reduced output of these commodities. Generally, agriculture in under-developed countries, especially in the relatively more developed ones with large areas, can respond dynamically to rising demand. Hence, if given better access to world markets, output might well increase, leading to higher rates of income creation in rural areas. This would have a positive effect on the economy of those countries where land is available and the rural population represents an important proportion of the labour force. The supply of capital would also increase in dynamic response to higher demands from the export market for primary products. Primary product producers confronted with rising demand, because of greater access to world markets, might well increase their savings in order to invest in expanding their productive capacity. Primary commodities such as sugar, beef, and cotton, can be, or even are being, produced by commercial rather than peasant methods of agriculture. The adverse conditions of the world market, however, reflected in Tables 5, 6 and 7, limit the direct investment opportunities in these activities.

> "The issue of reducing barriers to imports of primary products has been on the international agenda throughout the post-war period, but the results obtained have been limited... Perhaps the clearest illustration of the problem - and at the same time the most acute - is provided by sugar. It is one of the most heavily protected commodities through a variety of measures: quantitative import restrictions, import quotas, monopoly trading, and import licensing: import duties, levies, and other charges on imports; price supports and guarantees and subsidies for domestic producers of the raw materials and sugar manufacturers; export subsidies and refunds of duty on re-exports; and internal fiscal charges on both imports and domestic consumption. It is a commodity of great export interest to developing countries: their annual exports are now running at 14 million metric tons, valued at US$1.4 billion - the third largest export of developing countries after petroleum and coffee. The export flow would be substantially larger if protection were reduced, as some illustrative estimates indicate."[9]

Structural changes cannot occur in the short run. Neither domestic savings, nor the domestic market are able to expand at the rate required by rapid economic development. Exports would provide a solution, and to increase them is the most effective way to find markets which will, in turn, allow for more imports, and, in consequence, increased investment.

Drawing upon resources which are either idle or committed to the production of staple commodities would have the result of allowing the economy to increase aggregate output. This would benefit both from drawing on otherwise

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9 International Monetary Fund, loc cit p.103.

unused resources and from a more efficient pattern of resource allocation.

3.2.1.2. Effects of Import Constraints on Economic Development

A developing economy with a rapid growth rate requires a rational use of significant quantities of capital goods. Domestic production can only supply a part of this need. The difficulty, or inability, to transform domestic factors into capital goods, at least at a reasonable rate, is one of the characteristics of those countries not yet economically advanced.

All the input imports (expansion imports, investment and re-investment imports and operation imports) are necessary in order to avoid, not only under-utilization of existing resources, but also frustration of the growth potential.

> "The input-import requirement constitutes a factor-proportion problem, which if not solved would lead to under-employment of existing resources and frustrate the accumulation of further resources. A factor-proportion problem arises when factor substitutability is not great enough to allow purposeful employment of all existing or potentially existing factors of production."[10]

The factor-proportion problem arises out of limited substitutability, not between capital and labour, but between domestic factors and the input imports. Labour and capital resources (even capital goods imported in

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[10] Staffan Burenstam Linder, Trade and Trade Policy for Development (New York, Frederick A. Praeger Publishers, 1967) p. 13.

earlier periods) may be unemployed if input imports lag behind.

Developed countries may also face factor--proportion problems in the form of rigid import requirements to maintain production. If an under-developed country does not fulfil its import requirements, the domestic factors cannot be transformed into the full variety of required inputs, and the economy will be unable to transform potential savings into investment.

> "In discussing the economic consequences of limitations of supply from importation, we should distinguish between a demand-diverting effect and a supply-constraining effect. That is, one effect of import stringency is to divert demand from traditional overseas suppliers to domestic suppliers. At the same time, however, lack of raw materials and other inputs from abroad may inhibit the ability of domestic producers to respond elastically to this additional demand for their products."[11]

Latin American industries, in particular those of Brazil, Argentine and Mexico, suffered the impact of import limitations during World War II. The Textile Industry, benefitting from the demand-diverting effect, and with the advantage of an available elastic supply from domestic sources of requirements previously imported, was able to grow rapidly at that time. In other industries, however, although the same effect was present and demand was high, expansion was constrained because of an insufficient

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11 Nathaniel H. Leff, "Import Constraints and Development: Causes of the Recent Decline of Brazilian Economic Growth" Review of Economics and Statistics (November, 1967) pp. 299-300.

supply of raw materials. In the Brazilian equipment industry, for example, production in 1945 was only 9 per cent higher than in 1940. This was due to the bottleneck created by an insufficient supply of steel from imports and domestic production. Between 1945 and 1954, however, Brazilian equipment production expanded at an annual cumulative rate of 16 per cent. During this period, imports of raw materials and steel into Brazil increased vigorously.

3.2.2. The Transition to a New Model

The long Depression of the 'thirties may be taken as the critical point at which the primary export "model" of some Latin American countries broke down. The sharp decline in export receipts caused an immediate drop of 50 per cent in their importing capacity. This capacity only regained its pre-crisis levels after 1942.[12]

Until 1929, the year of the "great crash", the external sector was the leading sector of the economy of these countries. But as already explained, it could not stimulate growth in the rest of the system as it had done in countries like Canada, Germany and even the United States. In Latin American countries, therefore, exports represented an important share of the national income and were greatly responsible for its growth. Imports as the source of

12 See the many studies made by the United Nations Economic Commission for Latin America on this subject, in particular The Social Development of Latin America in the Post-War Years, E/CN/12/660/(New York: May, 1963).

supply of various types of goods and services, were the means by which an important part of domestic demand was satisfied. From 1929 on, the external sector became a lagging sector of the economy and led most Latin-American governments to take measures to protect internal income. These measures consisted primarily of import restrictions and controls, the raising of exchange rates and the purchase by the government of the surplus output of those commodities which the external markets could not absorb, at a price the exporting countries considered to be satisfactory. This policy aimed more at protecting the country against external imbalance than at stimulating internal activity. Nevertheless, industry, which then began to consolidate, was buttressed by the maintenance of demand supported by rising internal income resulting from that policy.

A brief consideration of how the new internally orientated development model came into being may be useful.

Since the existing level of domestic demand remained virtually the same while the capacity to import was sharply reduced, it was no longer possible to make an ex--ante adjustment between the structures of production and of domestic demand by means of foreign trade. An ex-post adjustment was made through a substantial increase in the relative prices of imports, which provided a strong stimulus to domestic import-substitution production. By making near full use of the existing productive capacity, it was possible to replace by domestic goods a proportion of the demand which was formerly met by imports. Later on, by a re-allocation of factors, especially the foreign exchange that was in such short supply, the available capacity to import was used for external purchases of the capital goods and raw materials needed to establish new production units and thus continue the import substitution process.

There was a decline in the external sector's contribution to the national income and a consequent increase in the contribution of domestic production to total supply.

The external growth factor, exports, lost its strategic position to the internal factor, investment, and the amount and composition of investment were what determined the continuation of the development process.

This does not mean that the external sector no longer played a major part in the development of those countries that had embarked upon the substitution process. What happened was that its function changed; instead of being directly related to income growth, through increased exports, it became one of the factors responsible for the diversification of the structure of production through imports of equipment and intermediary goods.

This explains how it is possible, at least in a period of time, to achieve a reasonable rate of investment and, in consequence, of growth, despite a stagnation or decline of exports and imports.

In conclusion, foreign exchange problems; low elasticity of demand for imports of primary commodities in advanced countries; the unsatisfactory way of the pricing mechanism in under-developed countries; and the case for infant-industry protection, led under-developed countries to adopt commercial policies that are far removed from the conventional theory of free trade. High tariffs, extensive quantitative restrictions and far-reaching exchange regulations became the rule rather than the exception.

> "The conflict over commercial policies in developing countries is probably not so much a conflict between different evaluations of the relevance of the protectionist arguments in the traditional theory as a conflict between the traditional theory and a wholly different approach. In any case, the policies do not reflect a well-defined set of conclusions derived from a neat body of theory and a search for alternative policies based on rather fragmentary theories of trade. As is so often the case, actual policies seem to precede explicit theories from which these policies could be deduced."[13]

But in countries like those in Latin-America, where a rapid process of industrial growth began this way, the changes in the structure of production were virtually confined to one sector - the industrial sector - and to allied activities. There was little or no effect on the situation of the primary sector - which, of course, included

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[13] Staffan B. Linder, loc cit pp. 79-80.

the traditional export lines. Two points should be noted here, and these are elaborated later on. One is the persistence of a precarious export base, which was one of the causes of the chronic external bottleneck, and in the final analysis will be shown to be the element capable of checking growth; the other is the incomplete nature of the transformation of the economic system, and the consequent emergence of a new type of dual economy. The new industrial sector was established and expanded within the narrow framework of the domestic market and the export sector did not change. This imposed a "closed" character on the new model.

The change, therefore, in the domestic division of labour resulting from the industrialization process based on import substitution, was not accompanied by any corresponding change in the international division of labour. This remained basically the same in world trade. In fact, the only appreciable change that took place was a considerable increase in trade within the group of developed nations. In other words, Brazil continued to export coffee, the Argentine continued with wheat, etc.

Summing up, the import substitution process may be interpreted as an incomplete and "closed" development process which resulted from foreign trade restrictions. The aim was to reproduce in an accelerated form the industrialization process carried out in the past by most of the developed countries of today.

3.3. Trade as a Gap-Bridging Instrument

The external bottleneck and the consequent fairly intensive substitution process that took place in countries like Brazil, Argentine and Mexico made them convert their economies to an internally, rather than an externally, orientated growth process.

Import substitution made considerable progress, and a large range of durable consumer goods as well as capital goods began to be manufactured internally. These goods, however, as already mentioned, are consumed entirely within the domestic market. For the countries named above, as well as others such as India, Pakistan, some African nations, etc., the external sector is characteristically a lagging sector.

Since some of these countries, including Brazil, have already reached a stage which classifies them as relatively more developed economies, with large areas and rich in natural resources, foreign trade could provide them with an opportunity to escape internal bottlenecks through imports of goods and services to be linked up with such domestic factors as might be unemployed. It could also provide a market for the output of new and traditional products, and thus maintain a high level of demand.

As these countries have reached an industrial stage capable of guaranteeing a steady flow of manufactured goods, such as small motors, steel, furniture, shoes, etc., the marginal cost of foreign exchange resulting from these exports may be lower than it was when sole reliance was placed on import substitution, as in the previous pattern of development.

But an increase in exports depends, on the one hand, on world market conditions, over which individual under-developed countries may have little or no influence. The expansion of sales in foreign markets, on the other hand, is generally a matter of improving techniques and strains, labour skills, mamagerial methods and the like, within the country, so as to increase productivity per hectare and per man-hour and to reduce costs.

Supposing that developing countries do manage to export more, either because better international conditions prevail, or as a result of real internal effort in export promotion, or both, then their economies would be able to expand more rapidly. Supposing, too, that there are under--utilized resources, it would be possible not only to increase exports but also production for the domestic market - permitting, perhaps, rates of growth even higher than were experienced when the import substitution process began.

Many current aspirations and movements such as those relating to the regional integration of Latin America (Latin American Free Trade Association - LAFTA) or the United Nations Conference on Trade and Development (UNCTAD) are based on, or imply, new patterns for the inter-

international division of labour in line with internal changes and with the need to accelerate the growth rate of developing countries by expanding their foreign trade.

> "Here, prospects for rapid expansion of export earnings depend on the willingness of developed countries to relax restrictions on imports as well as on the ability of the developing country to improve the quality and general competitiveness of its products. Agricultural protection is deeply rooted in the economic systems of most developed countries and is buttressed by strong political interests. No dramatic advances toward free trade in agriculture can be expected in the short run. The developed countries can, nevertheless, take a number of steps consistent with the objectives of both their agricultural and aid policies to facilitate the imports in question."[14]

In conclusion: foreign trade could become a real instrument of growth since its effect would be taking place within a more developed structure and not the one which prevailed before the depression of the 1930's. Increased import liberalization, made possible by improved export performance, would permit a loosening of an a priori direction of production towards the domestic market, as resource allocation would adjust the pattern indicated by freer market conditions. The effects of a greater supply of imports would have a vigorous impact on marginal resources allocation, affecting the economy's future investment and production plans and leading to increased specialized activities. In other words, aside from the direct impact on export production, the increased flow of imports would help the entire economy to

14 Lester B. Pearson, Partners in Development, Report of the Commission on International Development (London, GB: Pall Mall Press, 1969) pp. 84-85.

overcome constraints on output imposed by restriction on imports of essential inputs.

If exports of manufactured goods prove difficult because of tough competition from developed countries that already have their own connections in the international markets, the expansion of primary commodity exports would still bring a positive contribution to the economies of the countries producing them.

A survey made by the International Monetary Fund[15] shows that 39 out of 83 (almost one half) developing countries, depended, in 1965, on one commodity or on a single closely related group of commodities for more than 50 per cent of their total exports. Coffee exports, for example, in countries like Colombia, Ethiopia, El Salvador and Haiti, account for more than half their total export earnings (in Brazil it accounts for 34 per cent). Expansion of other primary products exports could be made as part of a greatly enlarged effort to rationalize their coffee production.

The concept of diversification is, consequently, not to be limited to the expansion of exports of manufactures. An increase in the number of export products, even though they may be exclusively primary goods, will represent diversification in the sense that risks resulting from recurrent price fluctuations, a fall in demand in international markets, etc. will be spread over a wider

15 IMF, loc cit Chapter 7.

range of products than heretofore.

Because foreign trade is today a lagging sector in the developing countries it has imposed upon them the characteristics and peculiarities examined in this chapter. If the word "model" may be used, it could be said that developing countries, such as Brazil, Colombia, the Republic of China, India, Mexico, the Republic of Korea, etc., have reached the stage at which their economy represents a model where foreign trade can supply part of the inputs required by rapid economic development. This model would be different from that in which foreign trade is a lagging sector, having a closer analogy to the case in which if is a leading sector. The new stage would be that in which the external sector becomes more integrated to the internal sector, promoting a better allocation of factors in a more complex economic structure.

4. THE BRAZILIAN ECONOMY HISTORICAL DEVELOPMENT AND PRESENT STAGE

The conditions that affected the Brazilian economy were quite different to those present in other countries, whose history of discovery and development began at about the same time.

In the Spanish American countries the first phase was ushered in with the discovery and exploitation of precious metals, for which slave labour, provided in the beginning by the native Indian populations and later by large numbers of imported Africans, was used.

In the United States, which was first colonized one hundred years later than Brazil, the early European settlers discovered a land rich in natural resources and possessing favourable climatic conditions, similar to those of their country of origin.

In Brazil the discovery of precious metal was not made until almost two hundred years later, and the first Portuguese settlers had to try their hand in agriculture, under conditions quite new to them.

> "Confronted with an environment hostile to the European settler, the Portuguese took with them to Brazil a vast retinue of African slaves who mingled with the native Indians - a primitive people, living a stone-age existence. From such human elements, the small number of white

> colonizers forged an entirely new civilization under conditions acknowledged to be difficult."[1]

The present Chapter analyses the various historical phases of the Brazilian economy, and the conditions that shaped them.

In terms of the part played by foreign trade in economic development, Brazil's economic history can be divided into three distinct phases. The first phase extends from 1530 to 1929. During this period, foreign trade is the leading sector of the economy. The second phase runs from 1929 to 1964, with foreign trade as the lagging sector. The third phase starts in 1964, and by then foreign trade began to be considered as an instrument capable of accelerating growth, performing the function, described in Chapter 3, of bridging the gap between two different stages of economic development.

4.1. Trade as the Leading Sector of the Economy (1530 - 1929)

In the four hundred years from 1530 - the beginning of the economic development of the territory - to 1929, the Brazilian economy received its dynamic impulse from external demand.

Viewed as a whole and within the international context, Portuguese colonialism in the tropics took the

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[1] Roberto C. Simonsen. História Econômica do Brasil (1500-1820), Terceira Edição, São Paulo, Brazil. (Companhia Editora Nacional, 1957) p.33 (my translation).

form of a vast commercial organization, more complex than the old trading companies in India, but, like those, with its activities directed towards the exploitation of the natural resources of virgin territories to the exclusive advantage of European trading interests.

Agricultural activity was the corner-stone of the system. Vast estates and slave labour provided the bases for large-scale production, destined for foreign markets. The internal market - in itself a subsistence economy - lacked any real economic significance.

In the North of Brazil, where colonization started, the first major economic activity was sugar production.

The sugar cane, as well as the technique for its cultivation, was introduced into Brazil from the island of Madeira. At this time, the Protuguese merchants enjoyed good commercial relations with the Dutch, who in turn provided the facilities for marketing the product in Northern Europe.

Sugar production began at the end of the 16th Century, and retained its importance up until the middle of the 17th Century. Then the French and British West Indies, with assistance provided by those Dutch nationals who had been expelled from Brazil for political reasons, also began to produce sugar. These new producers had better facilities for supplying the European markets, and succeeded in ousting the Portuguese colony from its monopolistic position as world supplier of the product. The result was that all activity connected with sugar production in Brazil virtually stopped, and the economy entered a phase of stagnation.

> "Celso Furtado says in this connection: 'there occurred a process of economic involution... the Northeast was progressively transformed into an economy in which a large part of the population produced only what was necessary to subsist... The formation of the Northeastern population and its precarious subsistence economy - basic element of the Brazilian economic problem in later epochs - are thus linked to this slow process of decadence of the large sugar enterprise, which in its best years was possibly the most profitable colonial agricultural business of all times.'(Furtado 1959:80-81)".[2]

In the 18th Century, when gold was discovered in Minas Gerais (Central-Eastern region), there was a recurrence of the same feverish activity as had been evident during the sugar boom. The results were quite similar. No lasting foundations were established, on which the economy as a whole could develop.

The discovery and eventual exploitation of gold in Brazil is connected, in the political field, with the close association which then existed between Portugal /

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[2] Andre Gunder Frank, Capitalism and Underdevelopment in Latin America, Historical Studies of Chile and Brazil (New York: Monthly Review Press, 1967) pp. 153-4.

and Great Britain.

This association, ratified by the Methuen Treaty of 1703, granted preferential tariffs to British textiles entering Portugal, and, by extension, Brazil. Deficits in the Portuguese balance of payments were covered by Brazilian gold.

For Brazil herself, the gold-mining boom produced the following results: (a) it removed the economic nucleus of the Colony from the North to the Central-east area; (b) it attracted to the mines a large proportion of the labour force that had been employed in sugar production, thus accelerating the contraction in this industry; (c) it attracted a great flow of Portuguese immigrants, and in doing so changed the population structure, which until then had been composed mainly of slaves; and (d) it started, albeit in a simple way, the process of urbanization, with the emergence of several townships in the mining areas.

Brazilian gold also provided a strong tonic for the industrial development of the United Kingdom. It guaranteed greater flexibility in English imports, and was an important source of those reserves which made the British banking system the most important financial institution in Europe.

> "By gold brought from Brazil the Portuguese made up the difference between the four hundred thousand pounds worth of goods sent to England and the million due for merchandise received.

> Under the conditions of trade existing after 1703, Portugal was shipping from five hundred thousand to a million pounds sterling of gold a year into England. One estimate places the amount of bullion imported from Portugal as high as fifty thousand pounds a week."[3]

The last thirty years of the 18th Century witnessed the decline of the gold boom in Brazil, and the passing of yet another ephemeral cycle of the country's economic activities.

After the arrival in Brazil of the Portuguese Royal Family, in 1808, to escape the consequences of the Napoleonic wars, two important events took place. The first was that Brazilian ports were opened to the allies of Portugal and Great Britain, and thus the isolation of the Colony came to an end. The second was that Brazil extended to British subjects the same commercial privileges they already enjoyed in Portugal.

When the Independence of Brazil was proclaimed in 1822, the United Kingdom managed to arrange for the privileges hitherto in existence to continue. Among these was the guarantee of preferential tariffs for British goods imported into Brazil. This preferential treatment lasted until 1844, when the trade agreement between the two countries expired. A 30 per cent ad valorem duty was immediately placed on most imports into Brazil. The

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3 Allan K. Manchester, British Pro-eminence in Brazil; its Rise and Decline (Chapel Hill.University of North Carolina Press, 1933), p.31.

resultant increase in the financial power of the central government helped to consolidate its authority, and this is one reason why Brazil kept her territorial unity at this time, unlike the erstwhile Spanish American colonies which split up into numerous republics.

> "By 1874, the average rate on imports was approximately 40 per cent and in 1879, 50 per cent with a 60 per cent rate on cotton textiles. In the early 1890's the tariff was raised still further. After some reduction in 1897, the tariff was increased again in 1900 to put most rates at 50, 60 and 80 per cent."[4]

As foreign trade was the leading sector of the economy, tariffs on imports by 1880 accounted for almost two-thirds of federal revenues, while tax on exports supplied more than 50 per cent of the revenues of those States producing commodities for the external markets.

Higher tariffs, supported by the Treasury as a source of revenue and a means of reducing the country's balance of trade deficits, eventually began to have a protectionist effect on the economy, principally towards the end of the century when the "milréis" was devalued more frequently. Between 1889 and 1895, for example, the number of factories (albeit rudimentary) rose from 636 to 1088 (until 1822 all industrial activity in Brazil had been strictly prohibited by Portugal).

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[4] Nathaniel H. Leff, Economic Policy-making and Development in Brazil 1947-1964, loc.cit. p.9.

4.1.1. The Genesis of the Coffee Economy

The market for Brazilian sugar became increasingly less assured. World cotton markets, in which Brazil had once featured as an important producer at the end of the 18th Century, also offered poor prospects, owing to strong North American competition. Tobacco, leather, rice and cocoa were lesser products, and the markets for these did not allow room for much expansion.

Within this context, the problem consisted in discovering export commodities in which land could be a fundamental factor in production.

By the middle of the 19th Century a relatively new product, coffee, had come to the fore. The requirements for its production conformed closely to the ecological conditions of Brazil. It had been brought into the country in the early 18th Century and was cultivated in many areas for local consumption, but it was only at a later stage that it became commercially important. This occurred when the price of coffee rose abroad, owing to political disturbances in the French colony of Haiti, which was an important producer. In the first ten years of Brazilian Independence, coffee accounted for 18 per cent of the value of total exports, taking third place in the list after sugar and cotton. In the subsequent two decades, coffee moved into the lead and eventually accounted for more than 40 per cent of the value of the country's exports. The increase in Brazilian exports in the first half of the 19th Century was entirely attributable to coffee.

At the time that coffee became an export commodity, its production was concentrated in the hilly regions around Rio de Janeiro. Here, close to the capital, there was a relatively abundant supply of manpower available owing to the decline of the mining economy. Furthermore, because of the proximity of the port, there were no problems of transportation as the mule convoys that provided the means of access to the port were also in plentiful supply. Hence the first phase of coffee expansion proceeded with pre-existant and under-utilized resources.

With the growth of the coffee economy a new managerial class emerged which was destined to play an important role in the future development of the country.

In comparing the formative processes which produced those ruling classes that had acquired power and status during the separate periods of the sugar and coffee economies, certain fundamental differences are immediately obvious. When the sugar "barons" came to power, all commercial activity was the monopoly of groups established either in Portugal or in the Netherlands. Production and commercialization were strictly segregated, and the important producers operating in Brazil did not have the capacity to view the perspective of the sugar economy as a whole.

The coffee economy was formed under quite different conditions. From the beginning, men with business experience made up the vanguard, and throughout the early phase of development, production and trading interests were intermingled. The new ruling class emerged from a struggle along a broad front: the acquisition of land, the recruitment of labour, internal transportation, marketing at the ports, official contacts, involvement in economic and financial policies, etc..

The proximity of the country's capital to the producing area was, of course, a great advantage. Soon, the rulers of the coffee economy came to understand the enormous importance of the Government as an instrument of economic action.

> "But what particularly singles out the coffee men is not merely the fact that they utilized that control to attain objectives well defined within the context of a specific policy. It was this clear concept of their own interests that differentiated them from other dominating groups previously existing or contemporary." [5]

By 1880, the elements that characterized the Brazilian economy had undergone a basic change. The

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[5] Celso Furtado, The Economic Growth of Brazil, a Survey from Colonial to Modern Times (Berkeley and Los Angeles: University of California Press, 1968) p.126.

country was reintegrated into the expanding currents of international trade, and once the early development stage was concluded, the coffee economy was able to finance its extraordinary subsequent expansion from its own resources.

As the position of coffee within the Brazilian economic system grew in importance, so the economic relationship with the United States grew deeper. In the second half of the century the United States had already become the principal market for Brazilian products, a position of supremacy which the United Kingdom had traditionally enjoyed in the Brazilian export trade.

Apart from coffee, trading also flourished vigorously in one other product: rubber from the Amazon region. The rubber boom, however, was short-lived, covering a brief period from the end of the 19th Century to the beginning of the 20th. Rubber plants from the Amazon were smuggled to Asia and nurtured there by English botanists using advanced scientific methods. The plants grew so successfully, particularly in Malaysia, that Brazil lost her lead as world supplier of this product. After a short time, the Amazon region, being no longer the dynamic centre which international trade had made it, reverted to lethargy.

In 1889 the Republic replaced the Monarchy as the form of Government. The year before, slavery had been abolished. The effects of Abolition, in its broadest aspects, were of greater political than economic significance. The role of slavery as the basis of a regional system of power was more important than its part in the organization of production. Once it was abolished, there was practically no change of real significance in forms of production organization or even in distribution of income. In the sugar industry, for example, technical innovations resulting from heavy investment in machinery, as well as export difficulties (caused by vigorous Cuban participation in the American market) contributed to a reduction in the demand for manpower. As far as coffee growing is concerned, even before Abolition, a great stream of European immigrants had begun to flow into the State of São Paulo. For this reason the contraction in the supply of labour resulting from the abolition of slavery had no major effect on the utilization of resources. What in fact occurred was that the relative abundance of land enabled former slaves to find shelter within a subsistence economy.

4.1.2. The Maturing of the Coffee Economy

For several reasons, one of which was the destruction by disease of the coffee plantations in Ceylon, a period of brisk expansion in coffee growing in Brazil began at the end of the 1880's. Brazilian coffee production in 1901 reached 16.3 million 60-kilo bags. In 1880 it had been 5.5 million, while present production is around 22 million bags.

The exceptionally suitable conditions for growing coffee in Brazil provided producers with the opportunity to monopolize three quarters of the world's supply and consequently enabled them to manipulate the price. When the first crisis of overproduction occurred in the beginning of the 20th Century, Brazil realized that it was possible to carry out defensive manoeuvres against the fall in prices. All that was needed was sufficient financial resources to be able to keep part of the supply out of the market. In other words supply had to be artificially restricted. Stocks accumulated in this way were held in reserve for (a) when the market showed greater strength, or (b) the years of poor harvests. In 1906 this policy was strengthened by the Agreement signed in Taubaté (State of São Paulo), which provided for direct Government participation in the market , whereby it would buy up any surplus for the purpose of balancing supply and demand. The purchase of coffee for stockpiling purposes was financed by foreign loans.

The defensive plan drawn up by the coffee producers was well conceived but it led, in the final analysis, to the expansion of the supply itself. The maintenance of high profits by high prices was an incentive to investment in the coffee sector. The result was a permanent, or rather, a growing pressure on supply, which created a serious problem for the future.

The complicated defence mechanism of the coffee economy operated with some efficiency until 1929, when the Great Crash came, bringing with it the collapse of the "model" of a primary-commodity exporting economy.

4.2. Trade as a Lagging Sector (1929-1964)

The heavy investment in the coffee sector - even when real profitability was relatively low - led to the absorption of an important part of the subsistence economy in the coffee-growing States and also financed European immigration. This promoted the expansion of the monetary sector within the economy. Because demand for manufactured goods within this sector was relatively high, a market for them was created which was later to stimulate the setting up of an industrial nucleus that eventually brought about a structural transformation of the economy.

> "The dynamic element in the first stage of European industrial development acted on the side of supply. Entrepreneurial action - through the introduction of a new combination of factors - created its own demand as it became possible to offer a cheaper and more abundant product. In the case of development induced from the outside - as in Brazil - the first consequence was a demand for manufactured goods. At first, this was met by imports; but the dynamic factor began to act internally, here on the side of the demand, from the moment demand could not be met by external supply. On the one hand, the stability in the level of money income, and on the other, instability in import capacity, acted cumulatively to guarantee attractive conditions for investments linked with the domestic market." [6]

The great stockpiling of 1929, the rapid

[6] Celso Furtado, Development and Underdevelopment, loc.cit. pp. 135-6.

sale of Brazil's metal reserves and the uncertain prospects for the financing of the large crops forecast for the short term - all hastened the fall in international coffee prices which occurred simultaneously with that of other primary products at the end of 1929. Between September 1929 and September 1931, for example, coffee prices fell from 22.5 cents to 8 cents a pound.

Despite the heavy drop in price, the international market was still unable to absorb total production because of the inelasticity of demand in terms of price. Although a 25 per cent increase in the physical volume of exports was achieved between 1929 and 1931, a considerable proportion of coffee production was left with no chance whatsoever of finding a market. It was, therefore, necessary to avoid the depressive effect brought about by unsaleable stocks on the market, which provoked a still further decline in price.

Since the aim was to stop the downward trend in price, a part of the harvested coffee had to be withdrawn from the market and destroyed. This was done by the Government, who made large-scale purchases of the product. Thus, a balance between supply and demand was achieved at higher price levels.

Coffee was now being purchased for stock-piling or destruction by means of credit expansion, and not with foreign money as had been the case before 1929.

Although such a policy created an inflationary pressure which has persisted up to the present day, the policy of expanding monetary income kept up the level of internal demand. At a time when overseas markets were in the throes of the long depression there began in Brazil a period of development based on internal demand which expressed itself, for the most part, in attempts to substitute domestically produced goods for previously imported ones.

Investment, which had hitherto been directed towards the expansion of coffee and other export commodities was now channelled into the manufacturing industry, with the aim of satisfying the internal demand that had hitherto been supplied by imports. This investment had two significant effects: on the one hand, it created the conditions in which the demand itself could grow; on the other hand, it led to a reduction in the capacity to import the finished goods previously acquired abroad, since a new demand was created for the import of raw materials, intermediary products and equipment.

Each wave of pressure on import capacity created a corresponding rise in the general level of prices so that development proceeded under continuing inflationary conditions. This process, however, finally encountered a barrier in the form of the reduced import capacity as a whole, which tended to become a growing obstacle to the maintenance of a high level of investment.

The process described above was aggravated by the deterioration in the terms of trade after 1955, leading to an increase in the external debt. This in time, created an untenable situation in the balance of payments. Once the initial stimulus to rapid accumulation in the industrial sector had worn off, the effort to keep up a high rate of growth simply through the mechanism of inflation became increasingly less effective. The rate of growth, for example, began to decline in 1962 and in the period 1963-1964 entered a phase of stagnation, the first since the War. The cost of living had risen by 70 per cent during 1963 and was rising at twice this rate in the first three months of 1964. Despite higher wages, the living standards of the urban working force had fallen. Sporadic violence had already broken out in some rural areas as peasant leagues attempted to seize the lands to which they felt entitled and property owners resisted force with force. The middle class was almost entirely alienated from the regime, for it was convinced that President João Goulart was leading the nation to chaos, and it feared that the common people would support him if he called for a vote of confidence.

Under these circumstances, the first military coup since 1930 took place in March 1964, and the Goulart regime collapsed. The new government introduced a series of economic measures and adopted a foreign trade policy which aimed at integrating the external sector with the rest of the economy. Before 1964, because of reasons already stated, there had been a bias against exports, either as a source of aggregate growth or as a means of dealing with the country's balance of payments problems.

4.3. Trade as a Gap-bridging Instrument (1964-1968)

The far-reaching possibilities for the development of a country the size of Brazil (fifth largest in the world) could only be properly assessed with much more detailed knowledge of the national resources than is at present available. The deficiency of information on these resources is itself, however, a characteristic of under-development. In the case of Brazil the difficulty is aggravated by the peculiarities of the country itself. Advanced contemporary technology, which has been developed almost exclusively in areas with temperate climatic conditions, often proves to have serious limitations when applied in tropical regions, such as those which make up so much of the vast Brazilian territory. Thus, the immense forest resources of Brazil, concentrated in the Amazon basin, are awaiting improvements in techniques for the exploitation of the heterogeneous tropical forests. The same applies to the cultivation of the soil. For want of adequate agricultural techniques, extensive areas of Brazilian territory, with adequate rainfall and good soil, are not utilized even when they are close to urban centres. In the Northeast, where population pressure is already beginning to be felt, there are three million unused hectares of plainlands awaiting such technological advances as will make chemical corrections in the soil an economically feasible undertaking. The same is true of the "cerrados" (closed pasture lands) located in the central part of the country.

Preliminary soil studies, however, have marked out an arable area covering about 53 million hectares, which is almost twice the present cultivated area. Of these lands, only a fraction requires irrigation.

Water resources are abundant throughout the whole area of the country; no region is actually desert or arid. An economically feasible hydro-electric potential has been estimated at 60 million kilowatts. Less than one-eighth of this potential is at present being utilized.

Studies of the Brazilian reserves of mineral resources, although incomplete, illustrate the country's potentialities. The known reserves of iron ore have been estimated at 10 billion metric tons, with an ore content of 60 per cent (this represents 20 per cent of total world reserves). Manganese reserves are put at 70 million metric tons, with an average ore content of 40-50 per cent, representing two thirds of the reserves of Latin America. Reserves of bauxite, nickel, tin, zinc, copper and lead are equally large.

Brazil is less favourably endowed with fossil fuel and coal reserves are large but of poor quality. Petroleum reserves, discovered less than ten years ago, are being discovered in increasing quantities, but are still relatively small.

As far as industry is concerned, the growth of industrial production was exceptionally intense in the immediate post-war period. This growth was particularly remarkable in the basic industries, as shown by the figures in Table 8.

TABLE 8

Growth in the Basic Industries of Brazil

	1953	1961	1967
	Thousand metric tons		
Petroleum			
production	120	4,549	6,994
refining (motor spirit)	87	2,787	4,923
" (others)	92	3,429	5,622
Iron Ore	2,460	6,950	15,163
Bauxite	19	111	303
Copper Ore	-	-	3.6
Manganese Ore	101.8	447.2	597.7
Tin	0.2	0.6	1.6
Sulphur	-	-	6
Coal	1,430	1,256	1,957
Sulphuric Acid	-	231	316
Cement	1,655	4,711	6,405
Pig Iron	894	1,976	3,057
Crude Steel	1,016	2,443	3,693
Aluminium	1.2	20	37.5
Electric Power	Thousand Kilowatts		
Installed capacity	2,090	5,205	8,042
	Million KWh		
Production	10,341	24,405	34,239
Motor Vehicles	Thousand Units Produced		
	-	145.7	225.4

Source: United Nations *Statistical Year Book 1968* (New York, 1969)

In the ten year span from 1957 to 1967, the average annual rate of growth of industrial production was 8.2 per cent, i.e. 50 per cent higher than that of the Gross Domestic Product (5.5 per cent). This is expressive of a process of change in the entire structure of the Brazilian economy, as can be seen in Table 9.

TABLE 9

Evolution of the Industrial Production and of the Gross Domestic Product of Brazil.

(Million 1955 NCr$)

Year	IP	GDP	%IP/GDP
1947	77.4	434.4	17.8
1952	114.3	554.7	20.6
1957	178.7	757.0	23.6
1962	312.7	1,044.7	29.9
1967	377.1	1,255.5	29.3

Source: Ministério do Planejamento e Coordenação Geral, Programa Estratégico de Desenvolvimento 1968-1970 (Riode Janeiro, Fundaçao IBGE, 1969) p.72

Table 9 shows, thus, that Brazilian industry, in 1967, produced 29.3 per cent of the Gross Domestic Product. In 1947 this participation was only 17.8 per cent, which reveals that Brazil in the post-war period effected one of the most rapid and radical structural changes ever observed in any contemporary under-developed country. A participation of almost 30% represents a degree of industrialization similar to those found in countries with a much higher per capita income. This fact, together with the diversity of the natural resources, makes it possible for Brazilian economic policy-makers to expect closer integration between the external and internal sectors of the economy.

Since 1964 the country has adopted an economic policy aimed at expanding and diversifying Brazilian industry at the same time making it more dynamic and efficient, not only in terms of the internal market but of the external market also. This in itself indicates an implicit acknowledgement that import substitution cannot by itself continue to be the dynamic element of Brazil's economic development.

A system has been evolved that provides incentives (tax exemption, drawback etc.) for exports, especially of manufactured goods. At the same time, a policy of flexible exchange rates, in which the currency is systematically devalued in accordance with internal inflation, has, since 1967, smoothed the way for a vigorous increase in Brazilian exports, as Table 10 proves.

TABLE 10

Trend of Brazilian Foreign Trade

	1964	1965	1966	1967	1968
Exports FOB(US$ mn)	11,430	1,595	1,741	1,654	1,890
Imports CIF(US$ mn)	1,264	1,096	1,496	1,667	2,132
Balance (US$ mn)	166	499	245	- 13	- 242
Terms of Trade (1953=100)	99	108	99	102	103
Volume of Exports (1953=100)	116	116	132	116	135

Source: Conjuntura Econômica,(Rio de Janeiro, March 1969)

Higher earnings from exports of coffee, sugar, iron ore and maize were the main reasons for the rise in value of exports. In 1968 manufactured goods represented 8 per cent of the export total. Imports increased even more sharply as a result of the Government's progressive relaxation of import regulations and due to the demand created by the high level of economic activity which began in 1967.

The economic growth rate has gradually recovered from the chaotic years of 1963-1964. Real output increased by 8.5 per cent in 1968, compared with increases of 4.8 per cent in 1967, 5.1 per cent in 1966, 2.7 per cent in 1965, 2.9 per cent in 1964 and 1.5 per cent in 1963.

An increase both in exports (which reached US$2.2 billion in 1969) and imports implies a resource allocation more in the line of comparative advantage and allows for a higher aggregate growth than would be possible under the increasingly inelastic import substitution, brought about by the economic policy prevailing up until 1964.

If resources are under-utilized it is possible to increase production for both exports and the domestic market simultaneously. This is what is happening to the Brazilian economy, as Chapters 8 and 9 will show.

In 1964, foreign trade began to play a new role in the Brazilian economy, a role similar to the one it plays in the developed economies. The aim of the economic policy-makers in Brazil is to integrate more closely the internal and external sectors, so that the Brazilian economy may enjoy some of the advantages of international specialization. This international specialization must occur at a level which reflects a more developed stage of economic development than that which existed in Brazil in 1929. It will avoid the inefficiencies and constraints on growth imposed by the type of autarkic development that prevailed until 1964

5. THE ROLE OF IMPORTS IN THE BRAZILIAN ECONOMY

In developed countries, the function of imports is basically to supply at competitive prices certain commodities that are classified as operation imports. Capital goods needed either for new projects or for re-investment can be produced domestically, even if for reasons of efficiency they happen to be imported. Countries like Japan and the United Kingdom are the best examples of economies that work on these principles.

In developing countries, imports, in addition to meeting much the same needs, are also required to supply a whole range of capital goods essential to the investment process and which cannot be produced internally. Thus the role of the import sector, to bridge the gap between demand and domestic production, is different to the part it plays in the developed economies.

The function of imports in the economy of Brazil can be understood when viewed in the context of the external sector as a whole and its role in the process of Brazilian economic development. Until 1929, consumer goods accounted for an important share of total imports. From 1929 to 1964 investment goods predominated, and imports of consumer goods were reduced to an insignificant proportion. From 1964 on, consumer goods again take up a greater share of total imports, without however reaching pre-1929 levels.

5.1. Nature of Imports up until 1929

It has been calculated [1] that, in 1850, Brazilian Gross National Product corresponded to £30 million. Brazilian foreign trade in that year has been estimated[2] at:

Exports	£7 million
Imports	£9 million
Total	£16 million

In 1850, therefore, foreign trade represented more than 50 per cent of Brazil's Gross National Product. As the external sector was, in fact, the most important sector of the system, it is likely that the percentage mentioned was even higher.

Supplies of manufactured goods were almost all imported, and domestic production was limited to such articles as hats, snuff, soap, pig iron and other goods of minor importance.

Until the end of the century, although great strides had been made in the textile industry, this trend was maintained and imports continued to supply an important proportion of domestic needs.

World War I provided an opportunity for

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1 Celso Furtado, The Economic Growth of Brazil, loc.cit.p 128

2 J. Pandiá Calógeras, A Politica Monetária do Brasil, (São Paulo, Brazil: Companhia Editôra National, 1960)p.130

industrialization to get started in Brazil. The stoppage in overseas supplies eliminated foreign competition, and many new industries were set up to meet the needs not only of the domestic but of foreign markets as well, (Brazil, for example, became an important supplier of textiles to South Africa). Another favourable circumstance for Brazil was the inflationary effect of war-time financing, which increased both prices and profits.

The type of industrial structure which had evolved during the war-time boom became evident when the census was published in 1920, The latter registered the existence of almost 14,000 industrial establishments employing rather more than 300,000 workers (the total population was 28 million). The most significant expansion had taken place in the food producing industry which in 1907 accounted for 26.7 per cent of the total value of industrial output; in 1920 this percentage rose to 40.6 (it included food, beverages and tobacco).

Viewed in perspective, the rash of industrial establishments which sprang up during the war did not basically transform the structure of Brazil's economy. It was a boom that had little effect on the development of heavy industry, and industrial activity continued to depend significantly on the importation of machinery and spare parts.

Since adequate statistics are unavailable for that period, the best indicator of the distribution of economic activity in the economy as a whole is the occupational distribution of the population shown in Table 11.

TABLE 11

Occupational Distribution of Gainfully Employed Population in Brazil in 1920

	%
Primary Sector	69.7
Agriculture, fishing and forestry	69.0
Extractive industries:	
Vegetable products	-
Hunting and fishing	0.7
Secondary Sector	13.8
Extractive industries: Minerals	0.8
Manufacturing industries	13.0
Tertiary Sector	16.5
Commerce	5.4
Transport and Communication	2.8
Government	2.8
Liberal Professions	2.3
Paid domestic services	4.0
	100.0

Source: Werner Baer, Industrialization and Economic Development in Brazil (Homeword, Illinois: Richard D. Irwin Inc. 1955) p.18.

Although 13 per cent of the working population in 1920 was employed in the manufacturing industries, many of the "factories" in that category were more of the small workshop variety than substantial industrial enterprises, and many were merely centres where rural handicrafts were made, and where work was carried out often only on a part-time basis. Even home needlework was classified under this heading in the 1920 figures.

During the 'twenties, many of the industries set up during the war suffered considerable setbacks. The price of domestically manufactured goods was high, and the quality was as yet inferior to American and European products. As soon as European factories were rebuilt their products again began to appear in the Brazilian market. Recovery in Europe also put pressure on American industry which suddenly found some of its industrial plant over-expanded, and then turned with increased energy towards Latin American markets.

Another factor that affected industry in the 'twenties was the coffee policy of the Government. Coffee consumption did not diminish during the war, and even increased substantially immediately afterwards. At home, as has been explained in Chapter 4, coffee enjoyed a period of enormous prosperity, which was scarcely justified by external events. There was a strong revival of old prejudices in public opinion against industrialization, and the Government did nothing to help the ailing factories.

The net result of these trends was a noticeable fall in industrial production in 1924 and 1925, followed by a subsequent slow recovery during the rest of the 'twenties. The few available indicators show a decline in the rate of industrial production, which was accompanied by a substantial rise in imports. In 1926, for example, imports represented 13.5 per cent of GNP, the highest rate in the period from 1920 to 1969.

Consumer goods accounted for 23 per cent of total imports from 1920 to 1929.

A correlation between imports of investment goods (capital goods, intermediary goods, fuels and lubricants) and total investment expenditure (gross domestic capital formation plus imports of investment goods)produces a coefficient of 0.65, while for the period 1929-1964 it is as high as 0.94. This may be explained by the fact that between 1920 and 1929 the Brazilian economy was essentially agricultural, with the dynamic sector, the export sector, operating basically with a single commodity, coffee. The internal sector, with its low productivity level, was primarily a subsistence sector, and met only a part of the requirements of food, clothing and housing of that section of the population whose consumption was within the monetary economy.

Investment was fundamentally directed into economic activities related to coffee. The correlation coefficient is much higher in the 1929-1964 period because an important part of gross fixed investment was made up of machinery and equipment for a wider range of economic activities. The proportion of investment imports expanded as the manufacturing industry became an increasingly important sector of the economy of Brazil.

In conclusion, World War I provided a powerful stimulus to Brazilian industry, but, when it was over the infant industries were stifled by competition from industrialized countries. The Government had no policy to actively protect and/or further stimulate the small manufacturing nucleus. It pursued the single policy of protecting the production of coffee, where investment needs were limited, basically, to the acquisition of virgin land and to the employment of man-power absorbed from the subsistence sector. Imports of investment goods were limited to those brought in to maintain the existing production levels of those industries that had survived foreign competition.

Virtually no input imports were made for purposes related to new manufactures, or for the expansion of productive capacity.

5.2. The Nature of Imports in the Period 1929-1964

The beginning of the import substitution process in Brazil is historically linked with the world depression of the 'thirties, when coffee prices plummetted.

The pressure of the resulting strong contraction in Brazil's capacity to import eventually led to a situation where, today, the level of industrial diversification and growth rates in Brazil are substantially higher than those in most other Latin American countries.

The relatively numerous external economies in the coffee-producing area had transformed the Rio-São Paulo axis into a region with a high concentration of economic activity through a cumulative process which greatly facilitated the growth of import substitution, although it also led to a sharp increase in regional imbalances.

When the substitution process first started, the main lines of production were finished consumer goods such as shoes, textiles, furniture, for which a domestic demand already existed and required the least technology to produce.

The new direction of internal economic activity brought a reduction in imports of finished consumer goods, and an increase in imports of intermediary products. In the period 1920-1929, as has been shown, consumer goods accounted for 23 per cent of total imports. Between 1929 and 1964 this figure dropped to 9 per cent. In this latter period the correlation coefficient between imports of investment goods and total investment expenditure was 0.94 (in 1920-1929 it was 0.65). This high coefficient is indicative of the role played by imports in investment. The observation applies to Latin America as a whole, where, in 1954-1956, the foreign exchange component of gross fixed investment amounted to 23 per cent.[3]

As new industrial plants were being set up in Brazil for the domestic production of consumer goods previously imported, there was a tendency for the home market to expand, not only because of the increased income resulting from the investment process, but also because the domestic product did not carry the restrictive tax burdens previously imposed on the imported ones. One other reason could be that, because of the paucity of statistics available for systematic market research, the decision-making process for investment was inclined to be subjective and depended on the judgement of individual executives. This procedure was inclined to result in exaggeration of the size of the market for domestically produced goods and the possibilities of import substitution. Furthermore, internal production replaced only a part of the value added that was previously generated outside the economy. Consequently, derived demand for imports of raw materials and other goods increased rapidly and exceeded the supply of foreign exchange, including that previously saved as

3 United Nations' Economic Commission for Latin America (ECLA) The Latin American Common Market (New York:1959) p.71

the result of the substitution process itself.

The response to this challenge was a fresh wave of substitution, which meant that imports of some of the less essential goods had to be curtailed in order to release the foreign exchange required for goods necessary for the setting up and operation of new production units.

In 1929, for example, investment goods represented 81 per cent of the import total. In 1939, this proportion was 76 per cent; in 1949 and 1951, the share was 85 per cent. These figures demonstrate that a high proportion of consumer goods had been effectively eliminated from the import list.

Tables 12 and 13 reveal that the structure of production changed between 1929 and 1947. Textiles and food products still predominated in 1947, but remarkable progress in the industries producing metals, machinery, chemicals and pharmaceuticals increased their importance in the industrial structure.

When, in 1946, restrictions on imports were lifted and supplies from abroad became regularized, the import coefficient (Imports CIF/GNP) suddenly shot up, reaching 11.9 per cent in 1947, whereas in 1942 it had been 4.4 per cent. Basically this increase in imports reflected the compressed demand of the war years. The demand for imports greatly exceeded the capacity to pay for them in foreign exchange. The feasible solutions

T A B L E 12 - A) CHANGES IN BRAZILIAN FOREIGN TRADE AND INDUSTRIAL PRODUCTION (1939 = 100)

Years	Quantum of Imp.	Quantum of Exp.	Capacity to imp. or exp.	Exports FOB-Imports CIF	Real Output: Total	Agriculture	Industry	Commerce
1929	154.9	63.2	139.4	80.3	75.9	83.8	62.8	76.5
1933	91.2	64.1	102.6	87.2	79.6	90.4	65.4	81.7
1939	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1940	86.2	81.1	75.8	45.3	115.4	125.0	102.0	116.9
1941	88.1	89.5	94.1	201.4	138.7	159.7	110.4	142.4
1942	59.9	78.3	85.7	403.6	138.3	158.6	112.8	142.6
1943	71.4	84.0	91.6	372.4	147.3	163.6	128.6	151.4
1944	86.0	83.9	105.8	380.3	143.8	150.1	137.8	145.8
1945	91.8	82.1	117.9	452.8	147.9	157.9	132.7	149.1
1946	122.5	106.5	151.9	651.4	159.9	164.8	151.8	160.3
1947	197.9	101.7	156.5	32.3	163.2	163.6	158.1	161.7

T A B L E 12 - B) IMPORT QUANTUM OF SOME SECTORS OF BRAZIL'S INDUSTRY GROUPS (1939 = 100)

Industry Group	1929	1933	1939	1940	1941	1942	1943	1944	1945	1946	1947
Metals	144.6	81.1	100.0	101.1	83.1	43.2	59.5	114.8	103.4	154.0	179.0
Electrical equipment	390.9	80.8	100.0	72.0	98.6	56.7	57.8	55.3	65.0	198.9	362.0
Transportation equipment	342.4	59.2	100.0	108.1	104.5	36.6	17.3	26.8	70.2	203.6	356.9
Rubber products	2,266.4	1,992.8	100.0	71.1	48.4	5.1	4.2	4.5	5.9	13.3	112.3
Leather and leather products	1,597.6	901.7	100.0	57.7	70.6	80.9	119.8	121.8	129.0	137.9	100.7
Chemical	93.6	82.2	100.0	94.6	101.2	72.4	98.5	90.3	92.7	118.7	186.8
Pharmaceutical products	185.3	107.1	100.0	54.5	82.2	89.8	52.7	134.6	138.3	211.3	278.5
Textiles	304.1	186.0	100.0	84.5	55.4	42.0	54.8	30.7	27.9	56.2	116.4
Apparel, footwear and textile products	188.8	150.1	100.0	42.6	54.6	59.5	36.4	30.9	75.4	219.9	422.4
Food products	262.5	144.8	100.0	88.5	46.4	30.6	26.1	59.8	86.0	163.9	266.0

Source: Calculated from: Octavio Dias Carneiro, Past Trends of Structural Relationships in the Economic Evolution of Brazil 1920-1965 (Cambridge, Massachussetts: Center for International Affairs, Harvard University, May 1966 - mimeographed).

T A B L E 13 - SECTORIAL DISTRIBUTION OF NATIONAL PRODUCT (IN CONSTANT 1939 PRICES; PERCENTAGE DISTRIBUTION)

	1929	1939	1947
Agriculture	37.5	33.3	27.8
Mining	0.8	0.6	0.4
Industry	11.3	17.4	21.7
Commerce	11.8	12.6	13.8
Transportation	6.3	6.7	5.9
Government	9.9	9.8	9.5
Services	14.8	13.2	14.4
Rents	7.6	8.4	6.5
T o t a l	100.0	100.0	100.0

Source: Calculated from: Octavio Dias Carneiro, Past Trends of Structural Relationships in the Economic Evolution of Brazil 1920-1965 (Cambridge, Massachussetts: Center for International Affairs, Harvard University, May 1966 - mimeographed).

for correcting this imbalance were either to devalue the currency, or to adopt a system of selective import controls. The latter course was chosen, and it led to an intensification of the process of industrialization in Brazil, as will be shown in Chapters 7 and 8. The exchange rate was maintained on the 1929 parity. Imports of finished consumer goods were restricted, and this benefitted the entry of capital goods and raw materials. The industrial sector thus gained a double advantage: on the one hand, the threat of foreign competition was reduced to a minimum by import controls, and on the other hand, raw materials and equipment could be bought for a comparatively low cost. Between 1945 and 1950, for example the price level of imports of investment goods rose by only 7 per cent, while that of domestically produced manufactures (producer prices) rose by 54 per cent. Imports of equipment increased 338 per cent between 1945 and 1951, whereas total imports were greater by only 83 per cent.

Table 14 shows the notable decrease in the imports of manufactured consumer goods in the years from the immediate post-war period to the early 'sixties.

TABLE 14

Commodity Distribution of Imports
(Percentages based on 1950 dollar figures)

	1938	1948	1961	1964
Food Products	14.9	17.9	13.5	23.1
Raw Materials (fuels, lubricants etc.)	43.1	36.6	45.1	47.0
Capital Goods	29.9	35.2	39.8	26.6
Manufactured consumer goods	10.9	9.7	1.5	3.0
Others	1.2	0.6	0.1	0.3
Total	100.0	100.0	100.0	100.0

Source: Calculated from Octavio Dias Carneiro, Past Trend of Structural Relationships in the Economic Evolution of Brazil, loc. cit.

The changes indicated in Table 14 are a reflection of the import substitution process which will be examined in Chapter 8. The figures in Table 14 should be compared with those in Table 15, which shows the decrease in the relative importance of imports to the economy.

TABLE 15

Changes in the Share of Imports in Brazil's GNP
(Percentages based on 1950 dollar figures)

Year	Imports CIF/GNP Percentage
1938	7.8
1948	9.5
1961	6.3
1964	4.6

Source: Calculated from Octavio Dias Carneiro, Past Trend of Structural Relationships in the Economic Evolution of Brazil, loc. cit.

5.3. Nature of Imports in the Period 1964-1968

After the change of Government in 1964, a new policy was adopted which removed some restraints on imports. Measures were also introduced to correct distortions in relative prices. The aim of the new policies was to switch from the excessive emphasis on industrialization geared to import-substitution to a more balanced allocation of resources. This explains the changes evident from Table 16, which shows that imports of consumer goods increased in the 1964-1968 period.

TABLE 16

A) Commodity Distribution of Imports
(Percentages based on 1950 dollar figures)

	1964	1966	1968
Food Products	23.1	17.9	15.3
Raw materials (fuels, lubricants, etc.)	47.0	50.6	46.4
Capital goods	26.6	27.4	33.5
Manufactured consumer goods	3.0	3.7	4.3
Others	0.3	0.4	0.5
T O T A L	100.0	100.0	100.0

B) Changes in the Share of Imports in Brazil's GNP
(Percentages based on 1950 dollar figures)

Year	Imports CIF/GNP Percentage
1964	4.6
1965	4.3
1966	5.4
1967	5.2
1968	6.6[4]

Calculated from the same source as Table 15 and Carteira do Comércio Exterior of the Bank of Brazil, Informação Semanal da CACEX, nº 141 (Rio de Janeiro, May 26th 1969)

[4] Estimated

The general trend, therefore, consists of (a) a reduction in imports of food products, mainly because wheat, which was once the most important item in this section and which was no longer subsidized after 1964, began to be intensively and successfully produced in Brazil; and (b) a modification in the structure of other imports.

Thus, imports of manufactured consumer goods, which declined from 1929 to 1964, now take up a greater share of total imports. This signifies virtually an end to import substitution in the field of consumer goods, and current imports either reflect a situation where minimum scales of production would not justify domestic output, or are related to specific products with well-defined characteristics, such as perfumes, wines etc..

Imports of industrial and primary products have increased (21.5 per cent in 1960 and 39.4 per cent in 1968), and this provides telling evidence of the diversification that has taken place in Brazilian industry.

The most significant changes, however, appear in imports of capital goods. From 1961 their share in total imports continually decreases. It is therefore apparent that Brazil can already produce a fair proportion of the capital goods required for its development process. For example, asfar as transport equipment is concerned, Brazil is now virtually self-sufficient. In 1968, imports in this sector amounted to less than 2 per cent of total imports. A complete examination of production and imports of goods, classified according to categories and uses in the context of total supply, is made in Chapter 8.

6. THE BRAZILIAN BALANCE OF PAYMENTS

The import substitution industries have become the leading sector in the economy's growth and most of the products previously imported are now manufactured within the country. The conclusion should be that the resultant savings in imports, ceteris paribus, would leave Brazil in a strong position in the external sector. Changes in the policy towards foreign capital were also made which, by the end of the 1950's resulted in an inflow of new foreign capital amounting to more than 100 million dollars a year, not including re-investment. In spite of all this, a chronic balance of payments problem has persisted.

The present chapter endeavours to explain this apparent paradox by analysing the effects of the import substitution process and increased foreign investment on the balance of payments. Although the economic policy adopted by Brazil was highly successful in regard to income creation and growth, it did not solve the problem of the balance of payments. The rapid growth of income has been accompanied by a steep rise in demand for new types of imports which has absorbed the additional foreign exchange resources supplied by domestic and foreign investors as well as those saved by the internal production of finished goods previously imported.

6.1. Salient Features of the Brazilian Balance of Payments

Table 17 summarizes the key items in the balance of payments during the period 1947-1968. Table 18 shows the structural changes that took place during this same period.

In the first five years, that is from 1947 to 1951, exports accounted for 92.5 per cent of Brazil's total foreign exchange earnings. In the last five years of the period, from 1964 to 1968, this ratio fell to 62%. As a result of (a) the decline in earnings from exports, (b) the relatively reduced foreign capital inflow and (c) the concomitant increase in the external debt, the country's capacity to pay for its imports was progressively reduced. The debt service payments on official account, for instance, in the period 1964-1968, amounted to an annual average of US$582 million (transfers of dividends on private foreign investments are excluded from this figure), representing 24.1 per cent of total payments to factors abroad, including imports. During the period 1942-1951 this percentage was 22,3.

Due to the sharp fall in coffee prices which adversely affected the terms of trade, the year 1954 may be taken as the turning-point of the 1947-1964 period. In that year, for example, the terms of trade were 294.2 (1939 = 100) the highest figure for the whole period. By 1963, this figure had fallen to 190.3.

TABLE 17 - BALANCE OF PAYMENTS - 1947-1968 (million dollars)

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Exports (FOB)	1.157	1.183	1.100	1.359	1.770	1.416	1.539	1.558	1.419	1.482	1.392
Imports (FOB)	- 1.027	- 905	- 947	- 934	- 1.703	- 1.702	- 1.116	- 1.408	- 1.099	- 1.046	- 1.285
Balance of Trade	130	278	153	425	67	- 286	423	150	320	436	107
Services	- 276	- 315	- 271	- 319	- 535	- 421	- 392	- 380	- 344	- 418	- 393
Balance of goods & services	- 146	- 37	- 118	106	- 468	- 707	31	- 230	- 24	18	- 286
Donations	- 24	- 7	- 3	- 2	- 2	- 2	- 14	- 5	- 10	- 11	- 13
Balance on Current Account	- 170	- 44	- 121	104	- 470	- 709	17	- 275	- 34	7	- 299
Balance of Capital	213	15	39	- 81	347	735	31	225	22	7	477
Non-compensatory	31	- 9	- 35	- 29	56	120	97	22	39	201	290
Compensatory	- 182	24	74	- 52	291	615	- 16	203	- 17	- 194	180
Errors & Omissions	- 43	29	82	- 23	123	- 26	- 98	10	12	- 14	- 171

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Exports (FOB)	1.243	1.282	1.269	1.403	1.214	1.406	1.430	1.596	1.741	1.654	1.890
Imports (FOB)	- 1.179	- 1.210	- 1.293	- 1.295	- 1.304	- 1.294	- 1.086	- 941	- 1.303	- 1.441	- 1.856
Balance of Trade	64	72	- 24	108	- 90	112	344	655	438	213	34
Services	- 326	- 373	- 470	- 358	- 410	- 298	- 305	- 447	- 550	- 567	- 537
Balance of goods & services	- 262	- 301	- 494	- 250	- 500	- 186	39	208	- 112	- 354	- 503
Donations	- 4	- 10	- 14	7	38	39	63	75	79	77	60
Balance on Current Account	- 266	- 311	- 508	- 243	- 462	- 147	105	283	- 33	- 277	- 443
Balance of Capital	455	336	482	273	534	267	18	- 70	96	304	516
Non-compensatory	202	182	52	323	191	- 12	58	79	205	63	555
Compensatory	253	154	430	- 50	343	279	- 40	- 149	- 109	241	- 39
Errors & Omissions	- 189	- 25	26	30	- 140	- 120	- 130	- 31	- 19	- 27	- 73

Source: Relatório do Banco Central do Brasil, 1967, 1968 and 1969 (Rio de Janeiro).

T A B L E 18 - BRAZIL: BALANCE OF PAYMENTS, RECEIPTS AND EXPENDITURE

Type of receipts and expenditure	1947-1952		1964-1968	
	Million dollars	Percentage	Million dollars	Percentage
Total receipts	1,477	100.0	2,529	100.0
Exports (FOB)	1,366	92.5	1,565	62.0
Services	61	4.1	140	5.5
Donations	3	0.2	81	3.2
Capital	47	3.2	742	29.3
Total expenditure	1,704	100.0	2,420	100.0
Imports (FOB)	1,238	72.6	1,213	50.1
Services	380	22.3	582	24.1
Donations	6	0.4	15	0.6
Capital	90	4.7	610	25.2

Source: Relatório Anual do Banco Central do Brasil 1967 1968 and 1969 (Rio de Janeiro).

6.1.1. The Period 1947-1954

The surpluses on current account which Brazil had acquired during the war and immediate post-war years were derived especially from surpluses from trade with Western European countries. In most of these years there was a deficit in Brazil's accounts with the United States[1], which was, and still is, her most important trading partner. Because of the inconvertibility of European currencies during the early post-war years, Brazil was unable to use a substantial part of the reserves held in those currencies for repayment of the growing deficit with the United States. By the end of the first quarter of 1947, Brazil had foreign exchange holdings amounting to US$673 million. Of these, US$354 million was in gold, US$262 million in sterling, while the rest was in dollars and European currencies. The balances held in the United Kingdom, France and Belgium were, however, blocked. Furthermore, Brazilian law required that US$275 million be held as reserve against the domestic currency. In view of these factors, Brazil's foreign liquid assets[2] amounted only to a little over US$90 million

[1] By the Rio de Janeiro Treaty of 1942, Brazil and the rest of Latin America undertook not to raise the prices of their commodity exports as part of their contribution to the joint war effort.

[2] Joseph A. Kershaw, "Postwar Brazilian Economic Problems", The American Economic Review (June 1948) pp. 333-4

out of a total net credit of US$673 million, and in the second quarter of 1947 they were further diminished.

From 1947 to 1950 the commodity trade balance showed a substantial surplus of an annual average of US$247 million, due mainly to the restriction on imports imposed by the Bank of Brazil. The deficit in the services items was only slightly higher than the commodity trade surplus, leaving a moderate deficit in the current account of an annual average of US$48 million. There was, however, an outflow of autonomous capital, and the total balance showed a deficit of an average of US$59 million a year.

From 1951 to 1954 the commodity trade balance fell to an annual average of US$89 million. There was an increase in exports, accompanied by an even greater increase in imports.

In 1951, the Bank of Brazil relaxed import controls mainly because it considered that the Korean war would develop into a world conflict, with a resultant shortage of supplies from abroad, as had been the case during World War II. As a result, the value of imports, which had reached a yearly average of approximately US$950 million, rose to US$1.7 billion in 1951 and 1952. Part of this increased cost was met by a rise in the value of exports, which occurred mainly because coffee prices increased substantially. A large proportion of the swelling bill for imports had to be paid for, however, by commercial arrears and official compensatory financing. The latter amounted to US$291 million and US$615 million in 1951 and 1952 respectively (see Table 17).

6.1.2. The Period 1954-1968

After 1954, conditions in the external sector in Brazil (as in other Latin American countries) took a turn for the worse. Coffee represented more than 50% of total Brazilian exports and when coffee prices fell with no compensatory increase in the volume of coffee exports, the Brazilian capacity to import declined. The overall volume of imports was maintained only by means of sizeable foreign loans. Indeed, more than 80 per cent of the cost of imports of equipment worth US$2.9 billion, made during the period 1957-1968, was financed either by credits arranged by the suppliers or direct foreign investment. From 1956 to 1961, the annual average capital inflow amounted to US$210 million. In the same period the current account showed a deficit of US$270 million.

From 1962 to 1968 the annual average deficit in current account amounted to US$140 million. The terms of trade worsened, and, because of the political problems mentioned in Chapter 4 which led to the Revolution of 1964, the inflow of capital was greatly reduced while capital outflow increased.

6.1.3. Foreign Debt

The successive deficits in the current account resulted in substantial increases in foreign indebtedness. Between 1957 and 1968 the Brazilian foreign debt increased from US$1.7 to US$4.0 billion. The most disturbing feature of the debt was not its increasing size, but the way it was made up. Under-developed countries normally rely on an inflow of foreign capital, which is used to cover the balance of payments deficits on current account. In the case of Brazil the problem was that the inflow of capital was only sufficient to cover a small part of the deficit. The greater part was covered by Government financing, reduction of foreign assets, and special transactions arranged with foreign financing organizations. The consequence was an external debt of tolerable size but entailing conditions of repayment almost impossible for Brazil to fulfil.

6.2. Some Structural Causes of the Problem

The principal reasons for the continuing balance of payments deficit are (a) the virtual stagnation within the Brazilian export sector, and (b) the income creation effect of increased investment for import substitution purposes which in turn generates an increasing demand for new imports. Chapters 3 and 4 examined the problem of the stagnation in exports. This chapter considers how a higher national income stimulated the demand for new imports of items such as equipment and raw materials, the cost of which far exceeded the amount of foreign exchange saved by domestic production of goods formerly imported.

The income creation effect is important because of the positive expansionary consequences of investment applied in import substitution processes. Due to the high value of the import substitution investment multiplier in Brazilian conditions, additional domestic or foreign investment for import substitution has unusually high dynamic multiplier effects on national income. The high value of the multiplier, in turn, can be discussed in terms of the marginal propensity to spend, and the low value of the leakage created by the marginal propensity to import.

The relatively high marginal propensity to spend reflects the high real consumption and investment parameters characteristic of Brazil, an economy with high rates of growth and inflation. The marginal propensities to consume and to invest are in fact so high that they can be maintained only by a heavy volume of imports, that is, by operating on a balance of payments deficit because exports are at a standstill. C. Y. Yang[3] has shown that in other under-developed countries the propensity to consume is high, and the marginal is higher than the average. At the same

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3 C. Y. Yang, "An International Comparison of Consumption Functions", Review of Economics and Statistics (August 1964). Table 3. p. 238

time, in the investment boom and inflationary conditions that prevailed in post-war Brazil, available savings have been absorbed into investments.

The multiplier's value is also increased, not only by the relatively low value of the marginal propensity to import, but also by the fact that the import list is composed almost entirely of investment goods. A higher import coefficient, produced chiefly by higher imports of consumer goods, would permit some of the potentially explosive impact of an increase in spending to drain out of the economy through an increase in imports. The comparative figures collated in Table 19, below, reveal that the Brazilian import coefficient is not high in comparison with that of other more developed countries.

TABLE 19

Ratio of Imports to Gross National Product, Developed Countries, Annual Average, 1966-1967

Countries	Imports as Percentage of GNP
United States	3
Fed.Rep.Germany	15
France	7
United Kingdom	13
Japan	10
Italy	14
Canada	17
Australia	13
Sweden	20
Netherlands	37
Belgium-Luxembourg	38
Switzerland	26
Denmark	28
Norway	32
New Zealand	18
BRAZIL	6

Source: Calculated from: United Nations, Statistical Yearbook 1968 Loc. cit. pp.390-7, 558-65

The circumstances which result in the import coefficient being comparatively low arise out of the difficulty in earning foreign exchange. The external bottleneck means that imports do relatively little to restrict the expansive effect of an increase in spending, and that the multiplier is so powerful that even with the relatively low aggregate investment coefficient of the Brazilian economy, an increase in investment for import substitution is enough to produce its dynamic income growth.

The sharp increases in national income have generated balance of payments deficits as they have interacted with a marginal propensity to import which declined relatively little in the course of the import-substitution process.

Table 20 shows how small was the decline in the import coefficient of the Brazilian economy in the 1947-1968 period, especially in the years 1958-1968.

TABLE 20

Ratio of Imports to GNP
(1947-1968)

Year	Percentages based on 1950 US$	Percentages based on current dollars
1947	11.9	15.3
1948	9.5	11.5
1949	9.7	9.6
1950	9.3	8.3
1951	15.2	12.8
1952	14.9	10.1
1953	9.6	6.2
1954	11.9	8.0
1955	8.6	7.2
1956	6.9	6.3
1957	8.2	6.8
1958	6.6	6.7
1959	6.5	7.7
1960	6.8	7.4
1961	6.3	7.4
1962	6.0	6.8
1963	6.2	8.2
1964	4.6	6.6
1965	4.3	6.3
1966	5.4	7.4
1967	5.2	7.2
1968	6.6	8.6

Source: Octávio Dias Carneiro, Past Trends of Structural Relationships in the Economic Evolution of Brazil (column 1) and United Nations, Statistical Year-book 1968 Loc. cit. (column 2)

The relatively low decline in the import coefficient would appear to be inconsistent, considering that, throughout the period 1947-1968, and especially in the years 1957-1963, the government employed an impressive range of policy instruments, such as differential exchange rates, import licensing and prohibitive tariffs on many products, in a strong effort to restrict imports as much as possible. Table 19 shows that the Brazilian import coefficient, compared with that of many other countries, was already relatively low. The possibility of further constraint was therefore limited. There were, moreover, other impediments to the government's efforts to resist the pressure on imports As more and more products were removed from the import list, those that remained were goods of low elasticity of substitution in consumption, for which the elasticity of substitution as between imports and potential domestic supply was also very low.

> "In Brazilian conditions, the marginal propensity to import means something very different than it does in economies with more ample foreign exchange supply. In other economies, imports are determined by the level of income, relative prices of domestic and imported products, and the exchange rate, subject to the constraint that imports be less than or equal to the supply of foreign exchange. In such conditions, the marginal propensity to import can be considered a function of national income. In Brazil, however, the constraint imposed by the availability of foreign exchange intervenes long before the desired level of imports is reached. Given the pattern of consumer tastes and comparative costs, especially

with an overvalued exchange rate[4] within a considerable range, imports would be much higher were it not for the foreign exchange availability constraint. Consequently, the import coefficient, M/Y, is simply the ratio of foreign exchange receipts to national income."[5]

In other words, the average propensity to import is actually nothing more than the ratio Foreign Exchange/National Income (FE/Y). For the same reasons, the effects of income levels and relative prices are unimportant and the marginal propensity to imports becomes simply $\Delta FE/\Delta Y$, as greater availability of foreign exchange would result in an equal increase in imports. In consequence, any foreign exchange saved by import substitution or made available by foreign capital inflow is swallowed up by the previous excess in demand for imports.

These considerations, in conclusion, explain why the high value of the multiplier has the significant income creation effect, generating in turn an increased demand for imports. Such increased demand for imports

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4 Because of price inelasticity of demand for Brazil's main export, coffee, of which it is the major supplier and price leader in the world market, the monetary authorities believed up until 1964 that foreign exchange receipts were maximized with an overvalued exchange rate. This will be examined in Chapter 7.

5 Nathaniel H. Leff and Professor Antônio Delfim Netto, "Import Substitution, Foreign Investment and International Disequilibrium in Brazil", Journal of Development Studies, 3, (April 1966) pp. 227-8. Professor Delfim Netto has been the Brazilian Minister of Finance for the last three years.

without (a) an accompanying rise in exports, and/or (b) a greater inflow of foreign capital, contributes to the maintenance of the chronic balance of payments deficit of the Brazilian economy.

7. ECONOMIC POLICY-MAKING IN BRAZIL

This Chapter examines the economic policies pursued by Brazil after the Great Crash of 1929, aiming atan increased industrialization drive based on import substitution.

A brief summary of events until the depression will assist in the understanding of how Brazilian industrialization was conditioned by the external sector.

7.1. The Conditioning External Sector (1530-1929)

Next to the continuing displacements of the centres of gravity, the outstanding feature of the Brazilian economy was the uneven distribution of those centres over the country's immense geographical area.

Each Province constituted a small, autonomous market, just as each port was supported by a distinct hinterland of its own. The Federal fiscal and monetary system provided the only outward sign of political unity.

The fiscal policy was related basically to the main economic activities of the country, which were importing and exporting. Tariffs were the main source of revenue of the central government, as were taxes on exports for those provinces that produced goods for the external markets. Monetary policy aimed at a balanced budget, equilibrium in the balance of payments with the parity of the "milréis" to the pound to be maintained at any cost, credit restraint, orderly management of the national debt, etc.; all this prevailing within a "free" trade policy, similar to that pursued by the United Kingdom and the Netherlands (particularly in the second half of the 19th century and early in the 20th century).

The first Bank of Brazil was founded in 1815 as an issuing bank and continued operating until 1829. After that it was reopened twice, but, in 1964, the sole right to issue paper money passed to the Treasury.

When Brazil's reserves fell short of her needs, she obtained loans from Rothschilds, the English bankers who were intimately involved in Brazilian affairs from the time of her Independence. The moderate surplus in the Brazilian balance of trade guaranteed the interest payments. But this financial tidiness was no more than an illusion, since it did not reflect any economic vitality capable of imparting to the whole system the dynamic impulse existing in the external sector.

A few years before the proclamation of the Republic in 1889, the opinions of a school of thought that favoured industrialization became increasingly vocal. It clamoured for economic emancipation through increased self-sufficiency in primary products and manufactured goods as a pre-requisite for political independence.

The main opposition to these ideas on doctrinal grounds came from free-traders who expounded the advantages of 'laissez-faire' and international specialization, and stressed the social welfare costs of "artificial" industrialization.

The Treasury itself gave its support to higher tariffs, because they not only provided its main source of revenue, but, by discouraging imports, they helped to reduce the country's balance of trade deficit.

The opposition of the free-traders and the coffee-growers was undermined by the fact that, in the last decade of the 19th century, they were themselves enjoying the benefits of a coffee boom which occurred simultaneously with the first stages of industrialization.[1]

In the first years of the 20th century, coffee prices began to fall. The situation became critical, and for the first time the government intervened. Its action was ratified in the Taubaté Agreement of 1906, which in effect established a permanent system of support by loans from foreign sources.

The long depression that began with the New York stock-market crash in 1929 spread throughout the world, and struck Brazil with its full force.

When the crash came it brought to a close the phase in which the Brazilian economy derived its dynamic

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[1] For an interesting study of the rise of nationalist feeling in favour of large-scale industrialization, see Nícia Vilela Luz, A Luta pela Industrialização do Brasil (São Paulo, Difusão Européia do Livro, 1961)

impulse from external demand. After 1929 a period of development began which was based on internal demand, and this found expression for the most part in the form of attempts to substitute domestically produced goods for similar products previously imported.

7.2. The Shift of the Dynamic Centre (1929-1964)

The period 1929-1964 is divided into two phases. The first extends from 1929 to 1951 and is characterized by a "spontaneous" process of industrialization. The second phase extends from 1951 to 1964, when decisions were consciously directed towards industrialization.

7.2.1. Period 1929-1951 A "Spontaneous" Process of Industrialization

The depression had a severe negative effect on Brazilian exports, whose value fell from US$474 million in 1928 to US$179 million in 1932. Brazil was one of the first Latin American countries to introduce exchange and other direct controls. The latter, combined with a depreciation of Brazilian currency that made foreign goods expensive in the domestic market, caused imports to fall from US$442 million in 1928 to US$113 million in 1932.

Because coffee accounted for 71 per cent of total exports, the government's main concern was to support the coffee sector. This, as already explained in Chapter 4, was done by buying up the surplus coffee and destroying large quantities of it. The programme drawn up by the government to implement this policy, which included all kinds of assistance being given not only to the coffee-growing States, but to the farmer himself, was called "Programa de Reajustamento Econômico".[2]

The official restriction of the quantity of imported goods which followed the fall in foreign exchange earnings resulted in internal shortages. Government support of the income of the coffee sector, however, kept up the demand for the type of goods which could not be imported. Curtailment of supply and steadiness of demand caused a substantial rise in the relative price of such goods, which in turn created an incentive for increased domestic production.

It was thus not long before some of the resources from the coffee support programme and from the "Reajustamento Econômico" found their way directly or indirectly into new industrial enterprises.

The Second World War, as the first one, provided a stimulus to further industrialization. There was a substantial decline in the quantum of imports, especially in capital goods and other manufactures.

Apart from efforts to deal with coffee inventories, economic policy measures were limited mainly to

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2 The source of funds for the "Reajustamento Econômico" was simply the creation of credit by the government to support the income of the coffee sector.

imposing export taxes on agricultural products, drawing up social legislation for urban workers, the restriction of foreign investment in Brazilian natural resources, and the creation of the Volta Redonda steel mill (1942-1946).

The government's attitude towards industrialization was reflected in the first major post-war economic policy decision - it established an over-valued dollar-milréis exchange rate.[3] This policy was adopted despite strong opposition which argued that it placed Brazilian industry in jeopardy. It was thought that some of the new industries developed during the war would not be able to withstand unrestricted competition with imports. Moreover, the disproportionate rise in the Brazilian price level as compared with the United States was thought to require a corresponding exchange rate[4] adjustment if the older domestic industries were to survive. The conviction shared by industrialists and the government that domestic manufacture would be unable to withstand foreign competition without

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[3] The exchange rate was set at the 1939 level even though the internal price level had increased almost twice as much as prices in the United States, for example, Brazil's principal foreign supplier.

[4] Since the early 1930's, tariffs had been levied as specific rather than ad valorem duties, and these had eroded to very low levels because of inflation. See Donald Huddle: "Furtado on Exchange Control and Economic Development: and Evaluation and Reinterpretation of the Brazilian Case", Economic Development and Cultural Change, XV, nn 14-15 (April 1967) pp.269-85.

tariff protection proved to be quite wrong. Industrial output expanded more rapidly in 1946-1947 when imports were available duty free and at an over-valued exchange rate, than they had been during the wartime period when supplies from overseas were curtailed. The ability of Brazilian industry to compete against imports was generally greater than had been supposed.[5]

> "With the prospect of a substantial rise in coffee exports in the early postwar years and in the belief that coffee exports receipts were maximized with an overvalued exchange rate, the government was attempting to secure a large inflow of imports at a relatively low domestic price. Competition from low-cost imports was also expected to inhibit inflationary price increases by domestic producers. These principles and preferences, however, were overturned by the balance-of-payments crisis of 1947, which evoked a policy response of import restrictions."[6]

The Brazilian experience in economic policy after 1947 is worthy of study in that it provides examples of some of the major problems which a nation is likely to encounter when it endeavours to introduce an industrial system into a predominantly primary economy.

The foreign exchange measures effected in 1947 can be summed up briefly as follows: the adoption of fixed multiple exchange rates for all external transactions

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5 Another policy measure strongly opposed by the industrialists was the government's 1946 prohibition of cotton textile exports. During the war years, Brazilian textile producers had developed a relatively large export market, exporting approximately 20 per cent of their total production. Since international prices were higher than internal prices, the government prohibited exports in an effort to mitigate inflation and help the domestic consumer.

6 Nathaniel H. Leff, Economic Policy-Making and Development in Brazil, 1947-1964, Loc cit p.14.

(this rate was maintained for five years, despite an annual rise of about 15 per cent in domestic prices); strict administrative control of imports through the issue of an import licence for each transaction which specified quantity, quality and price of the imported item and discretionary authority for withholding licences for "less essential" imports of durable and non-durable consumer goods.

As a result of import restrictions, import substitution took place in respect of the less essential items, particularly in the category of durable consumer goods. As the public sector was not equipped either financially or institutionally, to provide the growing infrastructure required to support this accelerated industrialization, the result was large-scale structural disequilibrium, especially in the energy-transport sector which continued to depend on the early investments of the primary export model.

The government's economic administrators approached Brazil's long-term post-war economic prospects with a certain bias against exportation either as a source of aggregate growth or as a means of dealing with the country's balance-of-payments problems. On the one hand, there was considerable pessimism concerning the possibilities of expanding exports as already explained in chapter 3 (low income-elasticity of world demand for most primary products, for example). On the other hand, government officials were concerned with the instability and risks of depending on exports as a major source of income and supply. These considerations were reinforced by ideological currents stressing the importance of import substitution and industrial development as a means to modernization and emancipation from "colonial" dependence on the world economy.

At the beginning of the 'fifties, a series of economic policy measures aimed at changing the structure of production were adopted, and, on the whole, they represented the initial formulation of deliberate action to promote industrial expansion.

7.2.2. Period 1951-1956. First Approach to a Development Policy

As a result of the studies undertaken by the Joint Brazil-United States Committee and the promise (which was not fulfilled) of a foreign loan of US$500 million for strengthening basic sectors (energy and transport), various measures were put into effect. These included the National Road Plan, the programme for expanding the supply of energy in the Northeast, the establishment of a Federal Fund of Electrification, a study of the problems besetting the national coal industry, and the programme for modernizing the merchant fleet and port facilities.

Moreover, the National Bank for Economic Development was founded in 1952, for the declared purpose of promoting industrial reforms. In its first four years of operation the bulk of its resources (obtained from domestic sources consisting mainly of compulsory loans from taxpayers) was invested in the infra-structure. From 1956 on, it concentrated on programmes for diversifying the industrial inventory.

In 1953, an important reform was introduced in one of the key sectors of economic policy, namely, the exchange system. Directive 70[7], modifying the system described in broad outline above, divided exchange operations into three markets, each with multiple exchange rates. The main import items were classified in five categories, with varying additional charges determined in auctions of foreign currencies. This entailed replacing the machinery for direct administrative control of applications by an aggregate supply of foreign currency for each of these import categories. In any case some financial transactions and certain essential imports still benefitted from a special exchange rate. In addition, customs duties were changed from specific to ad valorem duties. Imports of goods which were already produced, or could be produced, in Brazil, were virtually prohibited, since the tariff duties imposed on them were very high.

The main effects of this reform on the industrialization process were, briefly: (a) the reservation of markets for import substitution items was established as

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[7] The decisions taken by the Central Bank in relation to exchange, monetary and credit instruments are communicated to the public by means of circulars known as "Instruções".

a result of the rise in the price of those imports included in the categories for which higher exchange rates prevailed; (b) the granting of subsidies (implicit in the categories covered by lower exchange rates) for imports of capital goods and imports necessary to industrial development and (c) the possibility that the government, through the purchase and sale of foreign exchange, might once again absorb a share of foreign trade income.

Lastly, the setting up of Petrobrás in 1954, whereby the central government assumed the exclusive responsibility for the development of the petroleum industry also merits attention. While this can be interpreted as the re-affirmation of a nationalistic attitude deliberately favouring domestic development, it subsequently helped to relieve the pressure on the balance of payments as well as to give a greater measure of autonomy to national efforts in a strategic sector.

7.2.3. Period 1956-1964. Target Plan

At the end of 1956, the government (President Kubitschek's administration) formulated a wide range of sectorial objectives, known as the Target Plan, or "Plano de Metas", which represented the most substantial decision consciously taken as regards industrialization in the economic history of the country. During the period 1956-1960, these objectives were the lodestar of economic policy while, in some respects, in the course of the execution of the Plan, its original postulations were surpassed, and it more and more definitely assumed the character of an industrial development policy.

The Plan accorded absolute priority to the building-up of the higher strata of a vertically integrated industrial pyramid, and of the basic social capital on which this structure rested. Its purpose was to give continuity to the import substitution process. Little attention was paid to the structural reform of the agricultural sector.

> "Neglect of agriculture was a prominent unstated attitude of this approach to Brazil's economic future. Introduction of modern industrial technology was stressed not only for its higher productivity but also as a demonstration that Brazilians were capable of mastering the technological complexities of the modern world."[8]

Due to the utilization of virgin agricultural land, and new mining and forest areas, the supply of foodstuffs and industrial inputs of primary origin had increased at a higher rate than population. In these circumstances, the Plan's neglect of agriculture caused no major constraint on Brazil's economic development until 1964.

Nor was the Plan concerned with the question of unsatisfactory income distribution. Social investment and expenditure were given scant regard. It was not until 1959 that the proposal to stimulate the dynamic development of the former primary exporting areas (Northeastern region), untouched as they were by the industrialization process

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[8] Ibid p. 46.

concentrated in the Central Southern regions, was substantiated, with the establishment of the SUDENE, a federal agency responsible for overall planning in the principal problem area.

Briefly, the Plan postulated direct government investment in the energy-transport sector and in certain basic industrial activities, particularly steel manufacture and the refining of petroleum, where entrepreneurial initiative had been found wanting. It also established increased benefits and incentives for the expansion and diversification of the secondary sector producing capital goods and inputs which required a high capital intensity.

In the face of these objectives, which implied a sweeping change in the structure of the economy, less importance was attached to considerations relating to price equilibrium. That is to say, the monetary, fiscal and exchange policies became of secondary concern and were placed at the service of the industrialization process. In other words, as opposed to what happened in other Latin American countries, Brazil was able to reach a stage in which economic development carried on despite unstable conditions.

The policy underlying the Target Plan may be broken down into four basic parts. The first consisted in the particularly favourable treatment accorded to foreign capital inflows. The second was based on the expansion of the public sector's direct participation in domestic capital formation. The third major aspect of the economic policy of the period was the efforts made to channel private resources into the areas considered to be of key importance under the Plan. Finally, the fourth important feature of this economic policy lay in its approach to the problem of stability. By allowing a high rate of inflation (which began at 20 per cent a year) as a means to finance public expenditure, the Plan provided private enterprise with a mechanism for tapping the enforced savings of the community which was valuable for its expansion projects.

7.3. Approach to the Stabilization Process (1964-1968)

At the end of the Target Plan period (1961), Brazilian industry already displayed some features of a sector reflecting the rudiments of a mature economy. But the existence of a high inflationary process and the deterioration of external conditions made stabilization an imperative objective. The general price level increased 57 per cent in 1962; the increase was 77 per cent in 1963 and 86 per cent in 1964. Brazilian economic development, in by-passing the primary sector, the less developed regions and the major segment of the population, accentuated the existing sectorial, regional and social disparities. These disparities and the concern they aroused, became a burning political issue in Brazil from 1962 on. The sectorial imbalances and the demands of labour and other groups affected by inflation were such that further growth could only take place under quite different rules. Moreover, circumstances were no longer the same as in the previous decade. The maladjustments appeared within a more diversified economy, with more capital-intensive production processes and with major sectors that were highly sensitive to fluctuation in the rate of growth and therefore vulnerable to an internally-generated conjunctural depression. All this contributed to a situation that led, as described in Chapter 4, to a military coup, with the deposition of the President of Brazil in March 1964. After this, political power for effective decision-making was centralized in the military government.

The accumulation of heavy external commitments, the unfavourable trend of exports, the expansionist trend of subsidized imports, the high rate of inflation, etc. were problems to which the new administration gave immediate attention. A remodelling of the monetary instruments, including the creation of a central bank was also set in motion.

By the end of 1964, the government appeared to be capable of dealing with the economic, financial and social problems facing Brazil. A plan was implemented to curtail inflation by limiting credit expansion, by conditioning wage increases to productivity increases and by raising tax receipts by means of various reforms in tax administration. Production was boosted by a large government plan to build low-cost housing, the aim of which was to stimulate the basic industries supplying the building industries and to solve some of the social problems of urban overcrowding. The changes made in the profit remittance law and the settlement of payments for the nationalization of public utilities formerly owned by the American and Foreign Power Company contributed substantially to restore international confidence in private capital in Brazil, the inflow of which reached US$555 million in 1968.

In the external sector also, a new programme of import liberalization helped to rationalize the system of protection, and other steps were taken to correct distortions in relative prices. The policy aims switched from an excessive emphasis on import-substituting industrialization to a more balanced allocation of resources. In the export sector, for example, a flexible rate of exchange was introduced in July 1967. This proved a successful measure, resulting in a vigorous expansion of exports.

In conclusion, Brazilian economic-policy-making has played a positive role in the country's development. Despite some errors, Brazil put up a creditable performance. One such error was the bias against exporting, and the resultant inadequacy of import supply. For this reason, Brazilian development did not follow an optimal pattern and involved unnecessary costs in sacrificing opportunities offered by trade and comparative advantage. However, until 1962, Brazilian national income had shown a steady growth.

Despite the remarkable rate of growth achieved in the post-war years - and indeed since the turn of the century - Brazilian per capita income is still relatively low, at approximately US$325. This indicates how difficult it is for a country to achieve economic progress when it starts with poor initial conditions, and especially when the population is increasing at the rate of 3 per cent per annum.

Protection served as the functional equivalent of a selective devaluation on the import side. The emphasis on the "basic industries" stemmed from an implicit model of economic growth in which imports have to be acquired at low cost. This policy, however, had adverse effects on exports, in that Brazilian goods became non-competitive in external markets.

Brazilian policy-makers, however, were aware of this problem.

> "But they were at least able to deal constructively with some of its consequences and helped spare Brazil from the worst of both worlds - stagnation in foreign trade and in domestic production. Even the decision in 1962 to restrict direct foreign private investment may not have been as catastrophic as sometimes alleged. It is not clear that for a country like Brazil, this particular form of capital inflow is more advantageous than

others such as supplier credits."[9]

In any case, even in the years when direct investment was most important, it was only of minor significance in Brazilian capital formation and was much overshadowed by commercial loans.[10]

Brazil has been criticized because of her persistent inflation. Without denying some of the negative effects it had on Brazilian development, the fact remains that it did not prevent her making great strides towards economic growth. Brazilian economic policy-makers were aware of the problems caused by inflation and its consequences on different income groups, especially the hardship it brings to those with fixed incomes (such as retired persons, old age pensioners,etc.). Inflation was, however, the price the Government chose to pay for the economic development of the country. Its role should be interpreted as an allocative device, or rather, a re-allocation of resources from the consumer sector to the producer sector.

Unlike some under-developed countries which have followed overly orthodox fiscal and monetary policies,Brazilian growth has rarely been constrained by insufficient aggregate demand. Moreover on the supply side, an econometric study of Brazilian inflation has concluded that the rate of investment was positively related to the rate of price increases.[11] At the same time, some of the usual distortions that inflation might have been expected to induce in investment allocation did not in fact occur.[12] For example, the

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[9] Ibid p. 93

[10] Hollis Chenery and Peter Eckstein have shown that for most Latin American countries in the 1950's, domestic savings and foreign capital inflow were inversely related. See their "Development Alternatives for Latin America", Journal of Political Economy, January/March 1969.

[11] Dr. H.S.Odeh, The Impact of Inflation on the Level of Economic Activity (Rotterdam:Rotterdam University Press,1966) Chapters I,V,VI.

[12] W.Baer, "Brazil:Inflation and Economic Efficiency", Economic Development and Cultural Change(Nov.1963)pp.395-406

usual flight of private capital into urban real estate as a hedge against inflation was discouraged from taking place on a large scale because, from the time of the Second World War until 1964, all rents on properties were frozen by law.

Until 1929, monetary, fiscal and financial policy in Brazil aimed at achieving economic growth with monetary stability. The national budget, for example, had to be balanced at any price. Evidence shows that the rates of economic expansion were low in comparison to the post-war years, when inflation became a common feature of the Brazilian economy. Another factor was that the foreign trade sector was a lagging sector until 1964. Exports were comprised mostly of coffee, for which Brazil held a monopolistic position in international markets. Imports were, in some form or other, subsidised by the Government. For this and other reasons mentioned in this thesis, inflation was not a matter of prime concern for Brazil.

It is not suggested that Brazilian decision-makers always chose policies leading to the maximum contribution to economic growth. There were errors and missed opportunities for even higher rates of growth. These instances, however, should not detract from the positive features of the overall performance of the Brazilian economy.

8. IMPORT SUBSTITUTION PROCESS

The term "import substitution" which has been adopted to denote a new process of development taking place in the under-developed countries, may not be fully descriptive of the activities and administrative arrangements involved. It may give the impression that the process consists simply and solely in the removal or diminution of components of the import structure and their replacement by national products. It might be assumed by extension that one of the main policy goals would be to eliminate imports altogether, in other words, to achieve self-sufficiency.[1]

This, however, was not the case. The substitution process is not intended to reduce the overall import quantity. Such a reduction, when it occurs, is the outcome of restrictions in the external sector rather than an aim in itself. It is these restrictions, whether absolute or relative, that make it necessary to produce, in the country, goods formerly imported. But the position of the replaced goods is taken by others, and as the process gathers momentum, it generates an increase in derived demand for imports of

[1] This point of view has been advanced by some theoreticians such as Professor Rottenberg of Chicago, to emphasize the "dangers" inherent in a policy of import substitution. See Simon Rottenberg, Reflexiones sobre la industrialización y el desarollo económico, (Santiago: Catholic University, 1957).

intermediary and capital goods which may lead to greater dependence on the external sector than during the earlier stages of the substitution process.

Once import substitution is understood in its more limited sense, that is, as an absolute or relative decrease in certain groups of products in the import structure, the next step is to examine more closely the analytical problems that may arise. For this purpose, some examples are given below in which no such decrease occurs, or, if it does, its real nature is masked by the "apparent" substitution taking place.

The first example is an extreme case where no change takes place in the composition of imports in absolute or relative terms, that is, neither the quantum nor the respective proportions of the principal commodity groups in the import structure undergo any modification. In such an event there would be no "apparent" or "visible" substitution, even though a vigorous and effective process of substitution might actually be taking place through an increase in the contribution made by industry to an expanding domestic supply.

Another type of problem is posed by the emergence of new products on the world market, which makes it difficult to undertake a comparative analysis of the pattern of imports in different periods. For instance, after the Second World War, new durable consumer goods, such as electric refrigerators, appeared which bore no resemblance to the type of product imported previously. Consequently, the development of a domestic industry producing such goods cannot be described, strictly speaking, as "substitution" in terms of pre-war imports. It is obviously a continuation of the general process described above: that is, it involves a realignment of the factors of production corresponding to a change in the pattern for the division of labour in the economy.

Another common trend is the decline in imports of non-essential goods (certain kinds of durables and non-durables) as the result of discriminatory exchange policies aimed at reconciling the overall level of imports with the real capacity to import.

The effect of such restrictions has been to stimulate domestic production. Obviously, in these circumstances the "real" substitution takes place after the "apparent" substitution discernible in the pattern of imports. But it may well be that some products are not actually replaced (because the market is not large enough, and/or the resources for producing them locally are lacking), and that their reduced share in the import structure is entirely atributable to import controls. Once these have eased, imports of such goods will automatically begin to climb again, as will probably be the case with other goods that cannot be produced locally on a competitive basis without the protection of very high tariffs or other measures of trade restraint.

8.1. The Dynamics of the Process

The dynamics of the process of development through import substitution may be regarded as a series of responses to the successive challenges presented by restrictions in the external sector. As a result the economy gradually becomes less quantitatively dependent on external sources and also effects a transformation in the nature of this dependence. Throughout this process, which gives rise to a number of structural modifications in the economy, the basic contradiction between development requirements and the barrier represented by the capacity to import manifests itself in a series of different forms.

Substitution usually begins where technology is generally less complicated and less capital intensive - as for example, the manufacture of finished consumer goods such as textiles. A large market already exists, or has been created, for goods of this kind, as a result of defensive measures against foreign sources of supply.

The setting up of industrial plants for domestic production of finished consumer goods formerly imported tends to expand the internal market for such products, not only because of the higher income that results from the investment process, but also because of the absence of internal restrictions of the kind imposed on equivalent imports. Domestic production, however, replaces only a part of the value added that was previously generated ouside the economy. Consequently, derived demand for imports of raw material and other inputs climbs rapidly and tends to outstrip the supply of foreign exchange.

This, then, is the first manifestation of one phase of the above-mentioned internal contradiction between the aim of the process, which is to expand the product (and, imports, at least to some extent) and the limitations of the capacity to import.

The response to this challenge has been a fresh wave of substitutions, which means that some of the less essential imports have to be reduced to release the foreign exchange required for the establishment of the production units. Once more there is an increase in the product and in the income and the phenomenon described above then repeats itself, to a greater or lesser extent.

The mainspring of the import substitution process is the constant struggle to resolve these contradictions. Theoretically, the process could continue, through a rigorously selective use of foreign exchange, to that point in the international division of labour where utilization of existing domestic resources reaches its maximum.

But in practice, as the substitution process solves, or appears to solve, the problems successively posed by the "external barrier", its progress becomes increasingly difficult and costly. This is not only for internal reasons, such as market size, technology, etc., but also because limitations have made the import structure more rigid[2] before the development process has acquired sufficient independence in terms of diversification of production.

8.2. The Structural Changes in the Brazilian Economy

The purpose of the present chapter is (a) to show how far the import substitution process which has been taking place in Brazil during the last four decades has been reflected in perceptible changes, not only in the Brazilian GNP, but also in the structure of the import list itself, and (b) to analyse the behaviour and composition of the different categories of imports.

Although the period selected for detailed analysis of the changes in the Brazilian economy extends from 1929 to 1964, the periods 1920-1929 and 1964-1968 are studied, for reference purposes only, as available statistics are inadequate for any deeper research.

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2 By rigidity is meant that the import list is made up almost exclusively of investment goods, essential to the economic activity of the country. Due to the non-existence of consumer goods no margin is left for further reduction in imports in periods of shortage of foreign exchange reserves.

8.2.1. Period 1920-1929

The period 1920-1929 is marked by the coffee crisis in Brazil. The withholding of large stocks and the valorization schemes supported by overseas financiers were started in 1906, as already explained in Chapter 4. During the 1920-1929 period, Brazil's exports increased by 8.5 per cent (in quantitative terms) and 109.0 per cent (in price terms). Exports increased less than population, however, and even less than urban population, which was more closely committed to the export monetary economy. A growing share of export earnings was being used to meet the external debt contracted chiefly to support the coffee valorization policy. The external debt dominated the whole framework of the Brazilian economy and the central problem of government was the fluctuation of the foreign exchange rates.

Table 21 reveals some indices of the Brazilian economy in the period 1920-1929.

The increase of almost 50 per cent in the real output derived from the expansion of the external sector where heavy investments in coffee production took place. The high proportion of investment goods in the total import list (73 per cent in 1920 and 81 per cent in 1929) reflected the acquisition, principally, of equipment for the coffee industry (equipment for the opening up of roads, for example, to connect coffee plantations to the ports). Only a small proportion of those investment goods were destined to the

TABLE 21 - SOME SIGNIFICANT INDICES OF THE BRAZILIAN ECONOMY (1920-1929)

	1920	%	1923	%	1926	%	1929	%
1) GNP								
(i) Total (10^6 NCr$_{50}$)	105.4		116.5		99.5		150.8	
(ii) Per capita (NCr$_{50}$)	3.84		4.0		3.2		4.58	
(iii) " " (US$_{50}$)	176		183		147		210	
2) Imports FOB								
(i) Total (10^6 US$_{50}$)	429		341		545		615	
(ii) Consumer Goods (10^6US$_{50}$)	114	27	83	24	120	22	115	19
(a) durable consumer goods (10^6US$_{50}$)	56		37		48		46	
(b) non durable consumer goods(10^6US$_{50}$)	58		46		72		69	
(iii) Investment Goods (10^6US$_{50}$)	315	73	258	76	425	78	500	81
3) Electric power - installed capacity								
(i) Total 10^3KW	367		396		592		760	
(ii) Per capita (W)	14		14		19		24	
4) Crude Steel production								
(i) Total (tons)	5,326		8,931		14,308		26,842	
(ii) Per capita (kg)	0.19		0.22		0.38		0.81	
5) Cement production								
(i) Total (10^3 tons)	205		308		509		631	
(ii) Per capita (kg)	7.48		10.1		13.4		19.18	

Source: Calculated from: a) Octavio Dias Carneiro, Past Trends of Structural Relationships in the Economic Evolution of Brazil - 1920-1965, Statistical Appendix. (Cambridge, Massachussetts, Center for International Affairs, Harvard University, May 1966), mimeographed; and
b) Serviço de Estatística Econômica e Financeira, Ministério da Fazenda: 1920-1968.

production of food, textiles and clothing. These industries, however, produced only enough to satisfy a proportion of the needs of the urban population connected with the monetary economy of the export activities.

As already explained in Chapter 4, many of the industries built up during World War I suffered a considerable setback during the twenties, not only because of the policy of the government towards coffee production but also because of foreign competition as a result of the recovery of European production.

If an attempt is made to measure import substitution in this period, by means of one of the alternative measures of import substitution of Padma Desai[3] (Variant 1b[4], which is the only one which fits the available data), the result is 0.1309. In other words, there was no import substitution as such in this period, since the "import -availability ratio" is positive.

The ideal coefficient to measure import substitution is the one used by Chenery[5], in which some

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3 Padma Desai, "Alternative Measures of Import Substitution", Oxford Economic Papers, New Series, Volume 21, Number 3, (November 1969) p.318.

4 Variant 1b is:

$$u = \frac{\sum_{i=1}^{n} M_2 / \sum_{i=1}^{n} S_2 - \sum_{i=1}^{m} M_1 / \sum_{i=1}^{m} S_1}{\sum_{i=1}^{m} M_1 / \sum_{i=1}^{m} S_1}$$

5 Hollis Chenery, "Patterns of Industrial Growth", American Economic Review, (September, 1960).

consideration is taken of the share of domestic production in total supply.

Due to lack of data for the period 1920-1955, this coefficient[6] will be only employed for the period 1956-1964.

8.2.2. Period 1929-1964

The period 1929-1964 represents a phase of significant industrialization. Early in this period, Brazilian industrialization essentially involved the establishment of industries to satisfy an existing demand for the imports being replaced. Only at a more advanced stage did the problem arise of satisfying the demand created by development itself, particularly the demand for capital goods.

The period 1929-1964 will be divided consequently into two subperiods, 1947 being the turning point.

8.2.2.1. Subperiod 1929-1947. First Stage of Industrial Development

Table 22 reveals some significant indices of the Brazilian economy in its first stage of industrial development.

Since expansion of industrial production could not take place through an increase in the importation of machinery, because of the foreign exchange shortage and /

[6] The formula for the coefficient is:

$$u = 1/\Delta Q \ (Q_2 - S_2 . Q_1/S_1)$$

Q = Domestic Production; S = total supply

TABLE 22 - SOME SIGNIFICANT INDICES OF THE BRAZILIAN ECONOMY (1929-1947)

	1929	%	1935	%	1941	%	1947	%
1) GNP								
(i) Total ($10^6 NCR\$_{50}$)	150.8		168.1		194.1		221.7	
(ii) Per capita ($NCR\$_{50}$)	4.58		4.55		4.60		4.48	
(iii) " " ($US\$_{50}$)	210		207		211		205	
2) Imports FOB								
(i) Total ($10^6 US\$_{50}$)	615		418		472		1,092	
(ii) Consumer goods ($10^6 US\$_{50}$)	115	19	58	14	122	26	184	17
(a) durable consumer goods ($10^6 US\$_{50}$)	46		20		36		100	
(b) non durable consumer goods($10^6 US\$_{50}$)	69		38		86		84	
(iii) Investment goods ($10^6 US\$_{50}$)	500	81	360	86	350	74	908	83
3) Electric power - installed capacity								
(i) Total 10^3 KW	760		850		1,261		1,534	
(ii) Per capita (W)	24		23		30		31	
4) Crude Steel production								
(i) Total (tons)	26,842		64,231		84,391		416,032	
(ii) Per capita (kg)	0.81		1.73		1.99		8.40	
5) Cement production								
(i) Total (10^3 tons)	631		646		902		1,215	
(ii) Per capita (kg)	19.18		17.41		21.3		25.20	
6) Sulphuric Acid								
(i) Total (10^3 tons)	-		22		39		80	
(ii) Per capita (kg)	-		0.59		0.99		1.66	
7) Caustic Soda								
(i) Total (10^3 tons)	-		-		-		70	
(ii) Per capita (kg)	-		-		-		1.45	
8) Petroleum & petroleum products								
(i) Total (10^3 tons)	-		-		-		5	
(ii) Per capita (kg)	-		-		-		0.10	

Source: Calculated from: a) Octavio Dias Carneiro, Past Trends of Structural Relationships in the Economic Evolution of Brazil - 1920-1965, Statistical Appendix. (Cambridge, Massachussetts, Center for International Affairs, Harvard University, May 1966), mimeographed: and
b) Serviço de Estatística Econômica e Financeira, Ministério da Fazenda: 1920-1968.

the higher price of imports resulting from the depreciated currency, the initial phase of industrial expansion in the early thirties was marked by the increased utilization of idle capacity. This was possible especially in such an industry as textiles, which had been producing below capacity even before the depression struck. According to Celso Furtado[7] this more intense use of idle capacity increased the profitability of the relevant industries, which, in turn, provided the funds for further expansion. It also became possible to import cheap second-hand machinery, in many cases from those foreign factories which had been more severely affected by the depression.

Table 23 shows the real production indexes of the Brazilian economy in the period 1929-1947. Industrial production expanded from 28.3 to 73.1 whilst the real product increased from 38.3 to 82.4 an expansion of more than 100 per cent.

The overall level of imports attained in 1929 was not regained until 1944. Imports of consumer goods contracted very sharply at the time of the depression, especially durable consumer goods. This group of products while recovering more rapidly than non-durable consumer goods, failed to regain their 1929 levels in the course of

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[7] Celso Furtado, The Economic Growth of Brazil, Loc. cit. pp. 221-2.

TABLE 23 - REAL PRODUCTION INDEXES 1929-1947 - (1950 = 100)

	AGRICULTURE	INDUSTRY	% ANNUAL CHANGES	COMMERCE	TRANSPORT AND COMMUNICATION	REAL PRODUCT (Estimated)	% ANNUAL CHANGES
1929	45,2	29,0	- 4,3	37,0	29,1	38,3	2,7
30	44,0	28,3	- 2,4	36,0	25,3	37,0	- 3,4
31	40,0	27,4	- 3,2	33,6	24,5	34,6	- 6,5
32	45,0	27,7	1,1	36,4	21,1	36,8	6,4
33	48,7	30,2	9,0	39,5	24,6	40,2	9,2
1934	51,5	32,5	7,6	41,9	25,9	42,6	6,0
35	47,9	35,0	7,7	40,8	30,1	42,0	- 1,4
36	54,2	40,3	15,1	46,3	34,4	47,8	13,8
37	55,8	41,8	3,7	47,9	34,9	49,3	3,1
38	56,2	43,8	4,8	48,4	38,3	50,5	2,4
1939	53,9	46,2	5,5	48,4	41,3	50,5	0,0
40	67,4	47,1	1,9	56,5	41,5	58,3	15,4
41	86,1	51,0	8,3	68,9	42,4	70,0	20,1
42	85,5	52,1	2,2	69,0	40,4	69,8	- 0,3
43	88,2	59,4	14,0	73,2	44.9	74,4	6,6
1944	81,0	63,7	7,2	70,5	51,6	72,6	- 2,4
45	85,1	61,3	- 3,8	72,1	56,6	74,7	2,9
46	88,8	70,1	14,4	77,5	64,5	80,7	8,0
47	88,2	73,1	4,3	78,2	73,6	82,4	2,1
% Changes in the period	107,5	152,0		111,3	152,9	115,1	

Source: Calculated from: Wilson Suzigan, O Processo de Substituição de Importações no Brasil (Rio: Fundação Getúlio Vargas, fevereiro de 1968) mimeographed.

the 'thirties. By the middle of the 'forties, however, imports of durable consumer goods had reached high levels, surpassed only by imports of fuels, especially coal, essential to industrial activities.

Imports of non-durable consumer goods remained throughout the whole of the'thirties at an average of 50 per cent lower than the level registered in 1929. Even by 1947 they had not as yet returned to pre-depression levels. A process of substitution of domestic production for imports therefore took place, which was particularly intensive in the case of foods of animal origin, beverages and some of the simpler manufactured goods.

Imports of the fuels and lubricants group could not be reduced since a petroleum industry did not exist. In 1947, for example, the volume registered was double the 1938 figure, a development which simultaneously reflected the economic expansion of the post-war period.

The next most difficult group of imports to restrict was raw materials and intermediary products, since the economy needed them for domestic production of finished goods. Substitution in respect of several items of importance (metal products, for example) for subsequent economic development, was so intensive that by 1947, imports of raw materials and intermediary goods had contracted only by 20 per cent in comparison to the 1929 level.

The period 1929-1947 witnessed a decrease in external purchases of non-metallic raw materials in relation to the following items: skins and hides, textile fibres and yarns, paper products (other than newsprint), rubber manufactures, sheet glass and cement.

Capital goods displayed a fair degree of elasticity in relation to fluctuations in the overall levels of imports. Next to durable consumer goods, this was the group that underwent the most severe restrictions as a result of the depression. Its recovery during the rest of the decade also followed the same course. In 1947, however, notwithstanding the fact that the level of imports of capital goods was above the overall average, their expansion by no means equalled that of external purchases of durable consumer goods.

(a) The Behaviour of the General Price Level

In the period 1929-1947, industrialization was supported by the convergence of two factors: import substitution and transference of resources caused by inflation. Each factor went through different phases but remained inseparable from the process of the Brazilian industrialization.

Import substitution was a question of filling a gap.

Inflation, as a process of income redistribution, operated for the benefit of groups linked to industrial activities. In the initial phase of the depression, the government, in order to protect the coffee sector, initiated, as seen in Chapter 4, a vast programme of building up stocks of coffee, financing this by issuing paper currency. This policy, as already shown, indirectly benefitted the small industrial sector and created the conditions for its rapid growth.

> "Real income, which was distributed as the result of inflation, was itself created by inflation. It was not simply a question of renewed economic activity similar to what happens in a developed capitalist economy during a phase of cyclic recovery."[8]

In view of the insufficiency of the importing capacity, maintenance of a high employment level involved creating an internal imbalance that expressed itself in an increase of the price level. Table 24 presents the general price level for the period 1929-1947.

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[8] Celso Furtado, Diagnosis of the Brazilian Crisis (California: University of California Press, 1965) p. 103.

TABLE 24

The Behaviour of the General Price Level and the Expansion of GNP (percentages based on 1950 prices)

(1929-1947)

Years	Δ GPL	Δ GNP
1929	0.0	2.7
1930	-9.7	-3.4
1931	-3.1	-6.5
1932	0.6	6.4
1933	-1.3	9.2
1934	7.8	6.0
1935	5.4	-1.4
1936	14.4	13.8
1937	8.0	3.1
1938	4.2	2.4
1939	2.7	0.0
1940	5.6	15.4
1941	12.3	20.1
1942	11.7	-0.3
1943	15.7	6.6
1944	36.5	-2.4
1945	25.1	2.9
1946	14.7	8.0
1947	7.9	2.1

Source: Calculated from: (a) Octavio Dias Carneiro, Past Trend of Structural Relationships in the Economic Evolution of Brazil - 1920-1965, Statistical Appendix. (Cambridge, Massachussetts, Center for International Affairs, Harvard University, May 1966), mimeographed; and (b) Serviço de Estatística Economica e Financeira, Ministério da Fazenda: 1920-1968.

During the years 1929-1933 there were moderate price decreases, reflecting the strong effect of the beginning of the depression. From 1934 to 1940 the rise in the general price level is about 6 per cent a year. The average rise in price per year from 1941 to 1947 was about 18 per cent.

A certain coincidence is evident and can be traced between the growth trend in GNP and the rate of increase in the general price level. Years of slow growth or even decrease, such as those from 1929 to 1931, were marked by a decline in prices. The years in which the GNP showed noticeable growth, as in 1936, 1941 and 1946, were years in which the General Price Level increased by more than 12 per cent.

Available statistics are insufficient (a) to estimate the rates of inflation which might be compatible with the maintenance or even the recovery of the trend rate of growth in GNP above 4.5 per cent annually, and (b) to prove or disprove the view that economic growth is compatible with stability since there has been no period of price stability during the last fifty years of the evolution of the Brazilian economy.

> "...at least in the context of the Brazilian monetary policy, the monetary authorities have been unable to resist for a long time the constant and strong political, social and economic pressures to expand money and credit supply, as well as to devalue the exchange rates, inherent in the process of the Brazilian economic development in the postwar years. The sources of inflation have been structural, and the ways of propagation have been monetary."[9]

(b) The Measure of Import Substitution

For the period 1929-1947, import substitution

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[9] Octavio Dias Carneiro, Loc. cit. pp. 7-8

was measured at -0.0099, which represents a very low coefficient of import substitution. The beginning and the end of the period, however, coincide with two events that affected the normal pattern of international trade. At the beginning of the depression both imports and exports were vigorously reduced, and consequently their participation in the Brazilian GNP fell more rapidly than the GNP itself. In the last years of the period, the ending of World War II allowed a greater volume of imports and exports. Imports were liberated and the import coefficient showed a sudden rise, reaching 12 per cent in 1947. That is why the coefficient of import substitution was apparently small. In fact, however, substitution was intense in food and clothing, while in the group of the metallurgical, light machinery, and chemical and pharmaceutical industries, important progress was made.

8.2.2.2. Subperiod 1947-1964. The Strengthening of the Industrial Basis

The year 1947 may be seen as the first of a new era in Brazilian economic development marked by the intensification of the import substitution process, gains in the terms-of-trade, inflation, fiscal as well as balance-of-payments deficits, cold war tensions, and an increasing economic imbalance between the rural and the urban areas, and between the Centre-South region and the rest of the country.

Table 25 presents some significant indices of

TABLE 25- Some Significant Indices of the Brazilian Economy (1947-1964)

	1947	%	1953	%	1959	%	1964	%
1) GNP								
(i) Total (10^9 NCr$_{50}$)	221.7		277.7		381.3		462.0	
(ii) Per capita (NCr$_{50}$)	4.58		4.90		5.80		5.89	
(iii) Per capita (US$_{50}$)	205		218		251		260	
2) Imports FOB								
(i) Total (10^6US$_{50}$)	1,092		1,053		1,052		939	
(ii) Consumer Goods (10^6US$_{50}$)	184	17	96	9	62	6	69	7
(a) durable consumer goods (10^6US$_{50}$)	100		18		17		9	
(b) non durable consumer goods (10^6US$_{50}$)	84		78		45		60	
(iii) Investment Goods (10^6US$_{50}$)	908	83	957	91	990	94	870	93
3) Electric power - installed capacity								
(i) Total 10^3KW	1,534		2,089		4,115		6,313	
(ii) Per capita (W)	31.69		36.84		62.63		80.52	
4) Crude Steel production								
(i) Total (10^3tons)	416		1,016		1,608		3,092	
(ii) Per capita (kg)	8.59		17.92		24.47		39.44	
5) Cement production								
(i) Total (10^3 tons)	1,215		1,655		3,841		5,583	
(ii) Per capita (kg)	25.10		29.19		58.46		71.21	
6) Sulphuric Acid								
(i) Total (10^3tons)	80		98		202		300	
(ii) Per capita (kg)	1.65		1.73		3.07		3.83	
7) Caustic Soda								
(i) Total (10^3tons)	7		20		63		89	
(ii) Per capita (kg)	0.14		0,35		0.96		1.14	
8) Petroleum products (motor spirit)								
(i) Total (10^3 tons)	8		87		2,256		4,174	
(ii) Per capita (kg)	0.16		1.53		34.34		53.24	
9) Plastic and resins								
(i) Total (10^3tons)	-		-		-		45.7	
(ii) Per capita	-		-		-		0,58	

Source: Calculated from: a) Octavio Dias Carneiro, Past Trends of Structural Relationships in the Economic Evolution of Brazil - - 1920-1965, Statistical Appendix. (Cambridge, Massachussetts, Center for International Affairs, Harvard University, May 1966), mimeographed; and
b) Serviço de Estatística Economica Financeira, Ministério da Fazenda: 1920-1968.

the Brazilian economy that can be compared to those of the 1929-1947 period.

The overall compound rate of growth for the period 1947-1964 was 4.5 per cent annually: from 222 million constant (1950) new cruzeiros, the GNP rose to 462 million cruzeiros in 1964, that is, an expansion of more than 100 per cent. Those were the best years of the entire period 1920-1968.

The GNP per capita increased steadily, from US$205 dollars at 1950 prices in 1947 to US$260 in 1964 (the rate of population growth has increased by about 3 per cent annually).

If the GNP at constant prices is analysed for frequency and amplitude of fluctuations, the phase 1920-1947 shows serious instability and this instability is connected with the greater exposure of the economy to trade impacts.

With import substitution energetically carried out from 1947 on, especially between 1956 and 1961, a new source of instability arose from the inflexibility of imports as a result of the disappearance of a compressible buffer of durable consumer goods from the import list. Fluctuations, therefore, in the GNP at constant prices became more frequent in the later 1950's and early 1960's. In other words, in the period 1947-1964, the role of foreign trade as a determinant of income level became progressively less important, to acquire at the same time greater significance as a strategic element in the process of capital formation.

Table 26 shows the real production indices of the Brazilian economy in the period 1947-1968. Industrial production expanded from 73.1 to 300.0 whilst the real output increased from 82.4 to 207.5.

The supply of imports, however, did not increase with domestic monetary income and demand. On the contrary, it was reduced. Whereas the real product expanded by more than 150 per cent, imports virtually stagnated.

In an effort to deal with the balance of payments problem that resulted from stagnating exports, the promotion of import substitution was equivalent to accelerated industrialization. With buoyant aggregate demand and a marginal propensity to import, which declined little during the period, import substitution led only to a changing composition of imports, while the imbalance in the external sector continued. The persistent demand pressures on the exchange market were reflected in an upward trend, in real terms, in the cruzeiro-dollar rate for imports; so that, quite apart from government protectionist measures, relative prices moved to favour domestic producers for many products previously imported.

> "With income-elastic supply of factors such as capital, entrepreneurship, and skilled labour, industrial output responded with an annual cumulative growth rate of 8.8 per cent. This resulted in a process of rapid growth

TABLE 26 - Real Production Indexes 1947-1964 - (1950-100)

	AGRICULTURE	INDUSTRY	% ANNUAL CHANGES	COMMERCE	TRANSPORT AND COMMUNICATION	REAL PRODUCT (Estimated)	% ANNUAL CHANGES
1947	88,2	73,1	4,3	78,2	73,6	82,4	2,1
48	94,3	81,3	11,2	92,7	85,5	90,2	9,5
49	98,5	89,7	10,3	96,0	92,6	95,3	5,7
50	100,0	100,0	11,5	100,0	100,0	100,0	4,9
51	100,7	106,4	6,4	113,2	110,0	105,1	5,1
52	109,9	111,6	4,9	117,6	117,1	111,1	6,7
1953	110,1	121,3	8,7	114,3	127,6	114,6	3,2
54	118,8	131,7	8,6	131,3	136,8	123,4	7,7
55	127,9	145,6	10,6	137,9	141,0	131,8	6,8
56	124,9	155,7	6,9	137,1	145,8	134,3	1,9
57	136,5	164,4	5,6	153,9	154,6	143,5	6,9
58	139,2	191,4	16,4	164,4	163,6	153,1	6,7
1959	146,6	216,0	12,9	179,5	174,7	164,3	7,3
60	153,8	237,7	10,0	190,0	202,9	175,3	6,7
61	165,4	263,4	10,8	211,5	222,8	188,0	8,4
62	174,5	283,6	7,7	209,2	237,3	198,1	5,4
63	174,7	285,6	0,7	212,0	252,1	201,3	1,6
64	177,1	299,9	5,0	218,5	261,2	207,5	3,1
% CHANGES IN THE PERIOD	100,8	310,3		179,4	254,9	151,8	

Source: Calculated from: Wilson Suzigan, O Processo de Substituição de Importações no Brasil (Rio; Fundação Getúlio Vargas, fevereiro de 1968) mimeographed.

> led by industrial development until 1963, when the income inelasticity of import supply became so great as to constrain aggregate Brazilian growth."[10]

In terms of 1950 US$, FOB imports of consumer goods fell considerably, from a total of 184 million in 1947 to 69 million in 1964. The substitution effort was strongest in the case of durable consumer goods (as opposed to non-durable consumer goods).

In all the other groups, increases in the quantum of imports were registered throughou the period. The most striking expansion was that of fuels and lubricants; the quantum increased in the course of the period 1947-1961 by 150 per cent (see Tables 27 and 28).

The quantum indices for finished capital goods and intermediary products as a whole show a similar trend between the beginning and end of the period as the overall import quantum, although with fluctuations of differing degrees of intensity.

Capital goods displayed more elasticity than the other categories in reacting to the movements of the overall quantum of imports. Thus, in 1951 and 1952, the years in which the latter reached its peak levels, the increase in external purchases of equipment was disproportionately great, and the quantum of such imports

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10 Nathaniel H. Leff - Economic Policy-Making and Development in Brazil, Loc. cit. p.91

TABLE 27 - BRAZIL: IMPORT QUANTUM INDICES, BY MAJOR CATEGORIES, 1947-1961

(1947 = 100)

Year	Consumer goods			Fuels and lubricants	Raw materials and intermediate products			Capital goods	Sample total
	Durable	Non-durable	Sub-total		Metal	Non-metal	Sub-total		
1947	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1948	92.3	100.5	95.7	103.7	128.4	100.0	107.8	98.7	101.9
1949	85.8	102.0	92.8	105.4	140.0	108.7	115.8	95.7	102.6
1950	77.8	112.6	92.8	126.7	156.9	137.8	142.1	113.1	120.1
1951	176.4	164.7	171.4	163.5	221.3	187.8	195.5	193.1	186.2
1952	109.5	162.1	132.2	180.8	188.7	159.9	166.5	209.2	179.2
1953	24.8	113.3	63.0	178.2	163.4	140.2	145.5	94.0	115.2
1954	39.6	131.4	79.2	214.4	319.4	181.8	213.1	118.0	152.7
1955	20.4	120.8	63.8	208.0	161.9	158.8	159.5	82.6	119.1
1956	19.9	121.0	63.6	216.9	144.4	149.2	148.1	77.2	114.6
1957	25.9	115.3	51.3	196.0	181.3	150.2	157.2	126.2	134.0
1958	27.9	82.0	51.4	219.2	137.3	145.4	143.6	127.9	131.3
1959	29.7	82.1	52.4	215.0	143.1	159.2	155.6	153.0	144.4
1960	21.0	107.3	58.3	246.2	173.3	179.6	178.2	122.9	144.6
1961	17.0	117.9	60.6	248.7	196.0	174.8	179.6	114.6	142.5

Source: U.N. Economic Bulletin for Latin America, Vol. IX, Nº 1, (New York, March 1964) page 22.

TABLE 28 - BRAZIL: PERCENTAGE BREAKDOWN OF IMPORTS, BY MAJOR CATEGORIES, 1947-1961

1947	9.5	7.8	17.3	12.0	6.8	23.0	29.8	40.9	100.0
1948	9.8	7.5	17.3	13.0	6.9	23.5	30.4	39.3	100.0
1949	8.2	7.4	15.6	13.4	9.4	24.9	34.3	36.7	100.0
1950	6.4	7.0	13.4	13.7	9.0	26.9	35.9	37.0	100.0
1951	9.3	6.6	15.9	11.4	8.2	23.7	31.9	40.8	100.0
1952	6.0	6.8	12.8	13.1	7.3	20.9	28.2	45.9	100.0
1953	2.1	7.4	9.5	20.1	9.8	28.6	38.4	32.0	100.0
1954	2.6	6.4	9.0	18.3	14.4	27.9	42.3	30.4	100.0
1955	1.7	7.6	9.3	22.8	9.4	31.3	40.7	27.2	100.0
1956	1.7	7.9	9.6	24.6	8.7	30.6	39.3	26.5	100.0
1957	1.9	6.4	8.3	19.0	9.3	26.3	35.6	37.1	100.0
1958	2.1	4.7	6.8	21.7	7.2	26.0	33.2	38.3	100.0
1959	2.0	4.3	6.3	19.3	6.8	25.9	32.7	41.7	100.0
1960	1.4	5.6	7.0	22.2	8.3	29.1	37.4	33.4	100.0
1961	1.2	6.2	7.4	22.7	9.5	28.8	38.3	31.6	100.0

Source: U.N. Economic Bulletin for Latin America, Vol. IX, Nº 1, (New York, March 1964) page 22.

rose to more than double the 1947 figure. It was lower in 1955 and 1956, years when the overall level declined, than it had been in 1947.

Significantly as this circumstance was reflected in the economy's rate of investment, it is explicable enough in view of the fact that new equipment was the easiest of all items in the import list to restrict, since imports of finished consumer goods had already been reduced to very low levels.

Raw materials and intermediary products showed a more rigid behaviour pattern in relation to changes in the overall level of imports, inasmuch as external purchases of these goods were indispensable for the maintenance of the existing level of economic activity, especially in industry. Thus, quantum fluctuations were less sharp in their case than in respect of aggregate imports, except in 1954, when mass purchases of metal products were effected. In 1956-1961, which was a period of intensive industrialization, the quantum index of imports in the foregoing category remained at a higher level than that of total imports, whereas in the case of the equipment the reverse took place.

Among the intermediary products, the only items in respect of which "visible" substitution can be noted are the so-called "spare parts", which include parts and accessories required for the assembly of electrical appliances for household use, and motor vehicle parts. It was only from 1959 onwards, however, that the vertical integration of production in these two sectors made sufficient progress for any considerable decrease in imports to be registered.

The price of imports, measured by the Lespeyres Index, shows a sharp rise, increasing from 142.5 in 1947 to 865.3 in 1961. In spite of coffee prices having risen considerably from 1947 to 1954 (from US$475 to US$1,447 per ton), the capacity to import of exports, over the whole period, is unfavourable, falling from 129 in 1954 to 76 in 1961.

The data in Table 29 reveals the substantial changes that took place in the Brazilian economy during the 50's.

All the manufacturing industries can be said to have achieved a considerable import substitution. The extent of this achievement can be measured by the fact that the average import coefficient (in terms of the total supply of industrial products) fell from nearly 16 per cent in 1949 to less than 10 per cent in 1961.

The only industries in which no effective type of substitution could be distinguished were the rubber and beverage industries. In all the rest, it is evident from a comparison of the figures for the beginning and the end of the period that production expanded much faster than imports.

TABLE 29 - BRAZIL: PRODUCTION, IMPORTS AND IMPORT COEFFICIENTS FOR THE MANUFACTURING INDUSTRIES

(Millions of current cruzeiros)

Branch of manufacturing industry	1949 Imports	1949 Percentage	1949 Production	1949 Percentage	1958 Imports	1958 Percentage	1958 Production	1958 Percentage
Metallurgy	2 334	13.5	8 137	7.7	10 237	12.6	76 977	11.0
Metal-transforming	3 032	17.5	1.719	1.6	12 480	15.4	17 577	2.5
Electrical and communication equipment	1 218	7.0	1 502	1.4	4 773	5.9	31 163	4.4
Transport equipment	3 232	18.6	2 477	2.3	20 590	25.3	46 850	6.7
Chemicals and pharmaceutical products	3 809	22.0	9 196	8.7	23 424	28.8	93 934	13.4
Processing of non-metaliferous ores	542	3.1	4 835	4.6	1 826	2.2	33 701	4.8
Paper and paperboard	226	1.3	2 132	2.0	1 134	1.4	20 427	2.9
Rubber	22	0.1	1 722	1.6	972	1.2	13 890	2.0
Wood products	37	0.2	3 634	3.4	180	0.2	17 934	2.6
Textiles	1 319	7.6	20 026	19.0	578	0.7	98 941	14.1
Clothing, footwear, etc.	-	-	4 649	4.4	3	..	26 177	3.7
Food products	1 362	7.8	34 302	32.5	4 002	4.9	159 058	22.6
Beverages	82	0.5	3 348	3.2	485	0.6	18 083	2.6
Tobacco	6	-	1 475	1.4	18	-	9 270	1.3
Printing and publishing	69	0.4	3 031	2.9	501	0.6	16 363	2.3
Furniture	6	-	1 781	1.7	2	-	13 553	1.9
Hides and skins	50	0.3	1 630	1.5	69	0.1	8 878	1.3
TOTAL	17 353	100.0	105 596	100.0	81 274	100.0	702 784	100.0

Branch of manufacturing industry	1961 Imports	1961 Percentage	1961 Production	1961 Percentage	Imports as a percentage of total production imports 1949	1958	1961
Metallurgy	35 221	16.3	226 030	13.4	22.3	11.7	11.7
Metal-transforming	41 754	19.4	48 468	2.4	63.8	41.5	46.3
Electrical and communication equipment	17 088	7.9	84 171	4.2	44.8	13.3	16.9
Transport equipment	37 189	17.2	163 185	8.1	56.6	30.5	18.6
Chemicals and pharmaceutical products	54 566	25.3	259 459	12.9	29.3	20.0	17.4
Processing of non-metalliferous ores	4 078	1.9	88 751	4.4	10.1	5.1	4.4
Paper and paperboard	4 821	2.2	62 135	3.1	9.6	5.3	7.2
Rubber	6 796	3.2	39 573	2.0	1.3	6.5	14.7
Wood products	352	0.2	51 106	2.5	1.0	1.0	0.7
Textiles	1 702	0.8	269 738	13.4	6.2	0.6	0.6
Clothing, footwear, etc.	11	-	68 114	3.4	0.2	-	—
Food products	9 301	4.3	411 669	20.5	3.8	2.5	2.2
Beverages	1 366	0.6	51 345	2.6	2.4	2.6	2.6
Tobacco	6	-)			(0.4	-)	
Printing and publishing	1 377	0.6)	148 404	7.3	(2.2	3.0)	1.0
Furniture	5	-)			(0.3	-)	
Hides and skins	57	-)			(3.0	0.7)	
TOTAL	215 690	100.0	2 012 148	100.0	15.6	11.3	9.7

Source: U.N. Economic Bulletin for Latin America, Vol. IX, Nº 1, (New York March 1964) page 22.

These import substitution activities in the manufacturing sector brought about marked changes in the structure of imports. In the first place, there was an appreciable decline in the relative importance of food products and textiles in both production and imports.

From the standpoint of the structure of imports, the only sectors that increased their share in the list, were the metallurgical, metaltransforming and chemical and pharmaceutical industries, which in 1961 accounted for over 50 per cent of the total volume of industrial imports.

As might be expected, the most dynamic behaviour during the period concerned was that of the basic industries, whose high import coefficient in terms of total supply left room for considerable substitution. However, certain of these industries lost something of their dynamism between 1958 and 1961.

> "In the two most obvious cases, the metaltransforming and electrical equipment industries, this slower rate of growth is easily explained by two main factors: the transition from the categories of light industries to the capital intensive industries and the reduction of the margin of domestic market that remains for substitution."[11]

(a) The Behaviour of the General Price Level

During the period 1947-1964, the annual rate of inflation[12] ranged between 7.4 and 86.4 per cent.

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[11] U.N. Economic Bulletin for Latin America, Loc. cit. p.41

[12] For further considerations regarding Brazilian inflation, see Antônio Delfim Netto, Aspectos da Inflação Brasileira e Suas Perspectivas para 1965 (São Paulo: Associaçao Nacional de Programaçao Economica e Social, 1965) pp. 29-65.

Table 30 presents the general price level for that period and the increase in the GNP in real terms.

TABLE 30

The Behaviour of the General Price Level and of the GNP (percentages based on 1950 prices)

(1947-1964)

Years	Δ GPL	Δ GNP
1947	7.9	2.1
1948	7.4	9.5
1949	9.0	5.7
1950	14.4	4.9
1951	20.5	5.1
1952	9.1	6.7
1953	16.6	3.2
1954	29.1	7.7
1955	13.3	6.8
1956	18.4	1.9
1957	12.3	6.9
1958	12.1	6.7
1959	38.1	7.3
1960	31.2	6.7
1961	36.2	8.4
1962	56.7	5.4
1963	77.2	1.6
1964	86.4	3.1

Source: Calculated from: (a) Octavio Dias Carneiro, Past Trends of Structural Relationships in the Economic Evolution of Brazil - 1920-1965, Statistical Appendix. (Cambridge, Massachussetts, Center for International Affairs, Harvard University, May 1966), mimeographed; and (b) Serviço de Estatística Economica e Financeira, Ministério da Fazenda: 1920-1968.

During this period there is a high rate of increase in the General Price Level and the GNP. The years in which the GNP showed high rates of growth were 1959-1962, and in those same years the GPL increased at rates varying from 31 to 57 per cent.

> "The experience of Brazilian policy-makers was that every episode in which monetary and fiscal policy were tightened resulted in a decline in growth. Moreover, Brazil has long been accustomed to some price rises, and the inflation did not appear to pose a threat to economic breakdown through runaway inflation. Since the value accorded economic development was much greater than the value placed on monetary stability, it is not surprising that the former priority prevailed."[13]

(b) The Measure of Import Substitution

Import substitution in the period 1947-1964 was measured at -0.4516, which is a very high coefficient of import substitution for the economy as a whole. As already explained, this is the Desai measure of import substitution.

As statistics are available[14] for the period 1956-1964 concerning domestic supply and imports for (i) capital goods, (ii) intermediary goods, (iii) durable consumer goods, and (iv) non-durable consumer goods, it is possible to use the Chenery measure of import substitution.

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[13] Nathaniel H. Leff, Economic Policy-Making in Brazil 1947-1964, Loc, cit. pp. 160-1.

[14] Ministério do Planejamento e Coordenação Geral, A Industrialização Brasileira: Diagnóstico e Perspectivas, Documentos IPEA, nº4 (Rio: IPEA, janeiro 1968) pp. 239-239A.

TABLE 31

Measures of Import Substitution for the Brazilian Economy (1956-1964)

Industry Group		
Capital goods	-0.7728	(2)
Intermediary goods	-0.4947	(3)
Durable Consumer goods	-0.8685	(1)
Non-durable consumer goods	-0.4260	(4)
Total of all industries	-0.5617	

Calculated in accordance with the coefficient mentioned in footnote 4. The numbers in brackets refer to the rankings of the four groups.

All measures indicate that for 1956-1964, the years which included the Target Plan, import substitution was relatively highest in the durable consumer goods group, followed by the capital goods group, the intermediary goods group and the non-durable consumer goods group, in that order.

8.2.3. The Period 1964-1968

The period 1964-1968 featured unstable conditions in the social, economic and political fields. The rate of industrial expansion was 6 per cent per year, whereas in the period 1947-1959 this figure had been 24 per cent. The rate of growth of Real Output was 7 per cent, whereas in the previous period it had been 12 per cent. Thus, the industrial sector which had propelled the economic system towards an accelerated rate of development, had its rhythm of growth severely restricted.

In conclusion, alghough import substitution has greatly reduced the Brazilian economy's dependence on imports of capital goods, this does not mean that its growth possibilities are now independent of foreign trade conditions. Although capital goods and consumer goods are now available mainly from domestic supply (86 per cent and 96 per cent respectively in 1968) and the economy's aggregate import coefficient is relatively low (8.6 per cent in 1968) many kinds of key raw material and intermediary products are still supplied through imports. There is in fact some evidence that the slackening of the economy in 1963 started with inelastic supply of these inputs. Thus import substitution in the important range of capital goods and consumer goods has not freed Brazil from possible import constraints and Brazilian policy-makers are now relying more on exports as a means of growth.

9. EFFECTIVENESS OF THE IMPORT SUBSTITUTION PROCESS - ASSESSMENT.

All industrial sectors of the Brazilian economy (Traditional Industries and Finished-Product Industries) increased their respective shares of an expanding domestic production. The result was a relative reduction in the ratio of Investment Goods Imports/GNP, which fell from 8.9 per cent in 1947 to 5.8 per cent in 1968. In the same years the ratios between Investment Goods Imports/ Total Imports were 80.2 per cent and 89.7 per cent respectively.

Industrial production in Brazil in 1967 corresponded to approximately 30 per cent of the Gross Domestic Product. Most industrial inputs have been supplied from domestic sources. In 1949 the import-content was 20 per cent; in 1955, it was 11 per cent, and in 1966, this proportion was further reduced to 5 per cent. The rapid expansion in domestic production was a result of the process of import substitution. This process, which stimulated the entire economy's growth, also contributed to the diversification of the Brazilian economy. Table 32 shows an important increase in the share of income derived from manufacturing.

TABLE 32

Industrial Origin of Gross Domestic Product at Factor Cost (percentage distribution)

	1939	1947	1958	1965
Agriculture	33.3	27.8	26.1	30.2
Industry	17.4	21.7	25.3	28.8
Services	49.3	50.5	48.6	41.0
	100.0	100.0	100.0	100.0

Source: Ministério do Planejamento e Coordenação Geral, Programa Estratégico de Desenvolvimento 1968-1970, (Rio de Janeiro: Fundaçao IBGE, 1969) p.72

Table 33 reveals the noticeable increase in the share of the labour force employed in industry and the tertiary sector in the period 1940-1960.

TABLE 33

Distribution of Gainfully-Occupied Persons by Sector of Activity

	1940	1950	1960
Primary Sector	71.0	64.4	55.1
Secondary Sector	8.9	12.9	13.5
Tertiary Sector	20.1	22.7	31.4
	100.0	100.0	100.0

Source: Ministério do Planejamento e Coordenação Geral, Programa Estratégico de Desenvolvimento 1968-1970, (Rio de Janeiro: Fundaçao IBGE, 1969) p.81

Table 34 presents the participation of industrial manpower in total labour supply.

TABLE 34

Share of Industrial Labour in Total Labour Supply (thousand persons and percentages)

	1949	1959	1964
1) Labour Supply	16,638	22,017	25,648
2) Industrial Labour	1,309	1,752	2,120
3) % (2) / (1)	7.86	7.96	8.26

Source: Ministério do Planejamento e Coordenação Geral, Programa Estratégico de Desenvolvimento 1968-1970, (Rio de Janeiro: Fundaçao IBGE, 1969) p.75.

Table 35 shows the rapid transformation of the structure of industrial output in the period 1949-1966, with a noticeable decline in the production of non-durable consumer goods in relation to the production of durable consumer goods, capital goods, and intermediary goods.

TABLE 35

Structure of Industrial Production
(1955 New Cruzeiros)

	1949		1955		1959		1966	
	Value	%	Value	%	Value	%	Value	%
Capital Goods	8.4	4.1	18.0	5.3	59.5	11.4	88.5	11.3
Intermediary Goods	54.2	26.2	104.0	30.4	159.6	30.7	287.2	36.8
Durable Consumer Goods	9.3	4.5	19.0	5.6	43.1	8.3	97.8	12.5
Non-durable consumer Goods	134.7	65.2	200.9	58.7	258.0	49.6	308.1	39.4
Total	206.6	100.0	341.9	100.0	520.2	100.0	781.6	100.0

Source: Ministério do Planejamento e Coordenação Geral, Programa Estratégico de Desenvolvimento 1968-1970, (Rio de Janeiro: Fundação IBGE, 1969) p. 76

The participation of 52 per cent in consumer goods in 1966 is similar to that existing in developed countries. The high participation of intermediary goods (37 per cent), however, is not usual in these countries. One of the reasons for this difference is that Brazil has a relatively low integration in international trade, having to resort to domestic production to satisfy her need for this kind of goods.

Brazil differs, too, from many other under-developed countries, where exports rather than investments are the major determinant of the GNP.[1] With almost 80 per cent of all investment goods supplied domestically and fixed capital formation averaging 16 per cent of the GNP, domestic supply of investment goods constitutes about 13 per cent of the GNP. This contrasts with an export sector of less than 8 per cent of the GNP. Therefore, the Brazilian economy is more autonomous in determining its level of aggregate income than many other less developed economies. This can, of course, be either advantageous or detrimental, in that, if the Brazilian economy is now far more capable of

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[1] See for example H. C. Wallich, Monetary Problems of an Export Economy (Cambridge, Massacussetts, 1951) pp.125-7

generating its own business cycle, it also misses opportunities offered by the external sector.

9.1. Mechanics of the Import Substitution Process

All the structural changes, reflected in the four tables above, resulted mainly from the import substitution process. This process, between 1953 and 1965, took place simultaneously in many economic activities which were economically and technically interconnected, having as dynamic centres the sectors that were given priority in the Target Plan.

In 1961, Brazil achieved one of her highest growth rates, 8.5 per cent, but in the following three years it noticeably declined. The immediate causes of the stagnation were:

(a) a weakening of the import substitution process itself, resulting from the slow-down of economic development, of which it had been the mainspring;

(b) a greater inelastic supply of imports; this caused imports to decline more rapidly than domestic output, because the economy was additionally operating with idle capacity.

The Target Plan included targets not directly related to the import substitution process. Some of these "autonomous" targets, such as great output of electric power, improved transport and communication systems etc., having a high-content import coefficient, created a chain reaction (feed-back) not only between themselves, but also in other sectors such as the transport equipment industry, oil refining, electrical machinery, etc.. The chain reaction also affected, although in a more indirect and specific manner, other residual sectors of the economy, creating an expanding industrial market which depended for growth on the development of these pioneer "autonomous" targets. In other words, the basic dyanamic element lay in capital investment and autonomous goals, which themselves arose out of political decisions. But, because the implementation of this policy took place within a vigorous import substitution process, its effectiveness was greatly increased. The process helped in the assessment of the Targets and widened their effects.

The process of industrial development was related to the dynamic effect of the "installation" of the industrial units and "operation" of these same units on the rest of the industrial complex.

In the period 1955-1962, all the targets concerned with investment in the infra-structure and the substitution of imports of durable consumer goods and intermediary goods, provided the impulses necessary for the setting up and expansion of industries producing capital goods. From 1962 on, the installation effect, however, lost momentum.

Thus, the sectors producing mechanical goods, electrical, transport and communication equipment, which depended heavily on the "installation" effect, activated the "operation" effect in such sectors as Metallurgy, Rubber and Chemicals.

The slackening of the rate of growth in the Mechanical Industrial Complex, the size of which was over-estimated[2] during the peak phase of import substitution, could not help but have a slowing-down effect on the rest of the industrial sector, and this was not compensated by the more regular, albeit slower, growth of traditional industries, due to the scarcity of operation imports.

What seems clear is that the growth of the sectors producing capital goods and durable consumer goods now depend primarily on growth induced by the expansion of disposable income. However, with the new investments made under the Triennial Plan of Development which will create new installation effects, the import substitution process will regain its previous vitality. This time, it will be within a context which takes into account the external sector as an important sector of the economy. This will

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2 "The sector's excess capacity seems to be a case of sectorial over-building, which occurred because of the way firms made their investment plans. Reacting to the favourable market conditions and expectations generated in the earlier period, the older firms and new entrants installed more capacity than the market could absorb over the short or medium term". Nathaniel H. Leff, The Brazilian Capital Industry, loc cit. p.32.

forcibly produce a higher level of income.

9.2. General Evaluation of the Process

The development model resulting from the import substitution process consists of the efforts of the industrial structure to adapt to the insufficient growth of the capacity to import.

An evaluation of the import substitution process would, therefore, consist of:

(a) a comparison of the existent industrial structure with that which would result from an alternative course of growth;

(b) a study of the effects caused by the process on the growth of the economy; and

(c) an analysis of the rationalization of the sequence of imports.

As regards (a), the Brazilian industrial structure did not allow for better alternative methods. The international division of labour, which to a great extent determined the shape of domestic supply, did not permit export levels which would have enabled Brazil to import those industrial goods which were eventually manufactured in the country.

A combination between import substitution and export expansion was not impossible theoretically. But in practice it could not happen, bearing in mind that processes of rapid structural change always evolve by concentrating on a few chosen points - the points of least resistance. Moreover, to implement eclectic solutions, a minimum amount of diversification and integration are necessary. These elements were not present in the Brazilian economy until the Target Plan was implemented. The massive substitution of consumer goods virtually excluded them from the import list. This list, therefore, began to be made up, almost exclusively, of capital and intermediary goods and raw materials. This rigidity in the import list made it impossible to reduce it further even when there was a shortage of foreign exchange reserves. Therefore the increase in the substitution output during these periods of shortage involved resorting to compensatory financing. The servicing of this debt, in turn, created eventually a further constraint on the import capacity.

The conclusion is that had substitution started in the first place with capital and intermediary goods, there would have been greater freedom to manipulate the import list. In this case, the constraint of imports on domestic productive capacity would have been more reduced.

> "To adopt this priority however, would mean that supply had to precede demand, which would imply the adoption in the industrial process of "autonomous"

> targets more powerful than those that were really introduced."[3]

In short, in the recent period of development both the internal and external variables operated in favour of the import substitution process, thereby leading to an acceleration of industrial activities capable of increasing the growth rate of the economy as a whole.

> "The size of the Brazilian market and the returns it appeared to offer were the major factors attracting the foreign firms. Brazilian GNP in 1956-1960 was of the magnitude of 18-20 billion dollars. This was one of the biggest markets in all the less-developed countries, and was of a scale large enough to make overseas corporations consider seriously the possibilities of a Brazilian manufacturing operation. Equally important, the economy's record of sustained, high growth rates gave promise of an even larger market in the future. Because of Brazil's persistent balance-of-payment problem during the 1950's, however, it was not possible to supply this market completely through customary export channels. As foreign-exchange shortages reduced potential sales, overseas firms began to consider the possibility of supplying this market from local manufacturing facilities. Instead of supplying the final product, they would supply only the capital and know-how from the advanced countries."[4]

The effect of import substitution on the economy as a whole (item (b) above) was positive. In the absence of alternatives to an increase in the capacity to import, by means of a diversification and rise in exports, the substitution process enabled production to increase

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[3] Ministério do Planejamento e Coordenação Geral, loc. cit. p. 205 (my translation).

[4] Nathaniel H. Leff - The Brazilian Capital Goods Industry, loc. cit. p.25.

at an otherwise unattainable rate during the period 1947-1964.

This global growth was as much the result of the increase in the supply of goods which would otherwise have been unobtainable, as of the impetus generated by the newly installed factories, which resulted in an expansion in the total payments made to the domestic factors of procution.

As regards (c) - the sequence of substitutions realized - an analysis of this is possible in terms of net savings in foreign exchange during the period when the relative size and composition of the list of imports underwent changes.

In fact, the relative rigidity, of the list of imports, which was the result of predominant substitution of finished consumer products rather than intermediary goods, meant that, during certain phases, the problem of foreign exchange was acute. This occurred when the expansion of productive capacity, or even the maintenance of the level of economic activity, required a large amount of imports, not always compatible with the capacity to import.

Other critical observations in regard to the import substitution process relate to the type of advantages accruing to the business side of the process, and the consequences resulting from its domestic contingencies.

Thus, while the process was actively operative, the most attractive advantage it offered to the commercial sector was the possibility of keeping prices relatively high. This was possible because there was little domestic competition, and because Brazilian industry was heavily protected by high tariffs.

Costs of production, although allowing a high margin of profit, remained high themselves, not only for lack of competition, but also because of the low capital endowment of the basic social sectors (Transport, Power, Communications, etc.).

These strong incentives to the business sector of industry brought about two important results. On the one hand there was a pronounced diversification in the industrial sector, and, on the other hand, a tendency towards concentration. This concentration was made possible by technological monopoly or by the privileged position enjoyed by economic groups which had already absorbed a share of the market when the process first began.

As far as domestic conditioning elements are concerned, particular importance should be given to the size and structure of the domestic market and the progress in technology required for the manufacture of goods previously imported.

In fact, the level and distribution of income, which affects the size and structure of the market decisively, influenced not only the import substitution process, but also those consequences and effects which have been analysed here.

The technological elements employed led to a method of production in which capital was the most important element, to the detriment of labour. This greatly affected the industrial development in Brazil with serious repercussion on the whole economy.

A country with a large population like Brazil (more than 90 million people) should adopt techniques with a high utilization of manpower.

New methods will have to be found which will be capable of tying the secondary effects of investment to a high multiplier of labour force, and which will, at the same time, encourage investment in the educational sector.

9.3. The Social and Economic Structure Resulting from the Import Substitution Model

Notwithstanding the relatively high growth rate attained, and the degree of diversification achieved in the industrial sector, the Brazilian economy presents an essential imbalance at three converging levels: the sectorial[1], the regional and the social.

From the sectorial point of view, attention was focused on the secondary sector, particularly the manufacturing industries; the tertiary sector, although benefitting from a series of infrastructural investments in transport and power, had only a moderate growth rate in the post-war period, especially in some sectors covering services and public administration which in many ways are out of date.

The structure of the agricultural sector has remained virtually unchanged, although agricultural production has expanded at a reasonable rate, especially in recent years.

Agricultural growth between 1950 and 1960 was actually due less to an average increase in crop yields than to an increase in the area under cultivation. Such extension of the land under cultivation, prompted by the expansion of the urban market, was based essentially on the existing production function, that is, without the absorption of technological progress that took place in the secondary sector.

Consequently the population shift from rural to urban areas did not have the same significance in Brazil as it had in the developed countries.

What seems to have occurred is simply a migration of the unemployed from the country to the town in search of better economic opportunities, resulting in an enormous expansion of the large urban centres, together with a parallel increase in the marginal population groups in which under-employment is evident.

"It is a fact that in Brazil urbanization is not always linked with industrialization; in some cases the two go hand-in-hand, in others they are separate, as can be seen in some state capitals and other cities where urban growth was due to causes other than the setting up of industries... According to the census of 1960, the 'favelas' (shanty-towns) in Rio de Janeiro had a population of 337,000 living in 70,000 dwellings, so that the occupation density was 4.8. This population then represented 10.2 per cent of the total population of Rio de Janeiro and 11.6 per cent of its urban population."[6]

In the industrial sector, where there has been a noticeable increase in productivity and diversification, the stage of development reached is by no means well-balanced.

As the expansion of the industrial sector has been unplanned, the process has been marked throughout by distortions that were, and still are, the cause of certain serious bottlenecks, especially in the infrastructure sectors; and even the manufacturing industry is lacking to some degree in technological and economic complementarity. Thus, for example, while most of the industries producing finished goods have excess productive capacity- especially in the fields of textiles, electric household appliances, transport materials, and even in light industry - other industries suffer from a shortage of installed capacity, especially those producing intermediary goods, such as the basic metallurgical and chemical industries, and the rubber

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6 Manuel Diégues Júnior, "Urban Employment in Brazil", International Labour Review (March 1964) p. 646

and paper industries.

Furthermore, although the diversification of the industrial sector in Brazil is much greater than in any other Latin American country, the per capita output of most of the intermediary product industries was lower in 1964-1965 than in a number of other industrialized countries in Latin America, and in the cement, sulphuric acid and petroleum products industries it was lower than the average for the region as a whole. (See Table 36).

It is true that the absolute output figures are, except for sulphuric acid, higher than for any other South American country. Consequently, the per capita figures are not a clear indicator of the degree of development attained by the basic industries, since the average is reduced when related to the total population of the country. But it is a fact that large sectors of the population live in depressed areas and are more or less excluded from the transformation that has taken place in the Central-South region. In reality, these indices serve to point to another type of disequilibrium from which the Brazilian economy suffers.

The increase in regional disequilibrium reflects a natural tendency for economic activity to concentrate around the region that represents the nucleus of the system (the Rio-São Paulo axis), which in practice amounts to a transfer of income from the less developed to

TABLE 36 - SOME SIGNIFICANT INDICES OF THE SIZE OF THE MARKET IN SELECTED LATIN AMERICAN COUNTRIES, 1964-1965

			Consumption of five intermediate industry products									
	Income		Crude Steel		Cement		Sulphuric Acid		Caustic Soda		Petroleum and Petroleum products	
Countries	Total (millions of 1950 dollars)	Per capita (1950 dollars)	Total (thousands of tons)	Per capita (kg)	Total (thousands of tons)	Per capita (kg)	Total (thousands of tons)	Per capita (kg)	Total (thousands of tons)	Per capita (kg)	Total (thousands of tons)	Per capita (kg)
Argentina	14,327	639	2,680	85	3,646	136	198	12	83	5	18,426	906
Brazil	19,975	243	4,010	45	5,798	78	295	5	297	5	20,720	232
Chile	5,503	390	808	56	1,101	120	102	12	22	4	2,132	252
Mexico	11,779	292	2,575	55	3,985	101	510	12	135	5	18,692	510

Source: Organization of American States, Economic and Social Survey of Latin America, 1968 documents 5-A, 5-B and 5-C (Washington, August 1969) the more developed areas.

In recent times this trend has been modified (especially as a result of changes in economic policy), and one of the principal aims of present government policy is to correct the imbalance that exists, especially in the North-eastern region. However, the two main industrial States in Brazil (Rio and São Paulo) still generate about 50 per cent of the national income, although their population represents only 25 per cent of the total.

All the foregoing observations point to the conclusion that the effect of the recent pattern of development has been to transform the Brazilian economy again into an example of a dual economy.

This duality can be described, from the structural standpoint, as involving the existence of a strong capitalist sector, which expands rapidly, absorbs relatively little manpower, and has a comparatively high level of productivity, side by side with an under-developed sector, which contains the majority of the population and which is excluded from the development process.

As regards personal distribution of income, this system has given rise to a pyramid in which 5 per cent of the population receive about 35 per cent of the national income, and nearly 50 per cent of the population receive only 17 per cent of the total.

> "To use the pyramid metaphor, wich seems a clear means of conveying the requisite impression, the aggravation

of the structural duality of the Brazilian economy could be visualized in terms of the development of a series of pyramids whose upper strata represent the 'capitalist sector' and whose base corresponds to the 'under-developed' sector".[7]

The impossibility of drawing increasingly large population groups into the consumer market results from the fact that the structure of production in the primary sector, corresponding to the base of the pyramid, has remained unaltered.

An agrarian reform which would not displace too much manpower and would raise per capital productivity by increasing yields per hectare would thus be justified from the strictly economic standpoint, in that it would pave the way for future mass consumption, which is one of the basic characteristics of a developed society like Canada.

Without this type of consumption industries producing durable consumer goods are compelled to attempt increasingly vertical utilization of the existing market strata where the higher income brackets are located. The appearance on the Brazilian market of luxury cars and other opulent consumer goods in the earlier 'sixties is an example of this attempt.

"It seems unlikely that such a solution could be anything but a short-term palliative of the industrial growth problem. Moreover, it has two drawbacks: it established an allocation of resources which is highly unsatisfactory from the standpoint of real (social)

[7] U.N. Economic Bulletin for Latin America, Loc. cit. p. 55.

> costs; and it gives the structure of industry a bias towards stratification, if not aggravation, of the defective income distribution existing within the capitalist sector itself. The most dynamic sectors are driven to depend increasingly upon the demand of the upper income strata."[8]

In conclusion, an assessment of the import substitution process is not complete without presenting the view expressed by some economists of the United Nations Economic Committee for Latin America. These economists consider that, while the model of development through import substitution may have played a reasonably useful part in the diversification and expansion of Brazil's industrial activity in its various stages, the dynamic impulse to proceed with industrialization by this method would appear to be virtually exhausted.

> "The Brazilian economy is now faced with a problem of strategy, coupled with other shor-term problems, deriving from the fact that import substitution as a development model has already reached its final stage and it has now become imperative to move on towards a new and truly autonomous phase, receiving its vital force from theisystem itself..."[8]

The figures in Tables 37 and 38 do not support such a contention. Commodity imports into Brazil in 1968 amounted to US$2.1 billion or 7.1 per cent of GNP. Imports, measured in current prices, in the period 1962-1968, reached an annual average of US$1.5 billion. This figure, which was larger in twelve out of the fifteen years in the period 1947-1961, offers as much scope for import

[8] U.N. Economic Bulletin for Latin America, Loc. cit. p.56

T A B L E 37 - BRAZILIAN IMPORTS

	1947	1956	1961	1964	1968
Total Imports CIF (current US$1 million)	1,142	1,176	1,381	1,145	2,137
M/GNP	11.9	6.9	6.3	5.0	7.1
Investment goods imports (current US$1 million)	813	1,057	1,289	1,042	1,823
Consumer goods imports (current US$1 million)	29	119	92	103	314
Investment goods imports/GNP	8.9	5.7	5.4	4.1	5.8
Consumer goods imports/GNP	3.0	1.2	0.9	0.9	1.3

Source: Fundação Getúlio Vargas - As Importações Brasileiras (Rio de Janeiro, outubro 1969)

T A B L E 38 - PERCENTAGE BREAKDOWN OF IMPORTS BY ECONOMIC USE AND DESTINATION

I - Consumer goods	19.8	10.2	6.6	8.8	10.3
(a) durable	11.7	3.5	2.3	2.4	3.4
(b) non-durable	8.1	6.7	4.3	6.4	6.9
II - Fuels and lubricants	9.5	20.3	11.7	20.4	21.0
III - Raw materials and intermediate products	41.0	43.8	50.6	47.4	46.3
(a) Industry	40.0	42.0	48.9	45.3	43.9
- Metallic	9.4	12.5	10.4	8.3	5.2
- Non-metallic	28.7	29.0	37.4	36.8	38.1
- Building	1.9	0.5	1.1	0.2	0.6
(b) Agriculture	1.0	1.8	1.7	2.1	2.4
IV - Capital goods	29.7	25.7	31.1	23.4	22.4
(a) Industry	9.5	9.4	14.2	12.6	10.9
(b) Agriculture	1.3	2.0	1.9	0.7	1.2
(c) Transport	14.3	10.4	8.7	5.1	5.8
(d) Building	0.8	0.7	1.4	1.3	0.6
(e) Others	3.8	3.2	4.8	3.7	3.9
TOTAL	100.0	100.0	100.0	100.0	100.0

Source: Fundação Getúlio Vargas - As Importações Brasileiras (Rio de Janeiro, outubro 1969)

T A B L E 39(a) - INVESTMENT GOODS IMPORTS INTO BRAZIL

	1947	1955	1956	1957	1964	1968
Total investment goods imports (US$50 million)	908	943	862	1,045	870	1,512
Direct foreign investment (US$50 million)	37	74	216	299	9	192
Long term foreign loans (US$50 million)	-	234	163	12	270	696
Direct foreign investment/gross capital formation	1.9	3.1	10.4	14.1	0.6	4.8

Source: a)Octavio Dias Carneiro, Past Trends of Structural Relationships in the Economic Evolution of Brazil - 1920-1965, Statistical Appendix. (Cambridge, Massachussetts, Center for International Affairs, Harvard University, May 1966), mimeographed; and b) Relatório do Banco Central do Brasil, 1967, 1968 and 1969 (Rio de Janeiro).

substitution investment as those of the 1950's, when the import substitution drive was in full swing.

An alternative explanation of the slowdown in the substitution process is that the phase of "easy" import substitution has come to an end. Tables 37 and 38 reveal, however, that import substitution was particularly extensive in such industries as steel, petroleum refining, automobile and paper manufacture, where the greatest difficulties might have been expected in terms of large minimal scale, capital intensive production, and "complex" technology.[9] Imports have continued principally in intermediary products, which do not present these problems so severely. In any case, the Brazilian experiment of the post-war period was one in which the existence of effective demand, problems of factor supply and the absorption of "complex technology" were overcome.

> "...current industrial development in Brazil has shown a surprising ability to absorb technological improvements once the length of production series justifies the effort of adaptation and the investment involved. In other words, the technological limitation is essentially a limitation caused by the size of the market."[10]

The view proclaiming "the end of import substitution", ignores the vast possibilities for positive /

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9 See Nathaniel H. Leff, <u>The Brazilian Capital Goods</u> Loc. cit. Chapter IV.

10 U.N. Economic Commission for Latin America, "The Manufacture of Industrial Machinery and Equipment in Latin America - Basic Equipment in Brazil," <u>Economic Bulletin for Latin America</u>, (New York, 1963) p. 16.

net investment in non-import substitution activities, with both "installation" and "operation" effects on the substitutive industries.

> "It is highly unlikely that in the boom demand conditions of 1961-1962, investors had adjusted their actual with desired capital stock. There was probably considerable room for expanded investments in infra-structure, new products and new technological processes. Hence the picture of an economy without investment opportunities, both in import substitution and in non-import substitution activities, hardly looks relevant for Brazil."[11]

Another widely accepted explanation for the slackening in Brazilian growth has placed primary emphasis on the intervention of the political factors, that led to the 1964 revolution, in which they acted as a powerful disincentive to investment, particularly direct foreign private investment.

This explanation attributes too much importance to direct foreign investors in Brazilian investment and growth. Even during the period 1956-1959, when a most hospitable "investment climate" prevailed, direct foreign investments accounted for less than 15 per cent of gross fixed capital formation (see Table 39a). Furthermore, when direct foreign investment did decline from 1957 on, total imports of investment goods, as can be seen from Table 39b, were maintained at virtually their previous levels until 1963, as credit from foreign suppliers continued

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[11] Nathaniel H. Leff, "Imports Constraints and Development: Causes of the recent decline of Brazilian Economic Growth", Loc. cit. p. 495.

to be made available.

TABLE 39(b)

Investment Goods[12] Imports into Brazil
1947-1968

Year	
1947	908
1948	754
1949	841
1950	820
1951	1,309
1952	1,400
1953	957
1954	1,213
1955	943
1956	862
1957	1,045
1958	967
1959	990
1960	1,049
1961	1,054
1962	1,052
1963	1,051
1964	870
1965	778
1966	992
1967	1,329
1968	1,512

Source: Octavio Dias Carneiro. Past Trends of Structural Relationships in the Economic Evolution in Brazil 1920-1965 (Cambridge, Massachussetts: Center for International Affairs, Harvard University, May 1966 - mimeographed); b) Relatório Anual do Banco Central do Brasil (Rio de Janeiro, 1967-1969).

Moreover it is not clear why "political factors" should have powerful effects in reducing investment in an economy where the public sector itself is usually responsible for more than 50 per cent of aggregate fixed capital formation.

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12 Includes fuels and lubricants, intermediary goods and capital equipment.

If the hypotheses mentioned above fail to provide a satisfactory explanation of the slowdown in the Brazilian economy after 1962, then the question remains: what factors have contributed to interrupt the upward movement of economic growth and investment which Brazil experienced up until 1962 ? The answer is that Brazilian policy-makers did not see import constraint would affect growth. The general assumption was that the process of import substitution had freed Brazilian development from dependence on foreign trade conditions.

Not only was the slackening in growth not anticipated, but the policy-makers failed to deal with it when it occurred. No consideration was given to problems such as income inelastic supply of imports.

After 1964 the policy changed, and the external sector again began to be considered as an instrument of growth. Preliminary statistics for 1969, when foreign trade was valued at approximately US$4.5 billion, up 20.7% in current prices over 1968, and real output expanded by 9.0 per cent - the highest growth rate in the last 20 years - seem to indicate that the new policies are moving the Brazilian economy in the right direction.

10. ECONOMIC IMPLICATIONS. CONCLUSIONS

The aim of this thesis has been to describe and analyse the process of import substitution in Brazil, and the impact it has had on the economy of the country. The process resulted from the weakening of foreign markets for the products that Brazil traditionally exported (coffee, sugar, leather, iron ore, etc.). To make the level of internal activity less dependent on the exports of these products required an extensive process of accumulation. In its initial phase, Brazilian industrialization essentially involved the establishment of industries set up to satisfy an existing demand, that is, to replace imports. Only at a more advanced stage did the problem arise of satisfying the demand created by development itself, especially the demand for capital goods.

The overwhelming emphasis on import substitution industrialization and the neglect of other sectors produced imbalances that were affecting adversely the further growth of the economy. Education was one of the neglected sectors. Similarly, the disregard of the export sector, where no attempt had been made to diversify exports, was a further handicap to the economy considering the substantial foreign debt that had to be serviced and the continued need to pay for such crucial imports as fuels.

Table 40 compares the foreign trade of Brazil with the GNP in the period 1947-1968.

TABLE 40

GNP and Foreign Trade in Brazil
(Volume of imports and exports -
quantum: 1950=100), 1947-1968.

Year	GNP 1950=100	Annual % change	Imports 1950=100	Annual % change	Exports 1950=100	Annual % change
1947	82.4	2.1	100.5	61.6	122.1	- 4.5
1948	90.2	9.5	86.8	- 13.7	127.7	4.6
1949	95.3	5.7	89.1	2.6	118.1	- 7.5
1950	100.0	4.9	100.0	12.2	100.0	- 15.3
1951	105.1	5.1	146.8	46.8	106.6	6.6
1952	111.1	5.7	133.3	- 9.2	87.1	- 18.3
1953	114.6	3.2	92.1	- 30.9	96.4	10.7
1954	123.4	7.7	123.8	34.3	82.1	- 14.8
1955	131.8	6.8	98.3	- 20.6	94.2	14.7
1956	134.3	1.9	96.7	- 1.6	101.0	7.2
1957	143.5	6.9	117.8	21.8	95.5	- 5.5
1958	153.1	6.7	110.7	- 6.1	90.6	- 5.1
1959	164.3	7.3	124.6	12.5	106.1	17.1
1960	175.3	6.7	123.1	- 1.2	103.5	- 2.5
1961	188.0	8.4	117.4	- 4.7	109.6	5.9
1962	198.1	5.4	118.6	1.0	101.6	- 7.3
1963	201.3	1.6	115.1	- 3.0	116.1	14.3
1964	207.5	3.1	99.8	- 13.7	99.5	- 14.4
1965	215.5	3.9	94.9	- 4.9	114.2	14.8
1966	222.8	3.4	124.4	31.3	129.4	13.3
1967	233.7	4.9	137.9	10.6	142.7	10.3
1968	253.6	8.5	153.8	14.5	165.3	15.8

Source: Calculated from: a) Wilson Suzigan, O Processo de Substituição de Importações no Brasil (Rio; Fundação Getúlio Vargas, fevereiro de 1968) mimeographed; b) Instituto Brasileiro de Estatística, Anuário Estatístico do Brasil (Rio de Janeiro: Fundação IBGE, 1967).
Figures for the years 1967-1968 are estimated.

Between 1950 and 1964, national income rose 107 per cent, while exports and imports stagnated.

The examination in Chapter 3 of the rate of growth in world markets of Brazi's export products in the period 1947-1964 presented a gloomy picture. The highest rate of growth was in sugar (3.9 per cent), and the lowest was in coffee (2.4 per cent), while the rate of growth for manufactured goods was 8.7 per cent. A country dependent mainly on these primary exports could hardly hope to attain high rates of growth. To add to the gloom was the fact that Brazil was gradually losing the strong position it had once had with such products as coffee. A further barrier to growth has been the preferential treatment shared among those countries associated with the European Economic Community, the European Free Trade Association and the British Commonwealth. Although there was a rising trend in the price of coffee, particularly until 1954, since that year the price of this Brazilian export has fallen and so have the general terms of trade.

All this is evidence of the fact that Brazil was one of that group of nations whose traditional exports steadily lost their share in world markets, with little chance of recovering lost ground in these products. It is in this context that Brazilian economic policy should be examined. Confronted with this situation, the Brazilian government decided to pursue policies designed to change the economic structure of the country. Their decision was supported by a strong body of public opinion in favour of import substitution and industrialization being given priority in policy-making over the production of agricultural commodities for external markets. Therefore, in the government plans for Brazil after World War II, scant consideration was given to exports either as a source of growth or as a means of dealing with the country's balance of payments problems.

> "First there was a considerable pessimism concerning the possibilities of expanding exports, because of the low-income elasticity of world demand for most primary products. Elasticity pessimism was especially pervasive concerning coffee - and may indeed have influenced the decision to operate with a short-time horizon in this market - but it affected thinking about other exports as well."[1]

The Brazilian policy-makers have shown considerable skill with multiple import rates, and there was no reason why they could not have consistently maintained a separate, lower rate to promote exports of products other than coffee. The failure to do so reflected a general bias against such exports, which further expressed itself in the imposition of quotas and even outright prohibition, exports of coffee being the exception.

Export stagnation and ensuing import stringency had an important effect on Brazilian economic

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[1] Nathaniel H. Leff, Economic Policy-Making and Development in Brazil, Lóc. cit. p.80.

development. Shortage of imported inputs became so great as to constrain the economy's capacity for further import substitution, and was one of the main causes of the slackening of aggregate Brazilian growth after 1962. In other words, export stagnation put a brake on the entire growth process.

From 1964 a new policy for foreign trade was adopted which paid due attention to exports as a key element in economic growth. Export promotion, which had been rejected as being irrelevant even as a partial solution to the problems of the balance of payments and growth, began to be considered as a method for enlarging foreign markets for Brazilian goods.

The glamour which public opinion formerly attached to industrialization has faded in the light of the unique technical feats and industrial achievements which have been attained in Brazil, and of which the automobile industry is perhaps the best example - 353,000 cars, entirely made in Brazil, are produced annually. The country's economic administrators have probably advanced the furthest in this process of learning and achievement, in that they have realized that, contrary to their earlier reasoning, import substitution cannot, by itself, provide the remedy for all the country's economic problems.

Furthermore, development since the early 1960's is such as to allay some of the fears which, in government circles, were previously attached to exports of primary products. As sustained economic growth, rather than recessions, has been characteristic of the economies of the more advanced countries, particularly in Germany and the United States, the two of greatest importance to the Brazilian market, this has greatly reduced the risk of downward fluctuations in export earnings due to conditions beyond Brazil's control. The implementation of the International Coffee Agreement in 1962 opened up new ways for the price stabilization of a strategic product. Another international agreement dealing with sugar has recently been signed and is likely to have a similar effect.

As Table 41 shows, the terms of trade improved from 1963 on, reaching 98.0 in 1968 against, for example, 48.5 in 1946.

TABLE 41

Terms of Trade 1950 = 100

1946	48.5
1950	100.0
1954	120.4
1958	87.5
1962	72.5
1963	70.6
1964	76.0
1965	88.0
1966	79.0
1967	82.0
1968	98.0

Source: Calculated from: Octavio Dias Carneiro, Past Trend of Structural Relationships in the Economic Evolution of Brazil 1920-1965 (Cambridge, Massachussetts: Center for International Affairs, Harvard University, May 1966 - mimeographed) Loc. cit.p.38 and the Economist Intelligence Unit, Brazil Annual Supplement 1969, London, p.13.

Table 42 shows the current value of Brazilian exports and the volume based on 1950 dollar values.

TABLE 42

Brazilian Exports 1963-1969

Year	Current value (US$ million)	Volume (1955 dollar)
1963	1,406	103
1964	1,420	108
1965	1,595	116
1966	1,741	132
1967	1,654	117
1968	1,890	135
1969	2,250	156

Source: The Economist Intelligence Unit, Brazil Annual Supplement 1969, p.12. Data for the year 1969 were estimated.

Brazilian exports expanded considerably in the period 1964-1969. In 1969, the value was US$2.2 billion which was a record in the history of Brazil's economic development.

Because of the diversion of output to the domestic market, the export coefficient in many of the sectors producing goods for export is now relatively low. This means that the impact of deteriorating export conditions on aggregate income and supply is now less than it was before 1947, or better, before 1929, when the export sector was the leading sector of the economy. As Table 43 shows, in cotton, sugar, tobacco, rubber, leather, beef and timber the Brazilian export coefficient is considerably below the figure of, for example, "25 per cent which an exporting country might rationally consider undue dependence on foreign demand conditions".[2] Furthermore, the share of exports other than coffee in the Brazilian GNP is now so low, approximately 3.2 per cent, that even a sharp drop in exports would not have the same negative impact on aggregate income that it would in many "export economies".

2 Nathaniel H. Leff, "Export Stagnation and Autarkic Development in Brazil, 1947-1962", Loc. cit. pp.296-297.

TABLE 43

Exports as a Percentage of Total Domestic Production, Selected Commodities 1964-1968.

Commodities	Export coefficient (percentages)
Coffee	80.0
Cocoa	60.3
Iron Ore	56.5
Tobacco	20.9
Rubber	8.6
Hides and leather	8.4
Cotton	6.3
Sugar	2.3
Beef	0.9

Source: Informação Semanal-CACEX-Banco do Brasil, Rio de Janeiro, nº 160, 1969.

Manufactured products are becoming important Brazilian exports. In 1968 they represented 8 per cent of total exports, with US$150 million. In 1969 they accounted for 10 per cent of the total, or US$225 million. This means that the Brazilian economy is reaching a stage of development high enough to enable it to participate to a greater extent in the international market of manufactured goods. In this sector expansion has been more vigorous than in primary products.

The outlook for the expansion of Brazilian exports is favourable, as far as the internal supply capacity is concerned. As regards primary products, all that was needed was to put an end to the previous policy of export prohibitions and to adopt a flexible exchange rate. As regards manufactured goods, the new policy also granted tax exemptions to the exporter, which resulted in Brazilian goods being more competitive abroad. These measures made it possible for Brazil to increase exports by more than 30 per cent in a little over two years.

By affecting the relative profitability of the export and domestic market, the new approach to foreign trade encouraged Brazilian firms to seriously consider the advantage of foreign sales.

A rough appraisal of what export expansion might do for Brazil's import capacity presents the following picture. Firstly, let it be supposed that Brazil is able to increase exports at a rate of 20 per cent a year, as she did from 1967 to 1969. In that case exports will have reached approximately US$3.9 billion by 1972. This would lead to an import capacity of 10 per cent, in contrast to the 5-7 per cent figure representative of recent years. Such export expansion would affect all Brazilian development. Aside from the direct impact on export production, the increased flow of imports would help the entire economy to overcome constraints on output imposed by restrictions of essential inputs.

Resource allocation more along lines of comparative advantage would allow higher aggregate growth than would be possible under increasingly inelastic import substitution. Furthermore a growth pattern that would deal with the country's future import and supply needs largely by expanding exports and existing industries rather than by the constant creation of new ones would enable the present industries and their suppliers to expand along their cost curves towards a more optimal scale, and would lower unit costs. At the same time, because of under-utilized resources, it may well be possible to increase production both for exports and for the domestic market simultaneously, permitting rates of growth even higher than were experienced in the best years of the period 1947-1961.

Land and labour are available, unemployed, and elastic to expanding demands.[3] Concerning the conditions of skilled labour supply, Brazil has demonstrated a capacity to expand it quite rapidly in response to rising demands.

> "Despite the relatively high educational and skill requirements needed for the manufacture of heavy-engineering equipment, supply of these inputs has not posed a serious barrier to this sector's expansion. First, there has been considerable saving of educational inputs. The Brazilian skilled workers have less than a third of the formal schooling of their American counterparts. The sector also uses less than half as many engineers per unit of output as the American machinery industry. Such educational saving has not prevented the sector from attaining output of high quality and (with equivalent production equipment) productivity comparable to American levels. Moreover, lower formal-education levels have not inhibited the sector's flexibility in adopting new and more complex technology, for in the past decade firms successfully changed to heavier equipment and new product lines. The sector's experience in economizing formal education inputs indicates that the elasticity of substitution

[3] See A.B. Araoz, "Manpower and Employment in Brazil", International Labour Review. Vol. 93 (April, 1966).

> between education and other inputs, in response to different relative factor-prices, is greater than is assumed in a rigid "manpower requirements" approach to education and development."[4]

The supply of capital would also increase in response to higher demand from the export market for primary products and manufactured goods.

The resurgence of the external sector cannot, however, be limited to traditional exports. It has to include new goods, especially industrial products.

Judging from past experience, exports of many goods (see Chapter 3) have always suffered from instability and adverse trends.

> "Primary products currently account for 88 per cent of the exports of less developed countries. Over the years these exports and therefore the exports of these countries as a whole, have shown slow growth: slow relative to the growth of world trade as a whole and slow relative to the increase in imports required to sustain a satisfactory rate of development in these countries. Some commodities, most notably petroleum, timber, iron ore and bauxite, have shown sustained growth on a major scale. For most commodities exported by less developed countries, however, demand has increased slowly. At the same time, their prices on the world market have fluctuated much more widely than the export prices of industrial countries."[5]

The principal result for Brazil of an expansion of her industrial exports, either to the Latin American market or to the rest of the world, would be a reactivation of what has hitherto been the most vigorous

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[4] Nathaniel H. Leff, The Brazilian Capital Goods Industry, loc cit, p.81.

[5] International Monetary Fund, loc cit, p.3.

industrial activities in the manufacturing sector. This would, in fact, mean the addition of a number of elements of dynamic external demand to that part of the domestic market now forming the apex of the income pyramid. But if the process follows this course, the basic dichotomy between the developed and the under-developed sectors of the economy could be accentuated, since the effects of an expansion in the dynamic sectors would simply act indirectly on the primary sector (in that they would absorb more of the labour force) but would not necessarily alter the production functions of the more backward sectors.

To reduce this basic duality of the system, the economy is investing heavily in the primary sector and making every effort to continue to invest in the under-developed areas, in order to increase both employment and productivity in the less advanced sector and broaden the future market for the manufacturing sector.

Because of these heavy investments some branches of industry in the "capitalist" sector itself are being given a considerable incentive, especially those manufacturing production goods. Among these, mention should be made of the basic equipment industry which, having a relatively flexible productive capacity, is adapting itself more readily to this new type of demand. The impact of this is mainly being felt by the industries producing tools and light equipment for farming and for small and medium-scale industry in the under-developed areas.

The traditional industries also will fairly soon be reaping the benefit of the overall increase in the income of the under-developed sector. These benefits would accrue not only from the rapid increase in the productivity of certain sectors as a result of the investment made in them, but also from the immediate increase in expenditure and employment in the under-developed sector.

The government is now aware of the importance of education as a means of accelerating growth and consequently has also been investing in this sector.

The combination of domestic changes now taking place, together with an improvement in the position of traditional exports and the gaining of new markets for the industrial goods produced by the better-equipped sectors will be highly beneficial to Brazil. Thus, while external demand stimulates the "capitalist" sector, the government is intensifying its autonomous investment to complete the existing industrial structure, paying particular attention to the infra-structure of basic services, and to increasing, in large measure, the proportion of investment in the primary sector and under-developed areas. By means of this investment policy, reinforced on the social plane by measure to achieve better income distribution (especially in the primary sector), the gap between the two sectors of the economy is likely to be narrowed considerably in time.

Economic policy faces many obstacles particularly when it attempts to influence external variables and even in the sphere of domestic policy it is affected by a number of problems resulting from existing institutional and politico-social structures.

The 10 per cent import coefficient mentioned earlier as being feasible through improved export performance is still lower than in many advanced countries. Compared with the 8.6 per cent figure of 1968, however, it shows that the goal is not too remote. A higher coefficient Imports/GNP should enable the Brazilian economy to enjoy some of the gains of international specialization and avoid the inefficiencies and constraints on growth imposed by the previous pattern of autarkic orientated development.

APPENDIX A - METHODS AND SOURCES

The aim of this study was (a) to show how far the import substitution process affected not only the Brazilian GNP, but also the structure of the import list itself, and (b) to analyse the behaviour and composition of the different categories of imports.

The methodology adopted enabled an examination to be made of the import substitution process in the light of the historical development of the country as a whole.

The present study, therefore, is not limited to the years from 1929 to 1964, which is the period during which the process actually occurred, and which has been the subject of several other works. Here the field of research has been widened and an attempt has been made to follow the economic development of the country from its earliest days up to the present time. It is far more than a mere examination of the items that make up the balance of payments of the period. It traces the many factors which, either directly or indirectly, had a bearing on the process. In brief, all the relevant influences which may have emanated from the social, juridical and economic infra-structure of the country have been analysed in order to reach a comprehensive understanding of import-substitution industrialization.

It has been the special concern of the author properly to prove the fundamental premises on which this work is based. Proof of the theoretical conclusions reached has been obtained either from available statistical evidence, or from observations contained in other studies of the Brazilian economy, especially those made by foreign economists.

The work of Professor Octavio Dias Carneiro[1] was the main source for the analysis of changes in the GNP during the period 1920-1946. After 1947 the basic material was collated from the publications of the Instituto Brasileiro de Economia, which, from that year, was the organization officially responsible for preparing all the estimates concerning national accounts, sectorial and regional income distribution and the indices of real output.

Whenever necessary and possible, the annual coefficients used in this thesis were calculated from a five-year moving average of dollar or cruzeiro values centred on the middle year.

Brazilian economists are faced with a number of problems in constructing aggregates such as

[1]Octavio Dias Carneiro, Past Trends of Structural Relationships in the Economic Evolution of Brazil-1920-1965, loc. cit.

the index of industrial output, which is made up of four main sub-indices: manufacturing industry, mineral extraction, civil construction and electric power supply. The index is obtained from a chain of moving bases. Owing to the lack of adequate statistical information, the weights of civil construction, and the figures for electric power supply have not been brought up to date. For the whole series the figures used are those of the 1950 Census. Civil construction and electric power supply correspond to 7.5 per cent and 7.4 per cent respectively. The balance of 85.1 per cent is distributed among the various manufacturing sectors and the mineral extractive industry, according to their proportion of value added in the various base years.

For the manufacturing industries up to 1955, the index of real output was calculated for the following sectors: non-metallic minerals, metalworking, paper, rubber, leather and hides, chemicals, textiles, food products, beverages, tobacco, and publishing and printing. However, the index also reflects the output of other sectors. After 1955, the following specific indices were added: machinery, electrical and communications equipment, furniture, wood, footwear and clothing, and miscellaneous items. These indices are weighted according to value added in each base year.

The transportation and communication sectors consist of four sub-indices (index of railway services, sea transportation etc.), all of them being weighted according to the proportion of wages paid in 1949 to each sector.

What problems result from the methodology described above? An important one concerns the whole question of import-substitution industrialization. Many goods formerly imported and now manufactured in Brazil are produced at a higher cost than abroad. This gives an upward bias to the growth picture, since relative values are used in order to weight the real growth indexes. There is nothing, or very little to be done about this. Until now the researcher has been obliged to work with the existing estimates. These are periodically revised by the Instituto Brasileiro de Economia, and with constant improvement in methods and greater centralization of statistical material, each revision is more complete than the previous one.

As the 1960 Census was not carried out successfuly, the Instituto has not had as much information as it ideally required for accurate analyses. However, the Census to be taken in 1970 will benefit from the experience of past mistakes and should provide more comprehensive statistics than have hitherto been available. There will, furthermore, be the added advantage that all this information will be gathered together and centralized by the recently-formed Ministry of Planning, which did not exist in 1960.

The analysis made in this thesis of the changes in the structure of imports was carried out at the levels of aggregation selected by the Institute of Research and Analysis of the Ministry of Planning.[2] The base year is 1955. The sample chosen represented 90 per cent of the import list of that year.

The selected sample served as a basis for measuring import substitution. For the periods 1920-1929, 1920-1964 and 1929-1964, the coefficient adopted was that of Padma Desai[3], that is, import substitution, u, equals $M_2/S_2 - M_1/S_1 / M_1S_1$. For this formula the figures used were the physical volume (1955=100) of imports and total supply. To avoid distortions, the figures were calculated by taking the annual average of the three first and the three final years of each period. The value of imports was taken at CIF prices plus import duties. For the period 1957-1964 calculations were based on the Chenery measure, that is, $u = \frac{1}{\Delta Q} (Q_2 - S_2/S_1 Q_1)$. In this period, total imports and domestic supplies were considered quite separately according to groups - capital goods,

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2 Ministério do Planejamento e Coordenação Geral, Programa Estrategico de Desenvolvimento 1968-1970, loc. cit. Chapter VI.

3 Padma Desai, loc. cit. pp.318-323

intermediary goods, non-durable consumer goods, and durable consumer goods. The sum of domestic production and imports represents the value of total supplies at market prices, not including trading profits and internal transport costs. The estimates so calculated in this thesis constitute the first systematic attempt to measure import substitution for the Brazilian economy.

The 10 per cent coefficient M/GNP taken as an ideal target for the Brazilian economy, was chosen as being a half-way figure between the rate of 6-7 per cent achieved in Brazil in recent years and the average figure of 13-14 per cent presently attained by developed countries.

While this 10 per cent target may be considered to be a realistic one in the light of economic development in Brazil in the last two years, it did not take some factors into account. For example, no allowance was made for a domestic savings constraint, or for a possible shortage of skilled labour. In this thesis, however, the aim has been to consider the question as a whole, and as a result of factual and detailed study of the material available, to present a realistic model of development for Brazil.

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