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AGRICULTURAL DUALISM AND BRAZILIAN DEVELOPMENT

This research clearly demonstrated the disparities in agricultural growth between groups of farmers in Brazil, especially in the wheat region, and noted the broader interregional disparities which historically existed and appear to be even more accentuated in recent years. This process of growth has contributed to increased dualism in Brazilian agriculture: highly capitalized mechanized farms with low labor/land ratios, and under capitalized traditional small farms using large amounts of labor and little new technology. The dilemma appears to be the classic one of growth versus distributive equity, a theme of increasing importance in developing countries. As noted above, the policies affecting Brazilian agriculture to the greatest extent in the post World War II period are associated into two major sub-periods of development strategies in the country: the first characterized by general neglect and occasional discrimination against agriculture, especially in the 1947-61 period of intense import substitution industrialization, resulted in agricultural growth largely along the extensive margin; the second, beginning in the mid-1960's and continuing to the present, represents a period in which policies have been aimed at agricultural modernization and expanded traditional and nontraditional exports. In the first period, the objectives for agriculture were limited primarily to producing an adeuqate supply of reasonably priced food for urban wage earners and secondarily, generate foreign exchange to finance the importation of the industrial raw materials and capital goods. The assistance granted to agriculture consisted largely of improving extension and marketing services. Since the mid-1960's much greater emphasis has been given to modernization, and accelerating the growth of output and exportation. Emphasis on research increased in the early 1970's. Generally Brazil has been quite successful in meeting its economic objectives. In fact, the high growth rates since 1968 have caused people to speak of the "economic miracle" and make comparisons with countries like Japan. This euphoria may be a bit premature, particularly in view of current energy problems, but clearly the performance has been exceptional in the past few years, in large part due to expert decision making. The emphasis, at least in agriculture, however, has been largely on growth rather than growth with equity. Given the state of the economy when the military took power in 1964, it is easy to understand this orientation. But it is also necessary to call attention to the potential structural problems arising from this approach which may hamper future economic growth and development. The experience of other countries has demonstrated the difficulty in achieving equity, in spite of good intentions, once great inequities have arisen. Perhaps some loss in growth rate occurs when increased equity is pursued, but the results of this and other research, which suggest relatively constant returns to scale in agriculture over a wide range of output levels, imply that the losses might not be that great. If more broadly based growth is desired, the challenge to policy makers is clear and complex. It requires a fundamental rethinking of how millions of Brazilian farmers respond to policies. The tendency has been to view policy making as essentially a "top-down" activity with relatively little feedback about the dynamics of policy impacts. The observed inequalities in resource use, income and growth logically result. A growth-with-equity strategy would have to take into account the heterogeneity of farms and farmer response. Policy making would then involve identifying groups of farmers that are relatively more homogeneous and developing a specific set of policy incentives for each group. The recent efforts of the quasi-public national agricultural research institute (EMBRAPA) to develop region and crop specific technological packages is a promising attempt clearly in the right direction. The scientists and technicians of this institution are to be commended for this

initiative and their appreciation of the complexities of the agricultural development process. Another clear implication of this research is the crucial role which product and factor pricing has on the pattern of farm growth. Brazilian policy makers have consistently espoused the role of the market in allocating resources, yet continuously intervene in the market process in order to influence prices for some specific objective. Generally such intervention has been directed towards increasing the use of certain inputs, expanding output of selected products, or reducing consumer prices. The resulting distortions have helped meet the objectives, at least in the short-run, but have also contributed to resource misallocation and an unequal pattern of participation in the growth process by various groups of farmers. These inefficiencies and inequities could well frustrate future broad based rapid growth. Furthermore, the slow growth in effective demand of the marginalized segment of the rural population may frustrate the continued growth of the industrial sector. Solely removing pricing distortions, as important as that may be, may not constitute, however, the necessary and sufficient conditions for broader based agricultural development. Structural change needs to be attacked simultaneously. This research has shown how differential resource endowments and access to resources and policy incentives contributes to uneven farm growth. Land reform, credit for land purchases, effective land taxation, and improvements in the land market may be necessary to form the basis for more equitable growth where agricultural production is still largely a function of combining land with labor. More yield increasing technologies are also required so that increases in income are not restricted just to enterprise changes or mechanization. Rural education, now lamentably inadequate, must be improved and universalized so that farmers are better prepared to seek out and understand new information as well as provide a more productive source of labor when they choose urban employment. Extension workers must be provided with a larger stock of technological alternatives and must be freed of a myraid of administrative functions and a bias to concentrate their efforts on large farms. Lastly, signs are beginning to appear in Brazil that the past emphasis on the macro approach to the study of agricultural problems is waning and a new interest is emerging in the study of the microeconomics of the agricultural sector. The research reported in this volume has made a small dent in this vast uncharted field. Hopefully it will encourage some of the extremely talented young Brazilian men and women now studying at home and abroad to delve into the problems faced by farms and rural markets which have only been touched upon here. Studies related to such problems as the determinants of consumption and savings, creation of employment, returns from new technology, bottlenecks in input and product markets, impact of inflation and income distribution, exchange rate and other trade policy influences on agricultural trade, and financial market contributions to capital allocation and savings accumulation represent a few of the most crucial items in a long list of research priorities. Of immediate importance is the initiation of a nationwide system for the collection of farm level time series data absolutely essential to effective economic research. This research and the rapidly growing literature on economic and agricultural growth and development in Brazil show that the sleeping giant of the southern hemisphere awoke with a start in the latter half of the twentieth century and shows great potential for becoming a commanding influence in the economy and politics of Latin America. It holds untapped and underutilized agricultural resources that could become one of the important breadbaskets to help feed the hungry world. By achieving high growth rates for several years, it has demonstrated a capability to effectively draw some of these resources into production. But if it is to

realize its true economic potential and maintain long term high growth rates, it must begin to more effectively harness its most valuable resource, a resource largely overlooked in recent years - the growing quantity and quality of its peoples. When that occurs, we can justifiably refer to the "Brazilian Economic Miracle."

FINAL REPORT

June, 1975

CHAPTER TWO

FARM GROWTH IN BRAZIL

The Ohio State University Research Team

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PREFACE

In 1969 the U.S. Agency for International Development through its Technical Assistance Bureau contracted with the Research Foundation of The Ohio State University to conduct an "Analysis of Capital Formation and Technological Innovation at the Farm Level in LDC's," (hereafter referred to as the Capital Formation Project). USAID financial support covered the period July 1, 1969 through October 31, 1974.

Responsibility for the Capital Formation Project rested with the faculty of the Department of Agricultural Economics and Rural Sociology. Norman Rask was the research team leader throughout the life of the project. Richard Meyer served in Brazil as Project Chief of Party coordinating the extensive primary data collection and preliminary analysis efforts. Upon return to Columbus, he served as a member of the research team and with Norman Rask coordinated the writing of this monograph which constitutes the final report of the project. Members of the research team, responsible for specific areas of project research included Dale Adams, David Francis, Terry Glover, Donald Larson and Inderjit Singh.

The principal project objective were: (1) To investigate and describe capital formation and utilization at the farm level, including the impact of technological change on the need for capital and on the capital formation process, and (2) To evaluate the implications and impact of selected policies designed to stimulate capital formation. Research was initiated in Brazil and was limited to that country when conditions prevented expanding the research to India as originally planned.

The farm firm was the principal unit of analysis for the investigation and was viewed as the primary building block in the chain of production and marketing firms involved in development of the agricultural sector. The research procedure was to discover, measure and better understand the impact on farm firm decisions of major changes in government programs, world market conditions, and new technology. Such analysis required extensive farm level data and little existed in Brazil. As a result, collaborative research arrangements were established with several Brazilian institutions. The institutions were selected because of their knowledge of particular agricultural regions and expertise to assist in designing survey instruments and in collecting the data through personal interviews with farmers.

Utilization of the research results and improvement of local research capabilities were also important considerations. Thus during the course of the research, several efforts were made to communicate and interpret preliminary results for several Brazilian agencies and professionals and the local USAID Mission through seminars, meetings, and informal contacts. Furthermore, students and faculty at each of the collaborating institutions were involved in questionnaire design, sampling, interviewing, data manipulation and analysis, and in all cases a set of data was retained by the local institution as part of data banks that were being developed.

In any project of this scope many individuals play key roles and many institutions make significant contributions. We would like to mention some of those without whom the research could not have been initiated or conducted. In USAID/Washington Dr. Erven Long was an

instrumental force in the project's inception and provided counsel throughout its duration. Members of the USAID/Washington Technical Assistance Bureau who assisted were: Dr. Douglas Caton, Dr. Larry Witt, Dr. Arthur Coutu, Dr. Harold Jensen and Dr. Lehman Fletcher. In the USAID Mission to Brazil, William Ellis, Mission Director; Michael N. Galli, Deputy Chief of ARDO; William Rodgers, Chief of ARDO; Dr. Harlan Davis, Agricultural Economist; Ralph Miller, Deputy Chief USAID/PASA; Dr. Stanley Krause, Agricultural Economist; and David Cohen, Program Office; as well as several other members of ARDO and the USAID staff provided much appreciated in-country support and administrative backstopping.

The Central Bank and the Ministry of Agriculture served as official contact with the Brazilian government and provided encouragement for the initial studies. In particular Ary Burger, Director of the Central Bank provided valuable assistance. The Instituto de Estudos e Pesquisas Economicas da Universidade Federal do Rio Grande do Sul was the first institution to conduct a survey under the Project. We owe a great deal to the foresight and effort of Mauricio Filchtiner, Director and Eli de Moraes Souza, Chief of the Agricultural Economics and Rural Sociology Section, in getting that survey underway and to several other staff and students that so successfully completed subsequent surveys and analysis on the data collected in that state. Closely related to this first effort, a survey was conducted in the state of Santa Catarina in conjunction with the Instituto de Pesquisas e Estudos Economicos da Universidade Federal de Santa Catarina with Carlos Jose Gevaerd playing an important role in that work. An old friend and distinguished col-

league, Paulo F. Cidade de Araujo, was instrumental in assisting with the research that was conducted in Ribeirao Preto in the state of Sao Paulo in 1970. Several other staff members and students in the Departamento de Ciencias Sociais Aplicadas of the Escola Superior de Agricultura "Luiz de Queiroz," including Joaquim J. de Camargo Engler who later became head of the department, were very supportive of the several economic and sociological studies conducted in Sao Paulo, and were patient and much appreciated counselors and hosts to the several OSU staff that resided in and passed through Piracicaba. The research conducted in the state of Minas Gerais owed much to Helio Tollini, then Director of the Instituto de Economia Rural, Universidade de Minas Gerais in Vicosa; H. Evan Drummond, Ph.D. student at Purdue University; and Julian H. Atkinson, Chief of Party of the Purdue-Vicosa Institution Building Project.

While analysis of the data collected in these four states moved forward, the USAID Mission contracted with Ohio State University to provide support to the newly created Escritorio de Analise Economica e Politica Agricola of the Ministry of Agriculture. The first director of that office, Francisco Vera Filho, and his successor, Alberto Veiga, along with Iby Pedroso organized a survey in the state of Ceara which collected data similar to the type collected in the four other states and made it available to the Project. Faustino de Albuquerque Sobrinho of the Universidade Federal do Ceara and Roger Fox of the University of Arizona - Ceara Institution Building Contract were instrumental in making local arrangements. The Banco do Nordeste contributed resources and staff to that survey as well.

Special appreciation is also extended to the many interviewers and drivers in each survey region that spent long, hot, dusty hours locating and interviewing farmers. The Brazilian farmers we interviewed displayed great patience and excellent cooperation by completing long interviews as accurately and thoroughly as possible. To them we extend special thanks.

The research that went into this report involved many staff and students at both OSU and several of the institutions just mentioned. The training of graduate students was an integral aspect of the Project, both in the U.S. and Brazilian Universities and will no doubt remain one of its chief benefits long after the findings of this research become outdated.

Clearly, the research findings summarized in this report emanate from a successful team effort. However, it is appropriate to recognize explicitly those individuals most directly responsible for major parts of the report.

Chapter 2	Douglas Graham
Chapter 3	Richard Meyer
Chapter 4	Norman Rask and Richard Meyer
Chapter 5	Norman Rask
Chapter 6	Terry Glover
Chapter 7	Donald Larson and Richard Meyer
Chapter 8	David Francis
Chapter 9	Donald Larson
Chapter 10	Dale Adams
Chapter 11	Inderjit Singh and Choong Yong Ahn

Chapters 1 & 12 Group Effort

In addition, significant contributions to the Project were made by several other OSU faculty members, in particular Bernard Erven, John Sitterley, Francis Walker and Kelso Wessel. Kelso Wessel was a member of the OSU Institution Building Project at ESALQ, Piracicaba, during the initial phase of data collection in the state of Sao Paulo. He worked with Brazilian faculty and graduate students on questionnaire construction, survey design, and supervision of some of the interviewing.

Mrs. June Blind and Ms. Malinda Brenner shared most of the typing of the final version and were ably assisted by several other secretaries in the department on earlier drafts. Ms. Barbara Durman, and Mrs. Margie Butz were responsible for data organization and storage. Mark Hinnebusch did much of the computer programming during the latter part of the Project. The Statistics Laboratory helped with figures, tables and overload typing, while Ms. Marilyn Chute served as a most capable administrative assistant throughout the life of the Project.

While more than forty graduate students have assisted with the processing and analysis of data and many have used portions of the data for their own M.S. theses and Ph.D. dissertations, 9 individuals who were then Ph.D. candidates, deserve special recognition for contributions to the overall Project: John Stitzlein, William Nelson, Gerald Nehman, Hagop Kayayan and Solon Guerrero each spent a year or more in Brazil assisting with data collection and processing; Roger Baur and Choong Yong Ahn assisted with data processing and analysis in Columbus. Joaquin J. de Camargo Engler and Iby Pedroso worked with their respective institutions in data collection and used part of the data for their dissertations.

We would also like to express appreciation to G. Edward Schuh and Pan A. Yotopoulos for highly useful detailed comments each made on an earlier draft of this report. J. K. McDermott also contributed a helpful reaction as did several people in Brazil during a round of seminars conducted in October, 1974. Of course, the authors assume sole responsibility for the contents. The views and opinions expressed do not necessarily represent the views of any persons or institutions in Brazil or the U.S. that collaborated with the Project.

David Boyne
Project Supervisor

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CHAPTER 2

A REVIEW OF BRAZILIAN ECONOMIC POLICY & ECONOMIC GROWTH, 1947 - 1974

As a Brazilian colleague recently remarked, Brazil, during the postwar period, has undergone all the classical development experiences from import substitution industrialization (hereafter called ISI), inflation, balance of payments disequilibria and stagnation to outward looking export expansion and diversification and rapid economic growth [60]. A wide variety of strategies and instruments have been employed for economic development with varying degrees of success and distortions as well as a changing scenario of political institutions. The rapidly growing interest in the Brazilian economic "miracle" and the equally strong controversy surrounding Brazil's experiment with authoritarian government, suggests that a review of the country's general development experience is in order before moving into a specific discussion of agricultural policies in the succeeding chapter since the former has obviously conditioned the latter.

The postwar era can be divided roughly into two historical periods. The first (from 1947 to 1963) can be called the inward looking import-substitution period. This period marked the first deliberate strategy to industrialize through stimulation of domestic production of previously imported finished manufactured goods and later capital goods. Associated with this effort was a style of sectoral target planning, non-market allocation of resources (i.e. licenses, subsidies), increased participation

of foreign investment, a growing discrimination against agriculture and exports, increased income inequality, rising inflation and eventually a rising constraint on the capacity to import in the early 1960's. This process of economic change was carried out in an environment of open, competitive party politics and direct elections, with the government giving increased attention to urban industrial interests and less to agricultural interests. As will be seen later, the impact of "populist" party politics and growing urban voting constituencies was apparent in the choice of priorities and the strategies employed to promote economic growth.

The second period (1964 to the present) can be characterized as an outward looking export expansion and diversification phase of economic growth. Three features were carried over from the earlier period: a continued emphasis on industrial growth and import substitution; the growing role of the state in the economy and the continued participation of foreign capital. However, these features were developed in an entirely different political-economic context. Nonmarket planning techniques emphasizing the direct allocation of import licenses, direct subsidies, etc. were replaced by a more explicit strategy controlling relative prices through market mechanisms. Institutional innovations were undertaken emphasizing the centralization of economic policy execution, the indexing of financial instruments and government bonds for inflation, the development of capital markets and strong government control over the techniques of mobilizing savings and undertaking investment. Import substitution was continued, however, growth through export expansion and diversification was a far more important priority. Important export stimuli were created with substantial tax deductions and

the introduction of the "crawling-peg" exchange rate (monthly mini-devaluations) that kept the actual rate close to the equilibrium rate of exchange. Distributional concerns were of secondary importance. Finally, it should be emphasized that the political model within which this economic strategy was carried out was bureaucratic and authoritarian in nature. This fact becomes important as we investigate how it was possible to institute so many marked policy changes that clearly implied a redistribution of power and influence from the earlier period.

This chapter discusses the Brazilian growth experience in the context of these two periods. While there are important elements in common to both periods such as continuing import-substitution, foreign investment and public sector capital formation, each represents a sufficiently different model of development and set of policies to merit separate analysis. Both periods will be analyzed; first in terms of the performance of the key macro-economic variables characterizing its pattern of economic growth; and second in terms of the strategies devised and instruments and institutional innovatio employed in promoting growth. The socio-economic consequences of the policies are addressed throughout.

THE IMPORT-SUBSTITUTION STAGE, 1947-1963

Aggregate Performance and Structural Change

On the whole, Brazil experienced significant economic growth in this first postwar period. From 1947-1961 the overall real rate of growth averaged seven percent per annum. Growth of the agricultural sector averaged 4.6 percent per annum, while that of the industrial sector registered an average

TABLE 2-1

Data on Growth and Structural Change in the Brazilian Economy for Selected Years 1947-1973

A. Aggregate & Sectoral Growth Rates

Year	Real GDP	Industry	Agriculture
1947/61	7.0	9.5	4.6
1956/62	7.8	10.3	5.7
1962/67	3.7	3.9	4.0
1968	9.3	13.2	1.5
1969	9.0	10.8	6.0
1970	9.5	11.1	5.6
1971	11.1	11.2	12.2
1972	10.4	13.8	4.1
1973	11.4	--	--

Source: Baer [13, p. 273].

B. Sectoral Changes in GDP (1953 Prices)

	1947	1960	1968
Agriculture	30.0	22.2	20.5
Industry	20.6	28.0	29.3
Other	49.4	49.8	50.2

Source: Baer [12, p. 232].

C. Imports as a Percentage of Total Supply

Category	1949	1962	1966
Capital Goods	59.0	12.9	13.7
Intermediate Goods	25.9	8.9	6.8
Consumer Goods	10.0	1.1	1.6

Source: Baer[12, p. 233].

D. Annual Rates of Inflation for Selected Years, 1947-73

Year	Rate of Inflation	Year	Rate of Inflation
1949	5	1963	80
1950	10	1964	87
1951	12	1966	41
1954	22	1967	24
1955	24	1970	21
1956	21	1971	19.8
1959	39	1972	15.5
1960	29	1973	15.7
1961	33		

Source: Ferreira [27] 1971 onwards from Baer [15].

9.5 percent per annum during this period (Table 1). Within this period, 1956-1961 was the high point of rapid industrial growth. The real rate of growth of total product averaged 7.8 percent during this period; that of agriculture five percent, and that of industrial growth 10.3 percent per annum. As mentioned earlier, this was the period of intense, import substitution industrialization with significant participation of direct foreign investment. From late 1961 to early 1964, however, the economy fell into a cyclical slump, averaging only three percent rates of aggregate growth per year and stagnant or declining per capita growth. This period was characterized by considerable political and administrative instability, economic nationalism, rising inflation, a reduction in foreign loans and investments and severe balance of payments disequilibria, all of which, contributed to the only major period of stagnation in recent Brazilian economic history. We will have occasion to discuss this period in some detail later.

Given these marked differentials in the rates of sectoral growth, it is not surprising to note a sharp intersectoral shift in national product. From 1947 to 1960 the share of national product generated by industry rose from 20 to 28 percent while that of the agricultural sector declined from 30 to 22 percent. The share of the service sector remained constant at around 49 percent (Table 2-1, panel B).

Associated with the significant record of industrial growth up to 1961 was the change in industrial structure. In 1939 the important subsectors of heavy industrial activity such as metal products, machinery, electrical equipment, transport equipment, and chemicals accounted for no more than 23 percent of total value added in the industrial sector. By 1963, these

subsectors accounted for more than 45 percent of total industrial value added. Another revealing index of the structural change associated with this pattern of growth in Brazil is the change in the imports of industrial products as a source of total supply (Table 2-1, panel C). In 1949 capital goods imports represented 59 percent (of total capital goods supply), intermediate goods imports 26 percent (of total intermediate goods supply) and consumer goods imports 10 percent. By 1960 these proportions had declined to 23, 12 and 4 percent respectively.

Table 2-2 shows that this structural change largely occurred in the fifties rather than the sixties. The changing percentage distribution between the traditional and the several modern sectors stands out much more clearly between 1949 and 1958 (or 1962) than it does between 1962 and 1969. This sequential pattern of greater structural change in the fifties than the sixties is also corroborated by the lack of labor absorption. From 1949 to 1959 the share of labor in the industrial sector remained constant (around 13 percent) despite the marked increase in output. By 1970 it increased to roughly 18 percent, suggesting a much less marked pattern of productivity or technological change in the structure of industrial output, and more an expansion along existing technological production functions. An additional stimulus to increased industrial employment by 1970 was the severe constraint on wages from 1964 onwards which undoubtedly reduced labor costs below what they would have been in a nonauthoritarian political environment.

One success indicator of the ISI strategy was the fact that imports as a percent of GNP declined from around 12 percent in the early 1950's to eight percent by 1963. Thus, some savings in foreign exchange were realized.

TABLE 2-2

Percentage Distribution of Total Manufacturing Output by Selected Sectors, 1949/69 (1949 Prices)

Years	Sectors		
	Traditional	Dynamic A	Dynamic B
1949	70.4	24.3	5.3
1958	56.3	31.3	12.4
1962	47.4	34.2	18.4
1969	46.8	32.0	21.1

a/ Traditional: Wood Products, Furniture, Leather Products, Textiles, Clothing, Food, Beverage, Tobacco, Publishing

b/ Dynamic A: Non-metallic Minerals, Metallurgy, Paper Products, Rubber and Chemicals

c/ Dynamic B: Mechanical, Transport, Electric and Communication Equipment

Source: IBGE. Reproduced in da Mata and Bacha [59, p. 305].

However, at the same time that the aggregate import ratio was declining and the internal structure of production was becoming progressively more integrated into backward linkage industrialization, the composition of imports themselves was becoming almost exclusively confined to the strategic import of intermediate goods (fuels and industrial raw materials) and capital goods. This meant, in effect, that any future decline in the capacity to import would have serious repercussions on industrial output and employment. As will be seen shortly, this became crucial in the early 1960's.

In short, it is clear that the process of ISI industrialization in Brazil during this period had decisively changed the structure of production and, in the process, almost completely replaced the importation of consumer goods; significantly reduced the imports of capital and intermediate goods as a percent of total supply; but increased their relative role in the composition of total imports. It is important to underline this feature of backward linkage industrialization in Brazil. The large domestic market permitted more extensive ISI change than that recorded in most other third world countries and more than most ISI critics thought likely [55].

With the aggregate, sectoral and structural characteristics of the ISI experience established, it is now appropriate to review the studies analyzing the efficiency of this extensive pattern of ISI industrialization in the fifties and early sixties. Were hot-house, high cost industries established? What was the social cost of following this strategy? Evidence suggests that Brazil's experience with ISI industrialization was very capital intensive; very anti-labor absorptive in nature; probably more modern than the industries established in most third world nations and highly reflective of foreign technologies and foreign investment.

Capital Intensity

Many authors emphasize the widely recognized capital intensive nature of the ISI experience in Brazil [4, 8, 17, 28, 37, 67, 102]. Fishlow estimates that between 1949 and 1959 productivity per man in manufactures grew by 5.8 percent. He claims that much of the increase was due to the capital intensive character of the process which, in turn, was due to the product orientation and the deliberate overvaluation of the exchange rate which heavily favored the importation of capital equipment. Therefore while output increased at the considerable rate of 8.8 percent annually during the 1949-1950 period, the estimated net capital stock accumulated still more rapidly at 9.2 percent. However, Fishlow does underline the advance of total factor productivity was much more limited. Depending upon the weights attributed to capital and labor, it ranged between 1.6 and 2.7 percent [28]. The foregoing should make it clear that an important price was paid in promoting this modern industrial structure. This price was the limited employment absorption of the process. Given the sectoral profile and product lines chosen for ISI (metallurgy, electrical and transport equipment, chemicals, etc.) a shift to capital intensive techniques was unavoidable. This was true regardless of the relative price of capital and labor since these sectors and products had significantly higher capital labor ratios with any technological alternative than the structure they replaced or superceded [67].

Bacha estimates that the employment elasticity in Brazilian manufacturing was on the order of 0.3 to 0.4 percent for every one percent increase of total manufacturing product during the postwar period. Equivalent estimates for other lesser developed countries (LDC's) are much higher;

namely, around 0.7 percent [4]. Hence, as pointed out earlier, the percent of the labor force employed in the industrial sector remained constant from 1950 to 1960 at roughly 13 percent in spite of the rising share in total income of industrial output. Even traditional labor intensive sectors such as textiles, foodstuffs, tobacco, etc. showed sharp declines in their absorption of labor as output grew from 1950 to 1960. This reflected the relative factor price influence more than the sectoral mix effect in that alternative labor intensive technologies were more feasible in these sectors. In short, the sectoral mix chosen and the relative factor price structure that emerged from the ISI strategy were both highly unfavorable to expanded employment, the former reflecting the shift into new sectors, the latter reflecting the change in technology in existing sectors. It is notweorthy to note that the subsidy granted to the import of capital goods affected traditional as well as dynamic industrial sectors [59].Finally the increased labor costs to employers introduced through expensive social legislation raised the cost of labor considerably above its opportunity cost thus reinforcing the adoption of labor-saving techniques [5].

An associated development of this capital intensive ISI strategy was the growing inequality of salaries within industry due to the increased hierarchical division between blue and white collar workers. The latter consistently enjoyed rates of salary increase considerably greater than productivity increases while the former typically experienced wage increases considerably less than productivity increases [59]. These features of the ISI pattern of growth (capital intensive bias and the growing inequality between blue and white collar remuneration) strongly suggest

that there was a worsening of the distribution of income throughout the fifties. Finally the anti-employment bias of the technological change and industrial policy kept labor dammed up in Agriculture. This in turn led to growing inter-sectoral income differentials and reduced incentives for investment in agricultural capital formation.

Efficiency

Baer, Leff and Bergsman, in various ways, focus on the comparative advantage and relatively limited traditional misallocation associated with Brazil's industrialization. Baer argues that the almost limitless supply of hydro-electric power, rich iron ore and respectable local market demand gave Brazil a comparative advantage in producing steel. Blast furnace productivity could be competitive with any producer in the world with the single step of removing the requirement that some low quality domestic coal be used in the process. In the area of steel shop productivity, the two newest Brazilian mills (COSIPA and USIMINAS) using the modern L.D. process are comparable to similar shops anywhere in the world. Rolling mill costs were initially higher in Brazil until the sixties when a more balanced capacity (among blast, steel shop and rolling mills) was attained. Baer concludes that the arrangement of production today meets world competitive standards which is one reason why steel products have been able to participate in the export drive of the late sixties [9].

Leff argues that the Brazilian capital goods industry (heavy engineering products such as pumps, turbines, motors, machinery, etc.) was able to develop and expand local production in spite of enjoying low levels of protection in the late fifties and early sixties [52]. Hence, the earlier

evidence of extensive backward linkage industrialization in the capital goods sector must have been relatively efficient or at least not glaringly inefficient, otherwise the sector could not have prospered with such levels of protection. This apparent comparative advantage was confined to those capital goods that did not lend themselves to great economies of scale production and were highly labor or skill intensive rather than capital intensive operations. The more sophisticated process oriented-scale economy capital goods continued to be imported. Brazilian capital goods producers (and foreign capital goods producers in Brazil) could have enjoyed an advantage over capital good imports through offering direct and frequent consultations and follow-up servicing arrangements to their clients for a wide range of custom-built orders. The rapid growth of Brazilian industry from 1954 to 1961 meant that the demand for a wide range of capital goods was growing so rapidly that many local firms were probably prepared to pay slightly more for immediate delivery of local products of slightly less quality than that associated with imports because of the quicker order and frequent contact for servicing.

Bergsman, in the most recent general study of Brazilian industrialization, concludes that the formal structure of tariff protection has probably played more of a role in protecting inefficiency than in promoting efficiency [17]. High levels of effective protection were given to the more traditional textile, food, beverage and leather goods sectors. These were the sectors, however, in which Brazil presumably had a comparative advantage and in which ISI had already been largely completed by 1950. In contrast, moderate to low levels of were given to intermediate and capital good products. Having said this, however, he goes on to add that the postwar "modern" industrial

structure that emerged appears to be reasonably efficient. He estimates that the total static cost of protection (inefficiency) was no more than eight to ten percent of GNP. Allocative inefficiency was estimated to be no more than one percent of GNP. The remaining seven to nine percent represented avoidable high costs and monopoly profits [17]. In short, much of the tariff protection was probably redundant and unnecessary. This in part explains why many of these sectors (including more efficient firms in some of the traditional sectors) were able to participate later in the post-1967 export boom of industrial products in Brazil.

Foreign and Government Domination

The final structural dimension of industrial growth deserving mention here is the predominant role of foreign and government investment, and the relatively minor role of local private entrepreneurship in the ISI process of the fifties. As seen earlier, extensive structural change occurred in Brazilian industry during this period with consumer non-durables declining in the growth pattern while consumer durables and capital goods expanded rapidly. Table 2-3 shows that the sectors which dominated in the growth process were also those that ranked highest in the degree of their import substitution activity during this period; namely, metallurgy, chemicals, plastics, electrical, transport and mechanical equipment. Moreover, as Morley and Smith make clear in the final three columns of this table, it was precisely in these sectors that foreign and governmental investment activity predominated [66]. They estimate that total foreign direct investment grew from 1.3 billion dollars in 1950 to approximately 3.3 billion by 1966 and that during the period 1949 to 1962 53 percent of import sub-

TABLE 2-3

Rank in Import Substitution and Growth and Shares of Government and Foreign Business in Growth, 1949-1962

Sector	Rank in IS	Rank in Growth	1964 Market Share and Growth Under Constant Shares		
			Govt.	For.	Total
Non-Metallic	10	10		23.8%	23.8%
Metals	6	7	8.5	20.9	29.4
Machinery	4	5		45.4	45.4
Elec. Mach	1	3			
Transport Equip.	2	2	2.9	66.6	69.5
Wood	14	17		0	0
Furniture	17	11		0	0
Paper	8	12		26.9	26.9
Rubber	12	6		79.5	79.5
Leather	7	20		0	0
Chemicals	3	4	33.7	31.0	64.7
Drugs	9	14		62.5	62.5
Cosmetics	19	14		55.1	55.1
Plastics	5	1		28.8	28.8
Textile	13	18		26.6	26.6
Clothing	18	9		0	0
Food	16	16		18.2	18.2
Beverage	11	19		8.1	8.1
Tobacco	20	8		76.5	76.5
Publishing	15	13			

Source: Morley and Smith[66, pp. 126, 128].

stitution and 40 percent of overall industrial growth came from foreign or government firms [66].

Even in the absence of concentration ratios it is clear that foreign enterprises dominate the economy's largest firms. Of the 24 largest firms in the transportation equipment industry in 1965, 19 were foreign. In chemicals 17 of the top 22 firms were foreign. The top six firms in the steel sector in 1965 were foreign or state owned. In the aggregate, just 31 of the top 100 firms in the nation are run by private Brazilian entrepreneurs [66]. This market power suggests that the importation of relatively modern foreign technology was extensive. This fact, combined with the largest growing local market among third world nations, meant that Brazil, while perhaps not competitive in world markets, was not far behind in certain areas and products. It also accounts for the rapidity of structural change in the fifties with the major foreign investment boom occurring between 1955 and 1961. Two negative features of heavy foreign direct investment in the ISI process were the potential vulnerability to the future drain of profits and royalties and the weakening of government fiscal and monetary control as a large and important segment of the nation's industry could draw on credit lines overseas. Both these features were to upset government policy makers in the early and mid-sixties.

In summary, the ISI commitment to the sectoral profile of heavy industry and sophisticated consumer goods reinforced the capital intensive and foreign investment features of postwar industrial growth. This strategy also promoted the transfer of modern foreign technology into Brazilian industry with its related anti-labor absorption bias, increasing salary inequalities within industry and growing income inequalities between industry and the non-industrial sectors.

THE POLICY MILIEU OF THE ISI STAGE OF BRAZILIAN ECONOMIC GROWTH, 1947-1963

This section reviews both the strategy and the tactics employed to promote industrial growth during this first postwar period. The following section discusses the policy making scenario during the era of economic decline and stagnation in the early 1960's. Three broad frames of reference are useful here. First, it is important to realize that, despite a respectable rate of industrial growth generated by interrupted trade relationships throughout the depression and the second world war, the full arsenal of government policy instruments was not harnessed into a comprehensive and deliberate policy of industrialization until well into the 1950's. Industrial growth was frequently a byproduct of dealing with balance of payments crises. Second, the size and scope of this arsenal of policy instruments was still limited in the inflationary environment of the 1950's. Many fiscal and monetary policies were ineffective in this setting, compromising the degrees of freedom available to Brazilian policy makers. This fact became painfully apparent in the early 1960's and played a role in the ensuing economic decline which contributed to the political revolution of 1964. Third, non-market allocative devices were frequently resorted to during this period in the form of credit rationing, import licenses, non-market determined exchange rates and direct subsidies. The more traditional instruments of fiscal and monetary policy were underdeveloped and ineffective as mechanisms allocating resources in the economy during this period.

1947-1953: Early Balance of Payments Strategy and Industrial Growth

The lack of a conscious and deliberate policy to promote industrialization and the use of non-market allocation criteria were apparent from

1947 to 1953 [8]. A rush of free and uncontrolled imports immediately after the war eliminated the war-time generated dollar reserves. Moreover, a good proportion of this windfall was spent on consumer good imports. At the same time, the cruzeiro had not been devalued vis-a-vis the dollar since before the war, despite a domestic rate of inflation that had doubled during the war years alone. This seriously prejudiced non-coffee exports. There was a concensus against devaluation and other incentives to increased coffee output since this would lower the world price of coffee, and a consensus to avoid the pressures of "import" inflation. This led to strict import controls from 1948 to 1953. Inefficiency and corruption undoubtedly occurred within this non-market allocation; however, local industrialization was stimulated by the import barriers created through the balance of payments crisis and a sufficient allocation of import licenses at subsidized rates of exchange for capital and intermediate goods. This stimulus produced an industrial growth rate of 9.3 percent between 1947 and 1952. Thus, an initial policy to manage a balance of payments crisis gradually grew into a subsidy for selected industries through the cheap import of key inputs. Finally the long neglected law of similars was resurrected which controlled or prohibited the imports of goods that were "similar" to locally produced goods [8].

Some conclude that overvaluation and import controls during this period became in time viable policy instruments to stimulate industry, very likely far more efficient than an explicit subsidy system coupled with taxes on coffee exports [28]. Others feel the price was too high not only in terms of corruption and misallocation which this system of import allocation fostered, but also by reducing Brazilian non-coffee

export earnings in world markets [40]. This policy also reflected the continuing bias to promote capital intensive industry, neglect of agriculture (i.e., the non-coffee export sector) and indirectly eliminated the possibility of attracting any private capital inflows. Growth was possible during this period only because of the unusually high price of coffee in the postwar and Korean War years which doubled coffee earnings from 1947 to 1950. The overvalued exchange rate from 1947 to 1953 was designed, in part, to maintain this high price for coffee in world markets. However what was good for coffee was not good for other agricultural exports that didn't enjoy a monopoly position in world markets. Without this windfall from coffee, raising the capacity to import, the policy of deliberate overvaluation and direct import allocation would have generated a more serious balance of payments crisis more quickly than it otherwise did.

1955-1960: Foreign Investment and Government Activity

By the mid-fifties, the stage was set for more instruments to be employed for industrial growth and, further, to deliberately opt for significant foreign investment and large external loans in this process [24]. By the end of Vargas' second administration, it was apparent to policy makers that foreign trade and exchange rate policies were potent weapons for industrial growth, but that the earlier allocation--license system was inefficient. Consequently, a new multiple exchange rate system was established in late 1953. Market forces of supply and demand for foreign exchange were introduced for the first time, with an auction system governing the allocation of foreign exchange within five established rate brackets for

imported goods. Preferential rates were applied to capital good imports and unfavorable rates generally applied to consumer durables [43].

This stimulated a perverse pattern of industrialization in which the lesser essential consumer durable and non-durables received the highest protection. Nevertheless, the growth of local markets and government investment activity in basic industries and infrastructure created various forms of natural stimuli for intermediate and capital goods industries to develop [17]. To promote the latter, direct subsidies and a National Development Bank, rather than high levels of protection, were established, to channel government savings into these sectors at subsidized rates of credit. It was primarily these two factors (a large local market and growing public sector investment activity, intelligently applied to escape the trap of becoming locked exclusively into the first phase of ISI industrialization (i.e. consumer goods production) as were so many other third world countries [17, 55].

A third factor of considerable importance, foreign investment, began to assume major proportions after 1955 and, jointed with government investment, altered the growing pattern of industrial growth as explained earlier. The rapid decline in the price of coffee and the resultant decline in the terms of trade meant that the Brazilian capacity to import was declining and the foreign exchange gap was growing after 1955. The possibilities for rapid nationalistic (i.e., non-foreign investment) industrial development were slim due to the shrinking capacity to import equipment and intermediate goods. Also the political environment for foreign capital participation was ripe in Brazil after Vargas' death and the decline of economic nationalism.

Thus, the inflow of foreign capital became the major strategy behind Kubitschek's policy of sectoral targets (i.e., growth and investment plans for selected heavy industries) from 1956 to 1960, since this capital could now replace the declining export proceeds as the factor stretching out the capacity to import to service industrial growth. Illustrative of this strategy, was SUMOC Instruction 113 shich permitted foreign firms to import capital equipment without any foreign exchange cover. Thus, Brazil could gain foreign equipment and technology without drawing down its declining foreign exchange holdings [8].

In summary, legislation stimulating foreign capital inflows (such as SUMOC Instruction 113), plus a high level of effective product protection through the tariff structure and exchange rate mechanisms, subsidized development bank loans and finally executive sectoral planning groups, drew in over 700 million dollars of private direct foreign capital investment between 1955 and 1960. Thus the capacity to import and engage in ISI growth which was supported by high foreign exchange earnings from 1947 to 1954, was in part replaced by foreign capital inflows from 1955 to 1961. Most foreign investment was applied in the automotive, mechanical, metallurgical and electrical industries.

Associated with this inflow, however, was an increase in the rate of indebtedness to official creditors and short and medium term suppliers credit. In the short run the capacity to import was expanded, but in the long run was compromised by this increased indebtedness, the shortened average life of debt outstanding and the commitment to service future profit remittances (Table 2-4). This increased indebtedness was to curtail future policy options and give increased leverage to foreign creditors (especially the U.S. government) in influencing post-1964 stabilization policy [23, 24].

TABLE 2-4

Selected Data on Brazilian External Debt Conditions, 1947-66

Years	Average Life of Outstanding Debt (Years)	All Capital Debt Service as a Percent of Current Account Receipts
1947-51	11.1	11.4
1952-56	7.4	14.5
1957-61	6.3	33.5
1962-66	5.0	32.1

Source: John Donnelly[23].

Still another instrument used by Brazilian policy makers to promote overall and industrial growth during this period was the financing of the increased role of state activity in the development process by budgetary deficits [45]. In 1965, it was estimated that total government public sector investment activity (in a wide spectrum of activities such as mining, hydroelectric dams, steel mills, metallurgical industries, shipbuilding, highways, transport equipment, chemicals, etc.) comprised more than 45 percent of total capital formation in the country [106]. This growing role of the state in heavy industry, infrastructure, infrastructure, and banking underscores the decisive and at times innovative role of the state in directing the pattern of growth and altering the structure of production [14]. This strategy has essentially remained intact throughout both the ISI era of the fifties as well as in the politically and institutionally different export diversification era of the sixties and early seventies. However the methods of financing this activity changed. Important here is that models and financing instruments can change but broad strategies remain.

In the fifties and early sixties budgetary deficit behavior was the method used to finance these activities. As a result by 1963/64 the cash deficit had reached 4.2 percent of GNP (Table 2-5). Easy money policies were the rule, stabilization efforts rare and shortlived. This largely grew out of several political and economic considerations. First, the tax system was largely obsolete, highly income-inelastic for development purposes and unable to generate revenues at the same pace as public sector expenditures. Fiscal income inelasticity was due to the fact that the personal and corporate income taxes prior to the late sixties were ineffective as an important source of revenue [39]. No more than 10 percent of all Brazilian income

TABLE 2-5

Government Expenditures, Transfers (and Subsidies), Taxes and Cash Deficit as a Percent of GDP, 1947-1972

Year	E+TR/GDP	Tx/GDP	Deficit/GDP
1947	17.0	15.1	
1950	19.9	15.0	
1955	19.2	15.8	0.7
1960	23.3	20.3	2.8
1963	23.6	18.1	4.2
1966	23.6	24.4	1.1
1968	24.8	26.9	1.2
1970	--	--	0.4
1972	--	--	0.2

Source: Conjuntura Economia Various Years and Edesio Fernandes Ferreira[27].

recipients were legally liable to pay the personal income tax in 1964. Withholding at the source accounted for no more than two percent of all income tax collections and the lack of indexing fiscal debts (for inflation) in an inflationary environment encouraged tax deliquency. One source estimates evasion as equal to nearly one-half of potential tax revenues [81]. Table 2-5 shows that while government expenditures and transfers grew from 17 to 24 percent of GNP from 1947 to 1963, government taxes grew from only 15 to 18 percent of GNP. The difference was made up through inflationary financing by the central bank with a consequent rise in the rates of inflation from 15 to 20 percent per year in the fifties to over 90 percent per year in 1963 (Table 2- 1).

Two political pressures reinforced the use of budgetary-inflationary financing: first, the generous granting of government decreed minimum wage hikes to cater to the urban labor constituency during this period of populist politics and secondly, the strongly held position that a strong state directed economy was needed to act as a countervailing power to the threat of foreign investment domination in the face of weak entrepreneurial drive in the private sector [14,45].

Therefore, the budget-deficit form of inflationary financing (i.e., forced savings) along with the multiple exchange rate mechanism with all its hidden forms of taxes and subsidies acted as an indirect and ersatz substitute for the lack of an effective tax system in allocating resources for economic growth. Unfortunately, the ease with which these two mechanisms could be manipulated for political convenience led to increasing abuses by the early sixties. Management of the economy become more sporadic and inconsistent in the face of growing political tensions and inflationary pressures.

Major Distortions Introduced by the Growth Strategies of the Fifites

Various positive features of rapid ISI growth have been underscored earlier, namely the high rate of growth of GNP, the modernization of Brazilian industry and the impressive structural change within the industrial sector which produced effective backward linkage industrialization. A summary of the major negative consequences is now in order.

First exports continuously experienced exchange rate discrimination throughout the late forties and the fifties. The overvalued exchange rate may have made sense in dealing with coffee, since Brazil held a sufficient world market share to maintain a high world price through deliberate constraints on supply. This permitted the short run maximization of foreign exchange earnings. However this policy clearly hurt non-coffee exports, especially non-traditional agricultural and extractive exports as well as some potential manufactured exports. Furthermore this policy created a built in pessimism about ever achieving significant export growth in the future.

Second, agriculture was, on the whole, neglected at best and discriminated against at worst. In large part the discrimination grew out of the disincentives or penalties in the overvalued exchange rate for all agricultural exports. Coffee was protected, however, through guaranteed harvest prices and government stock piling. Thus the distortions introduced by one policy (i.e. an overvalued exchange rate) were translated into ever greater inefficiencies through a wasteful government stock piling program. Other crops lacked the political clout of the coffee growers. Livestock and local foodstuff producers invariably experienced sporadic price controls on

their products rather than subsidized help. Finally the lack of any significant investment in basic agricultural research or extension work compromised potential productivity gains. Only the rapid growth of the internal market in the Center-South and the possibilities for expansion on the margin in frontier areas kept agricultural output at acceptable levels.

Third inter-sectoral inequality between industry and agriculture widened during this period due to the more rapid rates of growth of industry. This produced growing streams of interregional migrants and a growing rate of tertiary employment. Interregional inequality in terms of income per capita did not widen because of the escape valve of interregional migration, however, the Northeast clearly suffered discrimination through the multiple exchange rate system and tariff structure which prevented this lower income area from importing finished goods more cheaply from abroad and buying from higher priced ISI industries in the South. In addition the traditional agricultural exports from the Northeast suffered from the constantly overvalued exchange rate. In sum, all the benefits of competitive or subsidized industrialization accrued to the Center-South.

Fourth, inflation eliminated any possibility of financial and capital market growth for any credit instruments other than short term commercial credit. No medium or long term financing existed in the private sector, and savers had no debt instruments into which they could put their savings. Industrial financing in the fifties consisted of direct government financing through development bank loans, foreign capital inflows (both official and private) and reinvestment through retained profits. This latter strategy was made feasible by the high profit margins growing out of high rates of protection.

Finally, income distribution undoubtedly worsened during this period for several reasons. The abrupt shift into capital intensive sectors and technologies limited the absorption of labor per unit of capital and widened the gap between blue and white collar work within industry. Skill differentials appeared and undoubtedly created quasi-rents for those in short supply and experiencing high demand. Factor price differentials through underpriced capital and overpriced industrial labor meant that capital was frequently rationed to favored groups and a dual labor market created separating priviledged and unpriviledged labor sectors. The inter-sectoral differentials discussed above also suggest that large sectors of the population (i.e. small farmers, sharecroppers and rural wage earners) were falling behind in the urban oriented industrial push with obvious implications in terms of increasing inter-class inequality. In part this is an unavoidable feature of modern industrial growth and, in part, perhaps tolerable, though unattractive, as a strategy for development.

The Scenario of Economic Stagnation and Policy Making in the Early Sixties, 1961-1963

Growth of GDP fell from 10.3 percent in 1961, to 5.3 percent in 1962 and 2.4 percent in 1964. The entire period from 1962 to 1967 registered only a 3.7 percent rate of growth of GDP and a 1.3 percent growth of per capita GDP. This decline in average per capita income is particularly striking actually turning negative in 1963. This cyclical downturn was largely associated with the decline in the rate of industrial growth (3.9 percent from 1962 to 1967). Hence, any analysis explaining the decline in Brazilian economic growth during this period should focus on the policy treatment and behavior of this sector from 1961 onward, first during the pre-coup period of 1961 to 1963 and, in a later section, during the post-coup stabilization

period of 1964 to 1967.

Reference to the changing political scene is necessary as a backdrop to any discussion of economic policy during this period. The sudden resignation of President Quadros in 1961 and the controversial succession of Joao Goulart increased the tempo of politicization in Brazilian society. Furthermore, the accentuation of secteral, size and regional inequalities of income growing out of the growth experience of the fifites increased social pressures for reform. At the same time, the increasing burden of servicing the growing external debt in a period of stagnating exports reduced the degrees of freedom for effective policy making. The decline in foreign capital inflows and stagnating foreign exchange earnings seriously compromised the capacity to import and the pace of industrial growth. Thus, the steady march toward industrial growth with large foreign participation and political peace during the Kubitschek years (1956 to 1960) faltered, with pressure and threats rather than accomodation becoming the hallmark of domestic politics from 1961 to 1964 [78, 91].

Tense and strident debates focused on structural issues such as land reform, regional disparities, income distribution and economic nationalism. Foreign participation in industrial growth was no longer encouraged. Selective nationalization of foreign electric utilities occurred along with the passage of a strict profit remittance law in 1962 which discouraged the inflow of foreign capital. Growth did not necessarily mean development and the sensitive issues of structural reform and distribution replaced growthmanship as the touchstone for political debate. Economic policy became more improvised as a positive sum game degenerated into a zero sum game.

Traditional policy instruments were not particularly helpful in achieving these reform goals. Moreover, the increased resort to inflationary financing had largely nullified many of these instruments for any use whatsoever. As pointed out earlier, fiscal policy was particularly ineffective due to the antiquated and income-inelastic structure of the tax system. Exchange rate meshanisms, though restructured into less confusing categories, were nevertheless losing their ability to channel investment resources due to the declining capacity to import. The lack of monetary correction in an inflationary environment and the absence of a government bond market precluded the use of many monetary policy instruments (such as open market operations). Even the imaginative use of budgetary deficit financing had been largely exhausted once these deficits reached the remarkably high level of four to five percent of GDP. Forced savings through inflation were no longer possible. Added to this was the fact that much of government tax revenue was already earmarked by constitutional or legislative means for specific expenditures, thereby reducing the scope for discretionary planning and reallocation of public resources by policy makers.

Market forces of supply and demand were frequently ignored as price controls were placed on basic foodstuffs with negative effects on output. At the same time, subsidized rates of government services, generous minimum wage hikes and the purchase of rapidly growing coffee surpluses added to the growing budgetary deficits. In the end, the weak coalitional government of Goulart was incapable of resisting a wide spectrum of political demands and constantly resorted to easy credit policy, subsidies and deficit financing to satisfy all groups. The classic co-optation devices in Brazilian politics had gone awry as the system became overloaded.

The above description of the gradual erosion of the capacity for effective policy making in the early sixties raises the question of how much of this erosion was avoidable (i.e., due to weak or incompetant leadership) and how much was inevitable as a consequence of past patterns of economic growth. No single explanation is satisfactory; however, it is useful to close out this section with a discussion of the four competing schools of thought attempting to explain this decli ne in Brazilian economic growth. This will also help us to understand the competing attempts to explain the causes and consequences of the Brazilian economic "miracle" from the mid-sixties to the present.

The first group can be labeled the <u>import constraint school</u> and emphasizes the role of the declining capacity to import (i.e., the foreign exchange gap) as the single most important factor causing the decline [51]. This group draws upon Chenery and Strout's work, which emphasizes that a shortage of foreign exchange can and frequently does act as the limiting constraint and principal cause of a decline in industrial output (through reducing the imports of needed spare parts, capital equipment, fuels, etc) long before any local savings constraint begins to operate on the economy [19].

The early sixties was precisely the time when past indebtedness through official sources and medium run commercial suppliers credits were falling due. The nationalizations and anti-foreign investment legislation only exacerbated this situation with the outflow of capital and profits. Table 2-4 shows that almost one-third of Brazil's shrinking foreign exchange proceeds had to be applied to service foreign debts, leaving less for the imports of vital industrial inputs. At the same time, the export sector had remained locked into its traditional structure at declining rates of growth. Thus, this

group maintains there was no way to maintain respectable rates of economic growth in the face of a growing foreign exchange constraint (import constraint) caused by increasing debt obligations and stagnating exports. After 1955 the supply of imports to the economy was relatively stagnant. GNP increased by 61 percent from 1954 to 1962, while imports did not increase at all. This group argues that as imports came to be constituted exclusively of vital inputs of intermediate and capital goods, a ceiling was placed on the economy's potential output, a ceiling determined by the capacity to import [51]. Moreover, no fortutous inflow of private foreign capital was going to save Brazil this time (in the early sixties) as it had after the fall in the terms of trade in the mid-fifties. Brazilian policy makers were acting as if their import-substitution had been complete and was no longer subject to external constraints.

Critics of this position, while not denying the gravity of the poor export performance, nevertheless argue that the data on the specific imports that could constrain growth (i.e., capital equipment) actually grew by 28 percent in 1963 over their 1962 levels [16]. Balance of payments pressures may have affected growth more indirectly however, by influencing independent, exogenous stabilization decisions which in turn reduced growth because of sporadic credit constraints in 1963. Finally the rise in economic nationalism at this time suggests that a "political climate for foreign investment" hypothesis is just as relevant to explain the foreign exchange gap, as the more narrowly construed import constraint interpretation based on export performance alone.

A second school emphasizes the secular and the structural bottlenecks associated with the distorted form of ISI industrialization mentioned earlier [32,96]. This group argues that the ISI form of industrialization in Brazil had exhausted itself by the early sixties. Previous high rates of growth characteristic of the "substituting" phase of industrialization were now replaced by the more slowly growing natural internal market growth. Furthermore, the capital intensive features of Brazil's industrial technology necessarily restricted the growth of the local market due to the lack of extensive labor absorption and built-in income concentration in the process. Finally, continued backward linkage industrialization was unfeasible given the limitations of the existing market.

This school emphasized the need for structural reforms and the redistribution of income by income groups, sectors and regions to create a wider market for industrial products, hopefully based on wage-goods rather than luxury goods. The problem was considered secular (i.e., of a long run nature) and consequently couldn't be tackled through traditional fiscal and monetary policy instruments. They were not concerned with some of the more pressing demands of short run stabilization as much as with the structural constraints limiting aggregate demand.

Critics of this school would readily admit to the distortions inherent in the earlier capital-intensive, income concentrating industrialization of the fifties. However, they would argue that these distortions were hardly sufficient in and of themselves to cause the decline of the sixties. They cite the spiraling rates of price increases and growing budgetary deficits as evidence that Brazil was suffering from excess demand inflation and not Keynesian deficiencies in aggregate demand [51]. Others argue that the new

profile that would emerge from a more equal distribution of income in Brazil would not materially change the capital intensive bias or improve the labor absorption of the present industrial structure [67].

A third school or point of view on Brazil's decline emphasizes the "cyclical" rather than the secular tendencies in the Brazilian economy [30]. The decline in the early sixties, in this view was evidence of a downturn in the business cycle in which the earlier rapid rates of investment as newly installed capacity began to decline with its resultant effect on the rate of growth of output. We are dealing with a variation of an investment-output accelerator model here. After the early boom (1955 to 1961), which generated over-investment in capacity beyond what the market could absorb in the short or medium run, ISI producers and their suppliers began to cut back on investment since they had, in effect, built for the future. This "bunching effect" surrounding the large initial and indivisable capital expenditures from 1955 to 1961 caused investment demand to decline once this initial capacity had been installed. This school would argue that the recuperation of growth after 1968 largely reflects the cyclical nature of Brazilian economic growth in that demand had gradually grown to utilize existing capacity, thus sparking the drive for another investment boom at the end of the decade.

The final school can be referred to as the short run, orthodox school, since they firmly believe short run policy instruments were always capable of restoring growth to the Brazilian economy [18,88]. They argue that Brazil had no serious structural deficiencies on the demand side (i.e., insufficient aggregate demand) but only on the supply side (i.e., limited savings due to a deficient tax system and the absence of effective capital markets). The major "distortions" which disturbed this group were not

structural in nature but rather price distortions brought about by what they considered to be short-sighted and demogogic policies that fostered inflation and inefficiency. The economic troubles of the early sixties, in their view, were largely due to political instability and demogogic policies, which, in catering to populist support, scared away both foreign and domestic capital. Through both ignorance and incompetence, they felt the political leaders of the time had irresponsibly abused government finances and lost control of inflation altogether. In short, this group felt the leaders had lost their mandate to continue managing the economy and their legitimacy to rule the country. The attitude of this group deserves special attention since their philosophy largely inspired post-coup stabilization policy and their leading spokesmen became key policy makers in the succeeding "revolutionary" governments.

STABILIZATION AND THE RESTRUCTURING OF ECONOMIC POLICY, 1964 to 1967

Initial Challenge: Internal and External Deficits

Given the financial situation facing Brazil in 1964, the post-coup economic policy makers had one overriding goal, to bring inflation under control. To tackle this problem, they focused their efforts on reducing the cash deficit and correcting the balance of payments disequalibrium. At the same time, there was a strong effort to restructure the institutional framework to guarantee that the previously eroded and, in some cases, non-existent policy instruments could function more efficiently in mobilizing savings and allocating resources. The goal in these institutional reforms was to create an environment within which the price system could begin to play a positive role in generating savings and allocating resources.

The strategy to control the deficit employed means that were frequently unpopular and, in retrospect, only possible in an authoritarian regime in Brazil [92]. Among the measures taken were: (1) the creation of new taxes and a reform of the tax structure to improve the income elasticity of the system; (2) a temporary reduction in certain government expenditures; (3) an increase in the price of government services from their previously subsidized levels to user-cost levels; (4) the creation of an indexed government bond market to act as a non-inflationary form of financing public sector activity and (5) the introduction of monetary correction (indexing for inflation) for physical assets and all private and government credit instruments and (6) strict measures against any generous wage hikes after the first round of salary readjustments in late 1964.

The success of these efforts can be seen in Table 2-6 which shows the decline in the cash deficit from 4.5 percent of GDP in 1964 to only one percent by 1966. An important factor behind this effort was the successful restructuring of the tax system which, in effect, made it a much more income elastic mechanism to capture resources for the public sector. Total tax revenue as a percent of GDP rose from around 18 percent to about 27 percent, a high tax level for an underdeveloped country. Both indirect and direct taxes rose in this process, with indirect taxes rising from around 12 to 18 percent of GDP and direct taxes from five to nine percent. Coverage of the individual income tax increased from around 400,000 persons in 1964 to over 8,000,000 by 1972 [39]. Withholding at the source became much more widespread and deliquency discouraged through applying monetary correction to fiscal debts to counteract the erosion of the tax base through inflation.

TABLE 2-6
Performance of Key Macro-Economic Indicators, 1960-73

Year	Annual Rates of Growth			Private Sector Bank Loans/GDP	Cash Deficit/GDP
	Cost of Living	GDP	Money Supply		
1960	29	9.7		20.0	2.8
1961	33	10.3		19.3	3.2
1962	52	5.3		19.0	4.2
1963	80	1.5		16.2	4.2
1964	86	2.9	86	15.2	3.0
1965	45	2.7	75	15.0	1.6
1966	41	5.1	15	13.6	1.1
1967	24	4.8	42	16.0	1.7
1968	24	8.4	43	19.1	1.2
1969	22	9.0	32	20.6	0.6
1970	22.7	9.5	26	21.5	0.4
1971	20.2	11.3	32	22.7	0.3
1972	16.4	10.4	38	25.5	0.2
1973	12.6	11.4	47	28.8	0.0

Source: Official data reproduced in Edesio Fernandes Ferreira [27], Baer [15] and Conjuntura Economica, Vol. 27, No. 12 (1972) and Vol. 28, No. 8 (1974).

This latter policy was very important in raising government revenue. Business profits taxation was also tightened and restructured to eliminate negative impacts on resource allocation and growth. Fixed assets including inventories were now to be monetarily corrected for purposes of revaluation (instead of using original cost data) without any penalties. State value added taxes were also instituted (with uniform rates) in place of the former cumulative turnover tax which distorted resource allocation (among regions) and among firms (through promoting vertical integration) [39].

Other measures taken to reduce the deficit were controls on wage increases in the public sector after the initial round of favorable readjustments in late 1964. The elimination of deficitary pressures growing out of the former subsidized government services was also of considerable help. A final and extremely important instrument in budgetary control was the creation of a short and medium term government bond market. Crucial to this effort, of course, was the reform which applied indexing or monetary correction to debt instruments, savings accounts, etc. The importance of this alternative form of acquiring funds for the public sector is apparent [89]. Simonsen reports that until 1964 over 90 percent of the federal government's deficit had been financed (by inflationary means) by the Bank of Brazil (i.e. the Central Bank). After 1965, more than 50 percent of the deficit (which, of course, has been much smaller in size) has been financed through indexed or readjustable government gonds [89].

To gain credibility for this debt instrument, however, real rates of return of close to 20 percent were used as an initial incentive. This has given rise to complaints that the sale of government bonds has been unfairly draining funds from the private sector which otherwise would have benefited

private borrowers. This price was considered worth paying in order to gain another instrument (i.e., open market operations) to control public finances. Still the initial "voluntary" acceptance of these bonds was limited despite the favorable rate of return. Thus compulsory purchases were forced upon many government agencies and commercial banks were required to hold part of their reserve requirement in the form of these bonds.

The external deficit was largely resolved through rescheduling or "rolling over" the short term debt structure into a less onerous longer term repayment plan; the large inflow of official USAID funds (over $300 million a year in the mid-sixties) and the recession induced decline in the propensity to import during this period. In short, the improvement in Brazil's balance of payments at this time (1964 to 1967) depended much more on rescheduling the debt burden, foreign aid and reducing imports than it did on increasing exports. The reforms enacted to stimulate exports did not take hold until the ensuing period 1968 to 1973. Finally, the conditions tied to this American aid in terms of a constant review and interference in Brazilian economic policy matters by American officials raises serious questions about the appropriate form of foreign assistance in stabilization efforts of this type [22]. Since 1968 this aid with its associated dependence has largely disappeared as Brazil gained more autonomy and leverage over its policy options.

Institutional Reforms, 1964 to 1967

In addition to the problems associated with the internal and external deficits, the technocratic team under the direction of Roberto Campos and Otavio Bulhoes was interested in long run reforms. It is important to note

that we are talking here about "institutional" reforms within the existing structure of income, power and wealth distribution rather than "structural" reforms which would in any way seriously alter these distributions. While this is obviously a limited or constrained strategy of change, it still represented a significant alteration of certain institutional relationships with important consequences for the economy.

The government's stated policy was to "decentralize" the economy by creating the appropriate institutional environment for market forces of supply and demand to allocate resources in the economy. Economic efficiency was to be achieved through allowing the price system to function effectively, to promote market capitalism. Also there was a cosmopolitan attitude toward the relatively open participation of foreign capital and foreign trade (i.e., the integration of the Brazilian economy into the world economy) though this was to manifest itself more in the post-1967 period. This description, however, can be misleading. In some cases, the force of supply and demand were permitted to find their equilibrium levels (or at least move more closely toward these levels). The "corrective" inflation which allowed the prices of government services to rise is an example of this along with the readjustment of rent controls. However, a price control council (first CONEP and later CIP) was eventually established which clearly controlled certain prices in key industrial areas and fiscal incentives created innumerable artificial subsidies that had little to do with market prices. These incentive and price controls however were rather weak until the post 1967 period. A more accurate

description of government policy was the concern to centralize government economic policy in such a way as to guarantee consistency and to increase the power to control the economy quickly and decisively.

The key instruments devised were those associated with fiscal and monetary policy. The fiscal instruments devised were essentially tax credits which were employed to reallocate resources into exports, the stock and capital markets, the development of the Northeast and the Amazon, etc. Such a device would have been inoperative in the pre-1964 environment since the tax system itself was antiquated. All the various reforms altering income and business tax structures and state indirect tax structures were necessary along with the wider coverage, more effective collection, etc. before fiscal devices could become meaningful. Once established, however, they become a quick, efficient and automatic device to reallocate resources to service the broader context of economic policy goals. Another important fiscal incentive was the exemption of capital gains from taxation. This unusually favored treatment for capital along with accelerated depreciation was designed to stimulate investment and encourage the expansion of the capital markets.

The restructuring of inter-governmental fiscal relations was another device to, in effect, centralize fiscal policy in the hands of the federal government. Export tax power was taken away from the states and a uniform level of state value added taxation was ordered and controlled by the Ministry of Finance. In principle the state value added tax (ICM) was

expected to improve resource allocation over that generated by the former "cascading" sales tax (IVC). At the same time this efficiency criteria centralized the control of state fiscal policy. In short, state fiscal autonomy was seriously curtailed in the interest of promoting centralized fiscal control and policy consistency serving national goals [74, 76].

The real significance of this restructuring of fiscal relations between the states and the federal government did not emerge until the early seventies when the Northeastern states thought that the federally enforced uniform value added rates across all states (around 15 percent) was penalizing them in terms of lost revenue compared to that which they had gained with the former gross sales tax transactions. They argued that most of the value added for all manufactured goods occured in the South, leaving little margin left for the destination areas such as the Northeastern states to exploit in their value added system. In effect, the federal government had chosen a "dependency strategy" for developing the Northeast in which revenue sharing, regional development programs and tax credit schemes were designed to transfer resources from the Center-South to the poorer states. They did not permit any significant fiscal autonomy for these states to derive their own resources separately [74].

Another major area of institutional reform was in the area of monetary policy. Here a wide battery of measures created the most extensive restructuring of policy making instruments to date. The goal

was to achieve more efficient money and capital markets in both the private and public sectors. The means to achieve this goal centered around decree legislation to promote a wide range of institutional reforms, the creation of new trust funds and a centralized coordinating council to insure consistent policy execution. The single most important device to make these markets function was the indexing or monetary correction of credit instruments for inflation. Once this was established, it became possible to escape from the era of negative interest rates, and acquire additional instruments for government policy making such as open market operations through a public bond market and legislation and guidelines to stimulate the private money and capital markets [68].

The institutional reforms centered around the separate creation of a central bank; establishment of a national monetary council to centralize decision making on monetary policy; legislation to modernize the stock market with appropriate protection for the security buying public and minority stockholders; measures permitting commercial banks to accept deposits and make loans with monetary correction, and finally, legislation facilitating the functioning of financial intermediaries and savings institutions dealing with short to medium term consumer credit and long term savings (again, with monetary correction). The tax credit device mentioned earlier was harnessed to these reforms by permitting up to 12 percent of the personal income tax due for individual taxpayers to be applied to the purchase of mutual funds. The principle of earmarking taxes was now expanded outside of the public sector in the sense that the

government was willing to forego tax revenue (and expenditures) if it were applied in a fashion to promote the private stock market or serve other ends.

Other significant alterations in the monetary area concern the creation, growth and control of large government trust funds. These became more important levers of economic policy power after 1967. The newly structured pension fund (FGTS) was directly tied in to the creation of a National Housing Bank which applied these funds presumably for low income housing projects but, in effect, more for middle income groups; thereby guaranteeing a promising rate of return for the capital invested through the amortization and interest payments of low risk clients. In addition the growing FGTS fund was used to purchase government securities and thus become a big factor in the non-inflationary financing of government expenditures. Special funds were created for the stimulus of small and medium sized business, the machinery sector (FINAME) and the importation and development of technology (FUNTEC). Finally, in the late sixties, a complementary public sector pension fund (PASEP)and a private sector fund (PIS) were established through compulsory employer contributions (and tax revenues for PASEP) for the later benefits of employees. The growing proceeds of PIS are currently being invested in the private stock and public bond markets thus playing the role of a large institutional investor insuring long term credit, support for security underwritings and a secondary market for mutual funds [61].

The final element drawing all these threads together in the monetary field was the newly created National Monetary Council. Instead of having foreign exchange, central bank, trust fund, tax, treasury and credit policies

scattered through separate institutional channels (as occurred prior to 1964), all these policy instruments were brought together under the jurisdiction of the National Monetary Council headed by the Minister of Finance. For the first time, the entire arsenal of fiscal and monetary policy instruments could be blended into a consistent attack to achieve desired targets of economic policy.

The success of this centralized policy control became more apparent after 1967 in the second military government. Tax credits for exports, regional growth, and the capital markets; changing tax rates for business and individual income taxes; government open market operations, changing reserve ratios and foreign exchange regulation; measures for controlling consumer and business credit, and, finally, the manipulation, transfer and portfolio management in the capital markets of large government trust funds and development bank funds gave tremendous leverage to government policy makers to alter relative prices in the economy and decisively affect the market forces of supply and demand [60, 72]. In addition, the more centralized control of various government autarchies, traditional budgetary allocations (based on a larger tax base) and price and tariff control councils gave additional power to the authorities.

It was precisely this newly acquired capacity for centralized and flexible control of policy action that set apart the post-1964 regimes from those of earlier periods. This consolidation of economic policy power was never available for the economic managers of earlier regimes who frequently had to haggle and bargain with a variety of semi-autonomous agencies to gain even a semblance of flexibility and control.

Stabilization Performance, 1964 to 1967: Frustrations and Enigmas

In view of the foregoing, it is surprising, at first glance, to note the somewhat less than fully successful results of economic stabilization policy during this three year period. First, it is clear that inflation was cut down from roughly 90 percent in 1964 to 40 percent by early 1967 when the successor revolutionary government entered (Table 2-6). However, there were expectations that this could have been cut much further, given the control and flexibility gained by the policy makers. Secondly, real growth of the economy only rose from three to five percent during this period (Table 2-6). Third, the cost in socio-economic terms was considerable. The strict control on wage increases (the only sector not subject to monetary correction for inflation) is evident. The decline in real minimum wages from 1964 to 1967 reached 20 to 25 percent (Table 2-7). Thus, the question remains--why didn't this ostensibly forceful stabilization policy achieve more impressive results?

First the regime deliberately opted for a gradual rather than a "shock" treatment to reduce inflation so that the cost in terms of economic growth would be less severe. This necessarily spread out the time needed to reduce the rate of inflation, especially throughout 1964 and 1965. However, the abrupt decline of the money supply in 1966 (Table 2-6) came very close to being a "shock" treatment, yet the reduction in the price level was considerably less.

Several answers come to mind here. Clearly price expectations built upon past inflationary eras were too well built into the pricing habits of producers to expect them to change quickly. The long lags of a year of more between a decline in money supply and a corresponding decline in prices

TABLE 2-7

Selected Data on Real Minimum Wages in Brazil 1958-1973

A. Behavior of Real Minimum Wages in Sao Paulo and Rio de Janeiro (in 1953 Prices) 1958-1969. (Monthly Wages in CR$)

Year	Sao Paulo	Rio de Janeiro
1958	1.56	1.56
1959	1.17	1.72
1960	1.54	1.58
1961	1.71	1.81
1962	1.43	1.52
1963	1.31	1.39
1964	1.33	1.38
1965	1.32	1.34
1966	1.14	1.20
1967	1.12	1.17
1968	1.09	1.16
1969	1.13	1.13

Source: Baer [11, p. 136]

B. Real Minimum Wage (Cruzeiros per Month) 1965-1973.

	Guanabara		Sao Paulo	
Year	Current Prices	1965 Prices	Current Prices	1965 Prices
1965	62.00	62.00	62.00	62.00
1966	84.00	52.03	84.00	50.91
1968	129.60	52.88	129.60	50.04
1970	187.20	50.84	187.20	50.20
1973	312.00	55.34	312.00	51.83

Source: Baer [15, p. 45]

are lengthened even more in an environment bred on a history of inflationary psychology. Consequently, prices became sticky downwards as monetary demand fell off. This was the explanation offered by the stabilization authorities along with the argument that the corrective inflation policy (rises in the prices of government services) needed to correct market distortions, was an unavoidable temporary stimulant for continuing inflationary pressures [60]. In addition one could argue that the credit restraints which generated a rise in real interest rates probably increased the velocity of money, thus making it difficult for prices to decline.

Second, the earlier discussion on the creation of a large arsenal of policy instruemnts available to combat inflation and allocate resources for growth is exaggerated for the period 1964 to 1966. Some reforms were eventually instituted such as certain fiscal reforms, however, their effective implementation was only beginning to be felt at the end of this period. Other reforms, particularly those associated with the strong centralization of monetary accounts, trust funds and monetary policy instruments were not fully undertaken until the post-1967 period. Indeed a useful distinction between the two post revolutionary policy periods is the emphasis on fiscal measures to control the budget in the first period (i.e., reform of tax structure and policy, increasing revenue from government service and public bond sales, and controlling government expenditures), while in the second period there was more concern to focus on the sophisticated management of monetary policy (especially the centralized coordination of new funds and accounts, etc.). In short, the increase in the degrees of freedom for flexible and more fully centralized decision making became more apparent after 1967.

Third, it would appear there were some structural rigidities in the Brazilian economy making it unlikely that prices would decline in any proportional fashion to the decline in aggregate demand. During 1966 strict credit measures restricted the increase in the money supply to a mere 15 percent (compared to 75 percent the previous year), yet the rate of inflation only declined from 55 to about 40 percent, a surprising result if excess demand was the major causal factor behind the inflation and competitive forces were widespread in the structure of the economy. Fishlow argues that the manufacturing sector was far from perfectly competitive. Oligopolistic privileges were granted to a limited number of firms in many key sectors in the ISI process. This generated cost-plus, mark-up pricing behavior which meant that prices would tend to be sticky in a downward direction (in the short run). Output, inventories and employment became the adjustable variables in the face of a decline in demand, not prices, as general monetary instruments proved unsatisfactory in dealing with these structural features of the Brazilian economy. What we have here is a Phillips curve phenomenon in which structural deficiencies make it next to impossible to achieve significant price declines in the short run [30]. A related structural rigidity was pointed out by Morley who argues that severe credit constraints during this period could and very probably did force private sector producers to raise prices on their products to gain more profits to finance their working capital needs [65].

A fourth and final explanation for the lack of significant price declines refers to the lack of a consistent and well informed monetary policy during these crucial stabilization years. The annual averages for increases in money supply varied widely. (Table 2-6) It would appear the government over-

emphasized the exclusive role of the cash deficit in measuring the money supply and overlooked the impact of financing the coffee account and absorbing foreign exchange during the recession induced balance of payments surplus in 1965. A more sophisticated and coordinated policy mix was called for during these years to insure that some policies were not counteracting the impact of others in an unexpected manner [70, 71].

Whatever the reason, it is clear that this period experienced at best only painful and halting progress toward stable rates of inflation and little progress toward reactivating economic growth. Certain important institutional reforms had been initiated; however, the full fruits of this process of change would only be reaped by the post-1967 revolutionary government. An important factor in this process was the determination of the first president, Castello Banco, to pass over the reins of government to a successor administration. This established an important precedent for the regular transfer of power in an authoritarian context at regularly prescribed intervals (the only current authoritarian regime to institutionalize the process outside of Mexico). It created an opportunity for a successor administration, with a different scale of priorities, to initiate important changes in economic policy to promote economic growth. These changes would not have come as quickly if the first regime had remained in power. It is an open question whether Brazil might not have become locked into a stop-go stagflation characteristic of Argentina if there had not been a change of administration.

THE ECONOMIC MIRACLE: PERFORMANCE AND POLICY, 1968 to 1974

Monetary Policy and Economic Expansion

The major policy orientation of the second revolutionary government

was to reactivate economic growth and the period from mid-1967 to early 1974 constitutes the high point of the Brazilian revolutionary regimes' economic "miracle." In contrast to the stabilization period, these years were marked by the highest sustained growth performance ever recorded in Brazil's modern economic history. For six years from 1968 to 1973 the average annual growth of GDP was close to ten percent. In 1971 it reached 11.3 percent (Table 2-6). At the same time, the annual rate of inflation declined steadily from around 40 percent in 1966/67 to 18 to 20 percent by 1973 (Table 2-6). Heterodox monetary policy characterizes this period as the earlier stabilization orthodoxies were abandoned. The fight against inflation received only second priority (except for the last year 1973/74), while the recuperation of growth was the key item on the agenda. A 15 to 20 percent rate of inflation was considered "tolerable." Instead of trying to eliminate inflation, policies were devised to learn how to live with it at minimum cost and maximum growth through the use of indexed credit instruments discussed earlier [30].

Another important change in the conception of the development problem at this time by the new economic managers under Delfim Neto was to consider that cost-inflation was a far more pressing problem area than excess demand-inflation. This stands in sharp contrast to the position held by the earlier economic team, which was headed by Roberto Campos and Otavio Bulhoes. It was believed that there was considerable excess capacity in early 1967, along with an increasing burden of high real rates of interest for business growing out of tight money and credit policy. Thus an ease on credit restraints would result in economic expansion and not a rise in prices. Consequently, there was a considerable increase in the money supply through-

out the rest of 1967 and 1968 (42 and 43 percent respectively) in contrast to the 15 percent increase permitted by the previous regime in 1966. Also, instead of constraining credit to business, bank loans to the private sector were allowed to expand from 13 to over 21 percent of GDP from 1967 to 1970 (Table 2-6). Despite these actions, prices continued to decline with the cost of living falling from 40 percent in 1966 to a lower plateau of 24 percent throughout the period 1967/69. Economic growth, at the same time, shot up to nine percent by 1968 and remained high or higher throughout the balance of the period.

The cash deficit practically disappeared during this period as an important factor causing an expansion in the money supply. From 1967 onward bank loans to the private sector and foreign capital inflows (especially after 1970) became the major factors promoting an increase in the money supply. Thanks to the creation of an effective bond market, the monetary authorities were better able to control the expansionary effects of these activities through the liberal use of open market operations. Thus, inflation remained under control at the same time growth was occurring [70].

This unusual juxtaposition of policy and performance clearly distinguishes the different conceptualizations of the development problem in Brazil in the pre and post-1967 revolutionary regimes. Whereas one could be characterized as operating under an excess-demand stabilization psychology which emphasized the more simplistic and orthodox credit and wage constraint policies, the other operated with a cost-push growth psychology in which the cost pressures emanated in part from the tight money policies instituted by the earlier revolutionary regime. The more desisive and imaginative use of the interministerial price control council to control

the pricing behavior of the key oligopolistic industrial sectors offers additional evidence that the second revolutionary economic team was well aware of important structural constraints in the Brazilian economy. Specific economic policies and controls had to be created to deal with these problem areas rather than merely resorting to the more generalized monetary restraint used by the earlier government.

In addition to the overriding goal of economic expansion and the regime's imaginative use of monetary policy to achieve this objective, the post-1967 policy performance of the Brazilian government stands out in four broad areas: (1) the growth of foreign trade (both exports and imports (2) the growing role of non-direct, portfolio foreign debt; (3) the expansion of capital markets for medium term financing and (4) the consolidation of the structural and sectoral role of government economic activity and the centralization of economic policy instruments to channel savings and investment in the economy.

The Opening Up of the Economy

The export performance during this period probably ranks as the single most impressive achievement of the government, laying to permanent rest the earlier ECLA inspired export pessimism characteristic of all the regimes prior to 1964. In contrast to those earlier periods when exports were consciously and unconsciously discriminated against, the entire arsenal of policy weapons were coordinated to make exports not only a viable but indeed a highly profitable activity. Many exporters enjoyed either complete or partial exemptions from the federal value added tax (IPI), the state value added tax (ICM) and income taxes. In addition, drawbacks or rebates were made for all duties paid on all imported inputs used for the

manufacture of exported goods. Finally, a crawling peg or mini devaluation of one to two percent per month was instituted as an additional device to keep the less-subsidized exports competitive. Thus, fiscal incentives, drawbacks and exchange rate policies were all directed to the same end, to increase exports.

The results of this policy are clear. Exports, which averaged from 1.4 to 1.6 billion dollars a year from 1964 through 1967, rose to 2.3 billion dollars in 1969, 2.8 billion in 1971, 3.9 billion in 1972 and 6.2 billion dollars in 1973 (Table 2-8). While exports remained more or less stagnant from the mid-fifties to the mid-sixties, they increased almost fourfold from 1967 to 1973. Manufactured goods increased from three to almost 30 percent of total exports.

Imports have also kept pace with this increasing capacity to import. By the early seventies it was apparent that the income elasticity of imports was quite high (especially for capital and intermediate goods) and that ten percent rates of growth of GNP had to be serviced by growing imports. Whereas the income elasticity of imports vis a vis the growth of GDP from 1953 to 1967 was .29, it grew to 2.42 from 1967 to 1972. Over 85 percent of these imports were capital goods or intermediate goods needed to maintain the ten percent levels of economic growth since the capacity of the local capital goods sector was insufficient to meet this demand [104]. This would suggest that the liberal policy of permitting imports to accompany the growth of exports has led to import substitution <u>in reverse</u> since the import/GDP ratio has risen during this period [30]. The percentage of imports over total supply in most sectors has risen in sharp contrast to the behavior prior to 1964.

TABLE 2-8
Export Data and Information on Foreign Debt, 1967-1973 ($000,000)

Exports	Exports % Increase	Foreign Currency Loans	Suppliers Credits	Total Debt	Reserves
1,654	-5.0	1.083	2,673	3,344	199
1,881	13.7	1,083	2,737	3,820	257
2,311	22.9	1,605	2,798	4,403	656
2,739	18.5	2,285	3,011	5,296	1,186
2,904	6.0	2,193	3,429	6,622	1,723
3,987	37.4	5,588	3,933	9,521	4,183
6,198	50.0	7,858	5,024	12,882	6,417

: Von Doellinger[104],Wells[105]and Banco Central do Brasil Boletin de Fevereiro 1974.

Thus, the current pattern of growth can be called an export-led "opening up" of the economy in comparison to the ISI stage in which local production substituted for imports and lowered the import/GNP ratio prior to 1964. Questions arise with respect to whether this growth of imports can be maintained, and what effect a decline in the import capacity might have on overall growth now that imported inputs of capital and intermediate goods are an important ingredient in the ten percent growth rate economy.

Recent research by Jose Savasini and associates at the Instituto de Pesquisas Economicas has proven revealing in highlighting other aspects of this export promotion strategy [82]. The highest rates of export subsidization were not directed toward those manufacturing sectors which enjoyed the best comparative advantage (in terms of the domestic resource cost per dollar earned in exports). Nor were they associated with those sectors that contributed the most to the recent growth of manufactured exports. Finally, the more capital intensive and higher skilled sectors received higher subsidies than the more labor intensive sectors even though the latter accounted for a considerably larger proportion of total manufactured exports. In summary, while the growth of manufactured exports has been impressive, there is some question about the wisdom of persisting in a policy of subsidies emphasizing those particular industrial products and sectors that enjoy the least comparative advantage and have, to date, only made modest contributions to the current drive in manufactured exports. A social cost is being incurred in terms of domestic resources that could be allocated more efficiently elsewhere, unless one strongly believes in the dynamic or longer run comparative advantage of these sectors [82].

Capital Inflows and the Foreign Debt

Another interesting feature growing out of this pattern of export-led growth has been the increase of capital inflows into Brazil. New foreign direct investment remained relatively unimportant from the decline in the early 1960's until the early 70's when it reached several hundred million dollars a year. However, portfolio investment from the Euro-dollar market has proven to be the major source of capital inflows, reaching 3.5 billion dollars in 1973 alone. It has been these inflows that have offset the growing trade deficit on the current account and have created the balance of payments surplus for Brazil during 1971/73.

Several questions arise concerning these inflows. It is true they are a reflection of the attractiveness of the high positive interest rates that characterized the post 1967 period. It does show international confidence in the capacity of the Brazilian economy to meet future repayments. Nevertheless, it also reflects continuing imperfections in the internal private capital markets. Brazilian banks and borrowers have been resorting to external loans from the growing supply of Euro-dollars rather than drawing from local sources which charge higher interest rates. Also this hot money could flow out as fast as it comes in thereby creating considerable instability in the capital accounts. The government recognized this danger and demanded a five year period (later a three year period) before repayments could be made abroad and a 25 percent compulsory deposit in the centrol bank to control for the inflationary impact on the money supply. Suzigan et al. estimate that this form of portfolio capital from abroad represented no more than 15 percent of total financing for the industrial sector in 1967. By 1970 this had risen to approximately 30 percent [93]. It is true that most

of this financing goes into working capital balances. Still, this liberates retained earnings to be used for investment purposes.

It is impressive to note that the monetary authorities have been able to absorb this inflow without any noticeable rise in inflationary pressures through an increase in the money supply, This has been possible through the liberal use of open market sales of government bonds which draw funds out of the economy at a sufficient rate to contain the inflationary pressures introduced by the inflow of Euro-dollar loans. This anti-inflationary tactic would have been impossible in the pre-1964 years. Impressive as this is, it is nevertheless clear that this constant sterilization of incoming funds could more safely be handled through the improvement of local capital markets to begin to service this demand internally and increasing taxes to capture revenues which could add to government funds to complement the local supply of resources for investment.

The government's overriding concern has been to hold down the rate of interest since this reduces one of the important inflationary cost pressures on business sectors. A large supply of external funding at cheaper interest rates than those available on the local capital markets was a convenient way to accomplish this goal as long as the dollar earning capacity of Brazilian exports maintained its growth sufficiently to convince foreign portfolio investors that Brazil could maintain its capacity for future debt servicing. Nevertheless, the problems discussed above (along with the inherent bias of the financing in favor of multi-national corporations as against local firms in Brazil) are becoming more apparent and will have to be dealt with in the future.

As a result of this capital inflow, the total foreign debt has increased significantly. By early 1974 it was close to 14 billion dollars, roughly equal to two and one-half years exports (Table 2-8). In combination with foreign reserve holdings of five to six billion dollars, this is an acceptable ratio. However the annual interest paid to foreign creditors on this debt averages around seven to eight percent, while the average return earned on Brazil's foreign currency reserves averages only three to four percent. Thus there is a net interest drain on the economy which should be added to any estimate of the social costs of holding such a large foreign debt.

Money and Capital Market Growth

The policies of the post-1967 regime stand out in this area both for the changes brought about and the controversies generated. The changes and controversies lie in four major areas: (1) the creation and management of a government short term bill market (Letras de Tesouro National--LTN) and a long term bond market (Obrigacoes Reajustaveis do Tesouro Nacional--ORTN); (2) the priority to lower real rates of interest; (3) the stimulus for new financial intermediaries in the private sector and (4) the creation and management of new long term government trust funds.

The success of the government's bond market has already been discussed at some length in previous sections. The present section merely reviews succinctly the leading features of this policy. First, the introduction of monetary correction or indexing permitted longer term government bonds to be sold successfully in the capital markets. This meant that the government deficit could be financed by non-inflationary sources and, in the pro-

cess, an additional instrument of monetary policy acquired (i.e., open market sales and purchases of short and long term government bonds) to control the supply of money. The growing role of this instrument can be seen in noting that in 1964 the total national debt from the sale of bonds was negligible but by 1971 it had reached 6.7 percent of GDP.

Yet, it is important to note that over half of the purchasers of the ORTN paper were public sector institutions who had little choice but to buy the bonds and commercial banks who were induced to hold a portion of their legal reserves in the form of these bonds. More successful was the voluntary adoption of short term bills (LTN's) by commercial banks. Since these were highly liquid (30 to 180 day notes) and paid interest, they represented a more profitable way to hold liquid funds instead of using idle cash balances.

The most frequent complaint directed against the government's initiatives to promote the bond market have been the cost (real interest paid out) to gain the use of an additional policy instrument. Changes in legal reserve requirements could accomplish the same end of controlling the money supply at no cost in interest payments. However, the government feels that this instrument is too crude and invariably upsets the money markets, particularly those banks working with narrow voluntary reserve margins. Open market operations, though costly in terms of creating a "debt" which demands interest payments, nevertheless is a more subtle, quicker and less upsetting device, subject to continual "fine tuning" to changing economic conditions.

The second area of policy concern to the post-1967 government was the need to increase the efficiency of the local money market and lower interest rates. The authorities were convinced that an important structural defect of the Brazilian economy was the inadequate and inefficient money and

capital markets. Thus, the main issue in combating inflation after 1967 was no longer the excess demand introduced into the system by deficit-financing (that had been taken care of by the 1964-67 administration), but rather the cost-push inflation caused by high real rates of interest to industrialists and businessmen. Ironically, the regime, made up of monetarists, accepted a structural argument as an important causal factor behind inflation, though they located this cause in the "monetary sphere" rather than in the agricultural or foreign trade areas as the traditional structuralists had done earlier.

Basically, laws, subsidies and incentives have been employed since 1967 in the hope that these would increase savings and lower costs and so raise the efficiency of financial intermediaries that they would lower the real rates of interest they charged to business and industry. Laws prohibited the continual proliferation of bank branches and stimulated bank mergers on the theory that a smaller number of larger banks could gain such economies of scale in their operating costs that their interest charges would fall. In addition, commercial banks were subsidized, in effect, through allowing part of their legal reserves to be held in interest earning assets (i.e., long term bonds--ORTN). It has been estimated that this increased the total real earnings of the banks by eight percent a year [46].

Finance and investment banks have similarly gained higher profits in recent years through being the intermediaries financing extremely high rates of interest charged to consumers (for finance companies) and earning commissions on marketing government bonds, and foreign portfolio capital inflows (for investment companies). Thus, these new financial intermediaries

(the third area of interest for the government) helped to increase the income of financial intermediaries from four to seven percent of GDP from the early sixties to 1971 [46]. Financial intermediaries have been earning rates of reported profits considerably higher than other sectors of the economy and financial and investment companies a higher rate than commercial banks.

Available evidence suggests that there has been a marked increase in the amount of saving channeled through these financial intermediaries. Total savings through these intermediaries has increased from one to seven percent of GNP from 1962 to 1972 while savings through the direct issue of financial instruments absorbed by the public rose from 3.5 to 13.3 percent of GDP in the same time period (Table 2-9). Thus, financial market reforms have substantially allowed voluntary savings to replace earlier inflationary forms of financing.

During this whole process, however, real rates of interest have not fallen appreciably. What has happened is that the decline in the lower nominal rates of interest, required by the government in order to receive the various subsidies and commissions, is offset by an increase in the average balances required by the banks to be retained in their deposit accounts by borrowers at this lower rate of nominal interest. This, in effect, raises the rate of real interest on the account borrowed [46]. Attempts to improve the efficiency of the banking sector have largely reflected themselves in higher profits for this sector rather than in lower interest for their borrowers. It would appear that the convenient source of Euro-dollars available from 1969 onward was increasingly encouraged by the government and resorted to by local Brazilian businesses as the most

TABLE 2-9

Performance of Financial Savings, 1962-1972

Year	Financial Savings Through Intermediaries as a % of GDP	Direct Issues of Financial Instruments to Public as a % of GDP
1962	0.9	3.5
1963	0.8	3.9
1964	1.2	3.4
1965	1.7	3.8
1966	0.7	3.5
1967	2.6	6.2
1968	3.9	8.8
1969	2.6	7.3
1970	4.2	9.4
1971	7.3	14.0
1972	7.0	13.3

Source: Ness [68, p. 466].

convenient way to assure lower interest rates for borrowers in the Brazilian economy. The market was, in effect, split with the authorities tolerating high rates of interest on the local market as an incentive to increase local savings but, at the same time, encouraging Brazilian firms to take advantage of the lower cost of credit by borrowing abroad.

The fourth area of policy interest for the government was the expansion or creation of large trust funds. These include the Unemployment Insurance Fund (FGTS), the Social Integration or Pension Fund for private employees (PIS) and public employees (PASEP), and specialized accounts of the National Development Bank such as FINAME, and other agencies. By 1971, 6.3 billion curzeiros had accumulated in the FGTS. These funds will clearly become large and dominating influences on the capital markets in Brazil [61]. The FGTS fund is used to allocate resources into long term mortgage markets that the local private market ingores, and the PIS and PASEP funds act as large institutional investors in the stock and bond markets. The latter two funds introduce an anti-speculative instrument to offset unstable stock market behavior.

The authorities hope that PIS and PASEP funds can grow sufficiently in size to affect the supply of loanable funds and lower the rates of interest in the capital markets. Thus, the line of attack on the interest rate issue, in addition to subsidies and incentives to private financial intermediaries, now includes large public trust funds whose sheer size can hopefully increase the supply of savings sufficiently to lower interest rates and, in the process, allocate resources to neglected sectors in need of long term investment funds.

The cost of this strategy should also be studied in detail to determine to what extent the compulsory contributions to these funds might not be

worsening the distribution of income and compromising state government finances through an equivalent reduction in the revenue gained from state value added taxes [61]. One thing is clear, however; it has given the government more power to influence the behavior of the capital markets and resource allocation.

The Role of the Government in the Economy, Income Inequality and Dependency

The final areas to be discussed in this section are the increasing role of the government in the economy, income inequality and the changing nature of economic dependency in Brazil. Earlier sections have highlighted the way in which the post-1964 governments have centralized decision making on economic matters, thus gaining more consistent control over income distribution and resource allocation than pre-1964 regimes. This was evident in the broad range of fiscal and monetary policies along with action by tariff and price control councils, coordinated public trust fund management and foreign exchange policy.

At the same time government economic activity has grown in real terms. Baer underscores the increased role of the government in the capital formation of the economy [13]. Capital formation has increased from 3.9 to 5.8 percent of GNP while private sector capital formation has declined from 12.7 to 10.8 percent from the early sixties to the late sixties. If state and federal enterprises are added to the traditional accounting of government capital formation, their total public sector capital formation represented 60 percent of total investment in the economy in 1969 [14]. Also total government expenditures had reached 32.2 percent of GNP by 1969, a high ratio by international standards. Government banks in 1972 accounted for close to 55 percent of all deposits and 60 percent of all loans to the private

sector [14]. Public enterprises dominate in many key sectors such as metallurgy, mining, oil, electric power, transport, etc. Seventeen of the top twenty-five firms in the economy (in terms of assets) were government enterprises [14]. Thus, by any measure, the state plays an even more dominant role in the economy in the early 1970's, than it did in the ISI period in the fifties, whether in terms of policy instruments or directly productive activity.

From the foregoing one might think that this increased redistribution of power and economic resources from the private to the public sector in Brazil would be associated with a narrowing of economic inequality. In sum the taxing powers of the state (along with its pre-emptive role in many productive sectors) would drain off part or all of the surplus from higher property and salary incomes in the private sector and use these resources to subsidize socially oriented activities, increase the public bureaucracy and public enterprises. In the process one would expect a "leveling" effect on income distribution when compared to the earlier less state-dominated economy. While this is a workable hypothesis for the role of government and economic inequality in developed countries, such a pattern is not borne out in Brazil.

Income inequality has increased from the fifties to the present at the same time that the role of the public sector has grown to dominant proportions. Moreover, this increasing inequality appears to have occurred with varying degrees of intensity under the ISI strategies of the fifties as well as outward looking export strategies of the late sixties, under competitive party politics as well as under authoritarian regimes; in boom periods as well as in stabilization periods. In general, it appears to be an inevitable part of all the growth strategies and political experiments followed in the postwar period.

Nevertheless, some important distinctions can be made. The increasing inequalities in the fifties grew out of the abrupt structural change associated with the introduction of foreign capital intensive technology in the industrial sector. Labor absorption per unit of capital was limited in these modern sector activities and regional, sectoral and income inequalities widened because of the growth strategies followed. This is the classic pattern associated with ISI growth with strong foreign capital participation. This pattern was mitigated in part by the favorable minimum wage policies followed by the Kubitcheck government, however, as da Mata and Bacha show, the growing hierarchial division of labor within industry was also growing during this period.

In the mid-sixties, increasing income inequality was due to the anti-inflationary stabilization programs (1964/67). There were no technological or structural features associated with this phenomenon. It was simply a result of forcing the working classes (particularly the unskilled component) to bear the brunt of austerity [30] a common feature of most stabilization programs in authoritarian regimes.

By the late sixties and early seventies, the income concentrating features of the stabilization measures had eased and "growth-induced" patterns of inequality re-emerged. Two factors stand out here: (1) the skill-intensive features of rapid economic growth which increase the demand for highly educated personnel greater than their supply, thus creating a wide salary spread between workers and administrators; and (2) the vast array of fiscal incentives, subsidized credit and other benefits granted to higher income groups and holders of capital. The first factor emphasizes the widening wage differentials growing out of a scarcity of human capital.

The second factor underscores the fact that fiscal and other incentives promoting capital investment in industrial exports, capital markets, agriculture, etc. created large increases in productivity and profits that did not accrue to labor but to capital and owners of assets. Again, it is necessary to point out that the second explanation, emphasizing accrued increases in productivity to the non-labor components in the production process, were not only due to technological change. They were also due to explicit policies trying to build capitalist institutions through incentives, tax credits or exemptions to the private sector and the institutions of savings and investment in the money and capital markets.

Table 2-10 highlights the most important features of the worsening distribution of income in the 1960's. Panel A shows that the top five percent of the population increased their participation of total income from 27 to 34 percent from 1960 to 1970 while the lower 80 percent experienced a sharp decline from 47 to 40 percent. In panel B the rising Gini indexes show that there was increased income concentration within all six major regions of the country, but that this was more pronounced in the developed regions of Sao Paulo and the South. The degree of inequality (or income concentration) within the agricultural sector remained constant from 1960 to 1970, however this sector experienced a marked relative decline in income per worker vis-a-vis the non-agricultural sector. At the same time there was a greater degree of income concentration within the urban-industrial sector. Finally panel D points out how university graduates gained in relative income per worker at the expense of all other education levels.

Thus the role of government in a developing society at Brazil's stage of development can be an income concentrating rather than income redistributing role. This becomes particularly evident in an authoritarian state that believes strongly in significant foreign capital participation, local

TABLE 2-10

Selected Data on Income Distribution in Brazil 1960-1970

A. Percent of Total Income by Selected Income Classes

	1960	1970	% Change
Top 1%	9.98	10.72	+7.41
Top 5%	26.66	33.66	+26.25
Top 10%	37.64	44.67	+18.65
Top 20%	52.35	59.88	+14.38
Top 80%	47.65	40.12	-18.75

Source: Langone, C.G. [49, pp. 290-309].

B. Gini Indices of Intra-Regional Inequality 1960-1970

Region	Gini Index 1960	Gini Index 1970	% Change
Amaz+Central W.	.44	.48	+10.1
Northeast	.49	.55	+13.7
Minas (+ES)	.52	.55	+4.1
South	.40	.50	+23.4
Sao Paulo	.44	.54	+24.4
Rio-Guanabara	.45	.53	+16.7
Brazil	.50	.57	+13.7

Source: Langone [49, p. 172].

C. Gini Measures of Intra-Sectoral Inequality and Relative Income Measures 1960-1970

Sector	Gini Index 1960	Gini Index 1970	Gini Index % Change	Relative Income Per Worker 1960	Relative Income Per Worker 1970	Relative Income Per Worker % Change
Primary	.43	.44	+2.9	.59	.49	-16.7
Secondary	.42	.50	+20.0	1.24	1.27	+2.4
Tertiary	.50	.57	+13.8	1.36	1.37	+0.0

a/ Relative income measures the sectoral income divided by total income per worker

Source: Same as panel A.

D. Gini and Relative Income Measures of Inequality by Educational Level 1960-1970

	Gini Index 1960	Gini Index 1970	Gini Index % Change	Relative Income Per Worker 1960	Relative Income Per Worker 1970	Relative Income Per Worker % Change
Illiterate	.42	.39	-6.6	.54	.40	-26.7
Primary	.42	.46	+10.3	1.03	.85	-17.3
Jr. High	.44	.51	+17.0	2.15	1.71	-20.4
Sr. High	.42	.50	+17.9	2.61	2.44	-6.7
University	.46	.46	0	5.48	6.05	+10.4

Source: Langone, C.G. [49, p. 86].

capitalistic development, modern technology and rapid industrial growth. This phenomenon has become widely debated in Brazil and raises important questions about the degree to which sectoral, regional and class income inequalities can be reduced without jeopardizing the present high rates of growth.

Another related debate is concerned with the major causal factors of increased income inequality of the sixties. If the major causal factor was the severe wage constraint practiced during the stabilization period of the sixties, then presumably some form of careful, compensatory wage hikes (greater than current productivity increases) might be in order to restore the real income levels of the working class, since they paid an unusually high price in permitting the authorities to control inflation. If, however, the major cause of the growing inequalities is due to the special incentives offered to capital and asset holders, then the question arises how crucial these are for the present growth performance. Can they be removed or altered in such a way to subsidize labor instead of capital in the industrial sector? Can specific packages of technology be developed for the agricultural sector that hits different target groups and thus benefit small farmers? How effective have these incentives been in promoting a domestic capital market? If they have been ineffective, shouldn't the major role of financial capital formation and management of savings be shifted more to the major trust funds of the public sector where social benefit-cost strategies would be more likely and appropriate in the management of their portfolios?

Finally, if the major cause of inequality is due to the lack of a sufficient supply of human capital to narrow wage and salary differentials, a different educational policy is called for. In the past decade, higher

education received the lion's share of the limited resources devoted to education. Primary and secondary education experienced much less support and considerably smaller enrollment increases. Thus, any policy attempting to correct for human capital deficiencies should promote a radical shift in past priorities and emphasize a greater distribution to education as a whole and more to the lower forms of education. However, economic inequality is due to unequal wealth distribution as much as to unequal distribution of limited educational resources. Any strategy to correct inequalities should recognize that a broadening of educational opportunities is only one part of the total congerie of forces creating economic inequalities. Similarly some recent research has noted that the current form of administrative or bureaucratic control of wage and salary income in public and private sector enterprises may have led to an increased stratification of labor force income that is relatively unrelated to human capital differentials [7,56].

Clearly, a coordinated attack on poverty and income inequality should combine elements from each conceptual area: (1) more generous treatment of minimum wages; (2) more instruments promoting subsidies for labor rather than capital in certain pertinent sectors where the technological possibilities permit this; (3) a greater emphasis on making primary education a truly universal goal and vocational training and apprentice programs within industry more widely developed; (4) developing packages of technology in agricultural research institutes that can be applied and exploited successfully by small as distinct from large farmers and ;(5) mitigating the severe maldistribution of wealth in the society through a more socially conscious use of subsidies, fiscal incentives and some constructive measures of land reform.

One feature that stands out in the recent Brazilian experience of growing income inequality is the relative degree of tolerance toward these inequalities. Social tensions that are a part of this process have been kept under control by authoritarian rule. This has given Brazil an unusual comparative advantage to promote rapid economic growth vis-a-vis a country like Argentina, where inequalities of this magnitude would not be tolerated. There the growth psychology is compromised by the tensions of social conflict growing out of a more equal balance of power among the working class, the employer class and the state.

The final controversy concerns the degree to which the Brazilian economy has become more or less "dependent" or vulnerable to the shocks of the world economy in choosing its post-1964 growth strategy. It would be difficult to imagine a more dependent economy than that of Brazil from 1961 to 1964. Due to increasing rates of inflation capital outflows, political and administrative instability and a shrinking capacity to import, Brazil became more subject to the pressures of foreign creditors. International agencies and governments began to exercise various forms of bargaining pressure to force Brazil to honor her international debts. Following the political revolution of 1964 these pressures for the restructuring of domestic fiscal and monetary policy continued. Diaz Alejandro documents the link between the role of international assistance and debt rescheduling on the one hand and the foreign creditors insistance on a change in policies designed to devalue the currency, increase taxes, lower the rate of monetary expansion and eliminate the cash balance of payments deficit on the other [22]. While many of

these policies may have been necessary and even desirable, there is little doubt that Brazil's internal decision-making capacity was severely constrained during the period 1964-67.

From 1968 to 1973 policies successfully reduced many of these features of dependency. The capacity to import was markedly improved. The remarkable increase in exports, combined with rapid economic recuperation and declining inflation, permitted Brazil to acquire growing international reserves. This increased Brazil's bargaining position in dealing with foreign creditors and contracting new loans or rescheduling old debts at more favorable rates. Furthermore, the successful indexing of inflation for financial instruments, the growth of a public bond market and guaranteed returns to foreign portfolio investment in terms of foreign currency promoted a massive inflow of foreign capital from 1969 to 1973. Finally the diversification of export markets and the growing use of public sector consortia to control certain lines of foreign investment reflected additional measures to control the dependency syndrome. The growing role of Japanese and European investment has also reduced to some extent the earlier dependence on American sources of capital investment in the economy.

One of the more impressive signs of this decreased dependency is the relative decline of coffee as a major source of foreign exchange. At present (1974) coffee accounts for less than 20 percent of total export earnings. In contrast, manufactured or semi-manufactured goods account for about 30 percent of total export earnings, a remarkable change from the 1950's when industrial exports were relatively non-existent and coffee accounted over half of Brazil's exports.

At the same time the output of other agricultural crops such as cotton, sugar, soybeans, and food crops in general (including beef) have increased at an annual rate of about five percent [95]. Exports of agricultural products, other than coffee, have increased three-fold between 1964 and 1972. The increase in world prices for these products, along with subsidized rural credit for modern inputs and a more realistically devalued exchange rate have all contributed to the increase in this more diverse and stable structure of agricultural output and exports. One negative consequence of this otherwise improved agricultural situation has been the undue bias favoring large over small farmers in the subsidy packages offered. More attention will be devoted to this later in the report.

Despite these various measures reducing the degree of economic dependency outlined above, several important forms of dependency exist and will likely remain so for sometime into the future. We are of course referring to the unusal dependence on foreign capital inflows to maintain a surplus in the balance of payments. Another way to express the same phenomenon is to state that it has been impossible for Brazil to earn sufficient foreign exchange from her growing exports to cover her import needs for increased intermediate and capital goods in an economy growing at 10 percent a year. It has been necessary to resort to foreign capital inflows (mostly portfolio) to cover this gap.

Despite the extensive backward linkage industrialization into capital goods production discussed in earlier sections of this chapter, it has not been sufficient to remove this continued dependency on imported capital equipment. In part this is due to the unusually high rates of industrial growth generating demand beyond the capacity of local capital

goods producers, and in part due to the rapid rate of modernization in some sectors which demand the latest technology from abroad. Fortunately, in contrast to the 1950's, industrial exports, as a whole, are and can be expected to make substantial contributions to the pool of foreign exchange needed to cover these import needs. However this contribution is insufficient to eliminate the foreign exchange gap in question, and it would appear that the subsectors and product lines causing the greatest foreign exchange drain for imported inputs are the industrial subsectors contributing the least to the recent growth of industrial exports [82].

The degree to which Brazil can maintain this heretofor productive link of high growth and dependence on foreign capital inflows will depend upon her continuing capacity to increase the growth of exports, increase local capital goods production, reduce the need for expensive energy (oil imports) and promote local energy substitutes (hydroelectric power). In the meantime it is undeniable that the current pattern of dependency has created an extensive and modern industrial structure capable of generating high rates if economic growth.

Summary

In closing this chapter it is useful to consider the four views explaining the Brazilian economic "miracle" and, in so doing, clarify the accomplishments and limitations of the government's recent policies and the economy's performance. Furtado and Tavares and Serra argue that the capitalist model of export-led development has led to greater concentration of income through wage constraints on the working class and undue

fiscal favors and subsidies for the upper classes [35, 97]. In short, the structural stagnation of the early sixties has been averted through authoritarian and antidemocratic policies deliberately increasing aggregate demand of high income goods and services for the upper middle class elements in society, at the expense of the lower classes. Capital market legislation, its associated fiscal incentives and extensively financed consumer credit have been the motive forces for the boom through their favorable impact in increasing consumer durable production. Without these artificial devices, which in effect worsen the distribution of income, the current profile of demand would not have naturally supported the current rates of growth. In time, the process leads to over-concentration and increased political instability.

Fishlow takes a separate cyclical interpretation which dovetails into the cyclical analysis of the decline in the early sixties. He argues that the economy was ripe for recuperation in the mid-sixties and only failed to do so due to the simplistic, tight money policy of Campos and Bulhoes [30]. The successor regime saw the error of these policies and relaxed credit policy so as to let the natural forces of recuperation take hold. Up until the early 1970's no serious bottlenecks appeared since the expansion was primarily using up excess capacity. After achieving 10 percent growth rates, however, expansion of capacity was called for and increased savings (or taxes) necessary. The serious bottleneck underscored by Fishlow's scheme is the apparent inability of the Brazilian economy to raise its savings ratio much beyond 18 percent, it historical level. Continued expansion demands additional savings and taxes on consumption and new political will is necessary to bridge the

gap. One should recognize, however, that the savings constraint can be exaggerated in that the national income savings data upon which these arguments rest are highly suspect. One author's flow-of-funds savings rate has increased significantly from the early to the late sixties while the national accounts savings ratio remained constant [68] . Also, it would appear that the increased use of fiscal incentives may be overlooked or unrecorded in the national account investment data.

A third view emphasizes the role of public sector capital formation and increasing state control and domination of the infrastructure, banking and key manufacturing sectors[13] . The economic boom is credited largely to the behavior of public sector investment activity triggering off expansion in other sectors. This view would argue that the increased control the state has gained over the economy gives it additional degrees of freedom in averting cyclical declines due to internal causes. However, exogenous variables in the form of new balance of payments crises (such as the energy crunch) could upset the growth pattern.

The final view is the official view, which feels proud of the achievements to date, and confident that the many new fiscal and monetary instruments can see the government through any future crises and maintain growth. Whereas, the first post-1964 regime focused on lowering inflation through controlling the budgetary deficits, the second regime has focused on initiating and maintaining high growth rates and accepting tolerable rates of inflation. The maintenance of one of the highest growth rates in the world gives the regime an aura of ligitimacy (much more so than

lower inflation with lower rates of growth); hence, it is not surprising to note the strong emphasis on increasing the capacity to import (through increased exports and foreign capital inflows). This strategy allows the importation of vital raw materials and capital goods to maintain rapid economic growth. Similarly, it is not difficult to understand their favorable attitude toward foreign capital participation in this process, since this inflow has helped them to expand their technological horizons and stretch their local savings capacity.

Nevertheless, the opening up of the economy and increased dependence on foreign capital have created problems as outlined in the previous section. The importation of inflation from the outside world is an additional concern, as is the growing weight of the foreign debt. The probable decline in the supply of Euro-dollars could create problems to service this debt. Similarly, it would appear unlikely that future rates of increase of export income can maintain past performance in the unstable world trade unvironment of 1974. Unfortunately, this comes at a time when the "oil crunch" represents a serious potential weakness in Brazil's future balance of payments. From 1973 to 1974 the cost of oil imports increased from 800 million dollars to three billion dollars, causing a marked decline in Brazil's foreign reserves. Also, the role of the multi-national corporations in the industrial structure could limit some of the policy options available to a government which needs to discipline its economy to changing conditions. Finally, the increasing concentration of income could lead to unacceptable social tensions which could even upset an authoritarian regime, once the engine of growth falters. Despite the favorable growth record to date, sufficient structural problems remain in the economy to cause concern for future policy makers.

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