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WIDER

STABILIZATION AND ADJUSTMENT
POLICIES AND PROGRAMMES

COUNTRY STUDY

11
BRAZIL

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WORLD INSTITUTE FOR DEVELOPMENT ECONOMICS RESEARCH OF THE UNITED NATIONS UNIVERSITY

STABILIZATION AND ADJUSTMENT
POLICIES AND PROGRAMMES

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COUNTRY STUDY: **BRAZIL**

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TABLE OF CONTENTS

		Page
	PREFACE BY THE DIRECTOR	
	EXECUTIVE SUMMARY	
I.	INTRODUCTION	1
II.	SOCIO-POLITICAL CONSTRAINTS	3
III.	THE BRAZILIAN ECONOMY	10
	1. GDP and the balance of payments	10
	2. Prices	11
	3. Financial markets	15
IV.	ORTHODOX STABILIZATION	18
	1. Two orthodox policies compared	21
	2. A 'better' alternative	26
V.	NON-ORTHODOX STABILIZATION	28
	1. The Cruzado experiment	30
	2. Comparisons with 1980	38
VI.	EXTERNAL ACCOUNT PROSPECTS	41
	FOOTNOTES	44
	REFERENCES	48
	TABLES	52

PREFACE BY THE DIRECTOR

This monograph is part of a series being published by WIDER on the experience of developing countries with stabilization and adjustment programmes in the 1970s and 1980s. Each study analyzes the package of policies implemented by a specific country; its relations with the IMF and World Bank; the effects of the policies on production, employment, the balance of payments and social welfare; and what other policies might have been followed instead.

The intention of the series is to assist developing countries to devise adjustment policies that would, while accomplishing desirable adjustment and growth objectives, simultaneously remain politically viable in the particular country settings studied.

For this purpose it was thought desirable to explore policy alternatives to the adjustment programmes being implemented. Built into the design of the series, therefore - and constituting indeed its special feature - is the requirement that each study include a 'counterfactual' exercise to illustrate the effects of alternative policies. Utilizing econometric models adapted or specifically developed for each country, the probable effects of alternative policy packages are estimated; the object was to see how far the balance-of-payments adjustment and growth goals of a particular programme might have been achieved at a possibly lower social cost with a different policy mix.

Each country study is written by an independent scholar and expert in the relevant country. First drafts of the studies in this series were discussed at the WIDER conference on stabilization and adjustment policies in developing countries which was held 19-22 August, 1986 in Helsinki. Each study has been reviewed by WIDER's research advisers for the project, Professors Gerry Helleiner and Lance Taylor, and revised substantively by the author as necessary; subsequent editing has been conducted under the overall supervision of Mr Robert Pringle, Senior Fellow, who serves also as editorial adviser on WIDER publications.

A companion volume by Professor Taylor summarizing the experience of the countries surveyed will draw broader implications for the theory and practice of stabilization and adjustment policies; this volume will be published by Oxford University Press. The individual country studies in this series will subsequently be grouped into separate volumes, also for eventual publication by Oxford University Press.

Lal Jayawardena
Director
March 1987

EXECUTIVE SUMMARY

Brazil has undergone three stabilization programmes since 1980: without the IMF in 1981-82; with the IMF in 1983-84, and the Cruzado Plan of 1986. The first two could be said to have been more orthodox in character, given the political and social constraints which have a strong bearing upon the conduct of economic policy, while the third - the 1986 Cruzado programme - was more unorthodox.

The first two programmes both helped to improve the trade balance, the immediate policy objective. The effects of the first were however over-ridden by the 1981-82 world recession and the return of positive real interest rates, while the benefits of the second were overshadowed by the effects of the US recovery and the upturn in world trade.

The first was thus followed by the deepest recession in Brazilian history, while the second opened up the entrancing prospect of strong internal growth coupled with an easing of external constraints for the first time since 1980. Inflation had however become endemic, thanks to the policy of general indexation. It thus remained the biggest threat to a sustained recovery and the restoration of foreign confidence. The upshot was the Cruzado programme.

Essentially, this tried to break inflation expectations by imposing a sudden sharp shock in the form of a currency reform, a price freeze, and de-indexation. The hopes raised by the plan's reception and initial impact were dashed by two main faults of implementation. One lay in the failure to let 'obviously wrong' prices be corrected. This was prompted by the need to erase inflation expectations but it led to debilitating distortions in the demand-supply pattern. The second was the failure to act soon enough when signs of overheating, in the monetary aggregates, for example, became unmistakeable.

I. INTRODUCTION

This paper reviews the Brazilian experience of stabilization policies since the second oil shock. Brazil had become the Third World's largest debtor by the beginning of the 1980s and more recently has caught the attention of economic analysts by its government's insistence on untrammeled economic growth as the only acceptable way to repay external debt. Despite the difficulties posed by international trade prospects and the state of financial markets in 1984-86, Brazil achieved a highly favourable record in those three years: redemocratization proceeded without major political crises; economic growth was re-established as the main objective of government policy without impairing balance-of-payments prospects; and the country accumulated foreign exchange reserves without resorting to international banks for new money. Brazil's performance since 1984 may not yet have overcome the scepticism of the financial community which in 1987 continued to urge an IMF agreement on the country. Nevertheless, at its best it suggested that orthodox policies may not necessarily have an essential role to play in adjustment policies aimed at providing an acceptable prospect for major foreign debtors. In any event, Brazil is likely to go on searching for non-orthodox solutions, so that its efforts thus far warrant close examination and an effort at understanding.

In order to set the scene we have to recall the story of the removal of the foreign exchange constraint after the first 'oil shock', as well as evaluate the role of stabilization policies. Macroeconomic policy is not the result of rational choice operating in the absence of political constraints, but is the product of a complex mix of social forces defining the feasible range of policy decisions. This is a fact that external creditors overlook at their peril. The nature of the main social and political forces operating in the Brazilian scene are therefore

considered in section II before the basic elements of the Brazilian economy are described in section III. In section IV the record of recent stabilization attempts is reviewed up to the IMF experience of 1982-84. As a result of domestic responses to external shocks and because of accommodating distributive effects, inflation became the most important threat to the continuity of recovery after 1985. In February 1986 the Sarney government adopted a radical change in stabilization policy by promoting the so-called Cruzado experiment - a monetary reform which eliminated indexation and decreed a general price freeze - whose main elements are described in section V. Finally, in section VI, prospects for the Brazilian external accounts up to 1990 are analysed in the light of the apparent worsening of external constraints in the wake of the Cruzado experiment.

II. SOCIO-POLITICAL CONSTRAINTS

In spite of being one of capitalism's most dynamic economies, Brazil is a country where the level of poverty and social inequality stands out among its income group of countries (on the World Bank classification). In the 'miracle' years of the early 1970s discussion of the inequalizing nature of the Brazilian growth model was the central feature of most evaluations. Both the stabilization of the mid-1960s and the fast growth of 1967-74 seem to have resulted in more inequality. Concern with 'social pressures' at the beginning of the 1980s spread even among the conservative military who feared that a peaceful transition to democracy could be threatened if wages bore the main burden of stabilization. But efforts to improve the lot of the poor do not show up in the main social indicators, as analysed by Abreu (1985).

Life expectancy at birth is similar to that of the Philippines, a country which has about a third of the Brazilian per-capita income. Infant mortality is more than twice that of South Korea, which has around the same level of per-capita income. And adult illiteracy is one of the highest among Brazil's income group. According to the same author, basic social indicators are not only extremely unsatisfactory in comparative terms, but they have also shown little improvement in the past 20 years. Growth alone has thus not been sufficient to guarantee the provision of the basic needs of the population in terms of food, health, education or housing even though the economy's present size, measured by productive capacity, is larger than that of Spain or Australia, for example, and is equivalent to around 70 per cent of Italy's or 80 per cent of Canada's.

The pressure of population growth is cited by many conservative analysts, including those in the international agencies, as the main obstacle to the improvement of social indicators. This aspect, however, tends to minimize the

inegalitarian effects of the Brazilian growth model and to point to the adoption of population control, while ignoring the 25.9 per cent decline in fertility rates which occurred, according to Carvalho (1984), between 1960-70 and 1975-80.

In terms of income distribution, it should be enough to mention that at the beginning of the 1980s the poorest 20 per cent of Brazilians received only 2 per cent of total income. This was a smaller share than the poorest fifth received in Indonesia, Egypt, South Korea, Argentina, Mexico, Thailand or Yugoslavia, while the richest 20 per cent received a higher share than their counterparts in any of these countries.

'Grow first, distribute later', was the usual conservative response to the critics of unequal growth in the late 1960s and early 1970s. By the time of the first oil shock, however, the military establishment had added to the conservative tenet the requirement that social unrest should not impair a peaceful transition to democratic rule. In practical terms this meant that resort to wage controls was not a feasible strategy to deal with inflationary pressure, as was the case in the mid-1960s stabilization experience. The upsurge of inflationary pressures in 1973-74, which stemmed from both the overheating of demand and the rise in import prices, would thus not be met by a fall in real wages. Most criticisms of the 1964-66 stabilization experience concentrated on the wage control formula then adopted, which repressed the usual attempts at recovering the peak of real wages by a scheme aimed at maintaining the average real wage between adjustments. Critics pointed in particular to the systematic underestimation of future inflation as a means to punish workers for any acceleration of inflation beyond the target implicit in wage adjustment parameters. To make sure that organised workers would not bear the burden of inflation control, President Geisel's government, which took over in 1974, adopted a formula by which any underestimation of inflation in wage adjustment

parameters would be corrected in the following adjustment. As a result underestimation of inflation led to corrections above past increases in cost-of-living indices.

The second practical consequence of the concern with social unrest came when the short-lived stabilization attempt of mid-1974, coordinated by Mario Simonsen, then Minister of Finance, was virtually abandoned in the beginning of 1975. The 1974 plan featured a combination of traditionál monetary restraint, by way of a reduction in the real growth of the monetary base, with stricter control over the marking-up process in industrial prices. The annual rate of inflation was reduced from a peak of 35.2 per cent in 1974 to 22.1 per cent in May 1975. But the rapid deceleration in industrial growth from 14 per cent to 0.8 per cent became politically unbearable for the government, especially after the November 1974 parliamentary elections made clear that it would face a stiffened opposition in Congress for the first time since the 1964 military coup. The opposition party (MDB or Brazilian Democratic Movement) had made clear its intention of taking advantage of any opportunity provided by the lifting of control over the press to voice the discontent which had built up among workers and the urban middle-class during the worst years of political repression (1968-73).

As a consequence, the new limits to the design of stabilization policies placed more emphasis upon self reliance in achieving low inflation, and on making use of available foreign finance to design a long-run strategy for overcoming balance-of-payments problems. 'Growth-cum-debt' thus became the line of least resistance available to the Geisel government. By the end of 1975 a new five-year development plan (II PND) was approved by Congress defining the essential lines of this strategy. An ambitious investment programme was directed towards the long-run improvement of the trade balance by means of import substitution in crucial sectors like intermediate inputs and

capital goods, and by promoting export growth by diversifying markets and better exploring the resource base of the economy. At the new price of imported oil, the economic content of recently-discovered mineral riches, especially in the Amazon, was enhanced by the availability of abundant hydro-electrical potential which favoured the production of aluminium and other non-ferrous metals and downstream investment in the production of exportable manufactures.

At the same time conflicts between private and the public enterprises were to be softened as a clear complementarity could be perceived between private and public production, with the public sector engaging in the production of cheap inputs for private industry as well as in the provision of transport and energy infrastructure. Although the appropriate role of the state in a capitalist society has been a favourite topic of debate among Brazilian industrialists, there seems to be no evidence that the expansion of Brazilian state enterprises has hampered the growth of private industry.

The sectoral targets of the 1975 five-year development plan are reviewed in Batista (1986), together with an evaluation of what was accomplished. Investments in import-substitution activities were directed towards products representing an estimated import bill of US$ 3.5 billion a year, at 1974 prices. The most important sectors were non-ferrous metals, paper and pulp, petrochemicals and steel. A substantial effort was also made to increase the supply of hydro-electric energy, and the availability of transport facilities so as to overcome the congestion of ports and highways and accommodate the expected increase in exports. The production of capital goods was another important sector to receive a special incentive: this resulted in a fall in the import content of machinery and equipment investment from 21.3 per cent in 1974 to around 10 per cent by the end of the 1970s.

Even in those sectors that have been especially characterized by the presence of both state and privately-owned companies (such as petrochemicals, one of the sectors which grew more rapidly after the investment programme of the 1975 five-year plan), the division of tasks between public and private enterprises has tended to favour the latter (the subsidiaries of Petrobrás for example have concentrated on the provision of first generation inputs and private companies on the final stages of production).

Another important element pertaining to the social aspects of the new stabilization strategy was the provision of savings for the new investment programme. Increased domestic savings could not be achieved by higher income concentration because of distributive and political considerations. On the other hand, a reduction in government consumption and subsidies would make social indicators worse and weaken the stimuli to private investment (with inflation running at 30-40 per cent a year). In fact the harnessing of private interest to the new government strategy and the maintenance of a high level of investment required an increase in government transfers to the private sector. Increased government subsidies also followed from the decisions to avoid a real devaluation, to avoid fully adjusting domestic oil prices after the shock, to set ceilings on nominal interest rates applying to public credit lines directed to the new favoured sectors, and to forgo tax revenues in order to stimulate new export activities.

The Brazilian public sector also played an increasingly important role as a financial intermediary. It assumed the risks involved in the full indexation of domestic assets, guaranteed external borrowing, and set limits to the monetary correction applied to the National Development Bank's credits (so as to prevent inflation uncertainties inhibiting the private sector's will to invest). As a result the disposable income of the public sector (strictly defined, excluding state enterprises) declined from 16.8 per

cent of GDP in 1973 to around 8.7 per cent of GDP in 1983. This reflected both a decline in gross taxation (equivalent to 2 per cent of GDP, mainly in indirect taxes) and an increase in subsidies and transfers (by around 5 per cent of GDP) as seen in table 1 which is reproduced from Werneck (1986). A large portion of the rise in transfers occurred as a result of the increase in public internal debt from 5.5 per cent of GDP in 1973 to 10 per cent in 1983.[2]

It should be evident by now who have been the main actors in defining the politically acceptable limits to stabilization policies in Brazil in the past ten years. They are the military, who have set the procedures for the political transition towards democratic rule; the urban workers and the middle-class who could express their preferences in the polls and have somehow defined 'the public opinion' which politicians were supposed to cultivate; the private investors, both industrialist and rentier, whose asset preferences set the limits to indexation schemes applying to the savings/investment process; and, finally, the government which had to absorb the burden of the inconsistencies in the resulting intermediation process. The lowest income strata, which accounted for the poor social indicators mentioned earlier, served as the main argument for gathering the support of the 'relevant majority' around the strategy of rapid economic growth, although the very poor clearly played no direct political role either in the discussion or in the definition of strategy.

At the beginning of the Figueiredo government (1979-84), the second oil shock and rising international lending rates checked the structural adjustment which has been promoted by the II PND (development plan) and which had been taking longer than anticipated. A new wave of inflationary pressures signalled an exacerbation of internal inconsistencies and the choice of policies set by the interplay of the political forces cited earlier tended to be

narrowed down. As part of the military strategy of democratization, trade unions were allowed to organize strikes for better wages. A new attempt to adopt austere demand policies to deal with inflation led to the resignation of Mario Simonsen from the Ministry of Planning. After Delfim Netto moved from the Ministry of Agriculture to replace Simonsen a new law was approved in November 1979. This reduced the period between wage adjustments from twelve months to six and introduced nominal increases above the rise in the cost of living for the lowest income groups (up to three times the minimum wage), thereby strengthening wage indexation at a time when inflation rates were moving from the 40-per cent-a-year plateau of the Geisel period to around 100 per cent a year.

III. THE BRAZILIAN ECONOMY

This section summarises the basic characteristics of the Brazilian economy so as to provide the background to the stabilization policies adopted following the second oil shock, which will be described in the following section.

The main characteristics of the Brazilian economy fit the pattern of a semi-industrialized economy in which a 'modern' sector, usually identified with manufacturing industry, co-exists with a 'traditional' primary sector, of the type described for example in Okun (1975), Bacha (1982) and Taylor (1982). The distinction is based upon the different rules governing price determination and does not imply that all agriculture activity is 'traditional' in other senses. In fact, one increasingly important part of agriculture, especially that directed towards the production of exportable commodities and industrial inputs, may be as 'modern' as it can be, both in the technological sense of the pattern of input use and with respect to price formation. The distinction between the two 'sectors' helps, however, to emphasize the relevance of the difference in, for example, the downward flexibility of prices in response to excess supply.

1. GDP and the balance of payments

Potential output, or the long-run growth rate of the economy, is determined by the past behaviour of investment, both public and private, and by its productivity. The latter tends to depend on the quality of public investment, rather than on its size, and on the pattern of technology transfer from abroad in capital goods imports. Private investment decisions are of course volatile but may be influenced by government plans identifying priority sectors. A guaranteed flow of inputs and the provision of basic infrastructure, special credit lines and other incentives can help to direct the flow of private funds to priority activities. Short-run

interest rates are unlikely to have a significant effect on private investment since long-run financing by private capital markets is virtually non-existent. Monetary policy, however, may influence private investment decisions by its impact on the uncertainty surrounding the future behaviour of interest rates, by attracting private firms' retained profits towards short-term financial assets or by giving discouraging signals as to the behaviour of working capital costs. This effect tends to be important when monetary control is spasmodic.

In the short run, the level of capacity utilization is determined essentially by the level of domestic absorption and by the balance-of-payments or foreign currency reserve constraint. Assuming the foreign exchange is available, higher levels of capacity utilization increase imports and reduce the scope for increased exports, thereby worsening the trade balance. On the other hand, high net exports tend to raise investment relatively to domestic savings, leading to high levels of capacity utilization, provided the instability of strong acceleration effects is ruled out (see Taylor [1985]). In the short run imports are essentially non-competitive, but the non-competitive-import coefficient may be influenced in the long run by government policy concerning priority sectors and by exchange rate policy. The same applies to the supply responsiveness of exports. These assumptions are consistent with the decision not to promote real devaluation after the first oil shock, for example, and to direct investment towards import-substitution activities and granting fiscal and credit incentives to investment in export-generating sectors.

2. Prices

The basic assumptions adopted in this paper concerning price formation in the Brazilian economy reflect the main characteristics of an indexed economy. What follows is a summary of the basic model developed and estimated in Modiano (1985a).

Nominal wages are determined by wage adjustment formulas, which relate nominal increases to past increases in cost-of-living indices, and by the level of capacity utilization. Empirical evidence points to a low coefficient of demand in wage determination.[3] The level of wage indexation depends on the coefficients of current and past inflation (as in Lopes and Bacha [1983] as well as on the interval between adjustment as argued by Modiano [1983] and [1985b]). Until 1979 wage adjustments were promoted once a year for every category, in different months. From November 1979 onwards, wage corrections were made once every semester and negotiations concerning productivity gains were held once a year.

The nominal value of the exchange rate is periodically corrected to compensate for past inflation and has since 1968 been adjusted at uncertain intervals. Until December 1979 the main direction of exchange policy was the maintenance of purchasing power against the dollar, so that the value of periodic mini-devaluations was more or less equal to the difference between past domestic inflation and the US inflation rates. At the beginning of 1979 the government announced its intention to increase the frequency of exchange corrections; and in December of the same year it promoted a devaluation of 22 per cent above past inflation. In an attempt to control expectations of further devaluations which led to a speculation against the cruzeiro, the government announced that the nominal devaluation of the cruzeiro during 1980 would be limited to 45 per cent in line with an expected rate of inflation of 50 per cent for the year. This target was abandoned in the middle of the year and in real terms the average exchange rate appreciated by about 3 per cent relative to the previous year.

In February 1983, another maxi-devaluation was promoted, which implied a correction of the exchange rate by 30 per cent above past inflation. In order to control expectations

of further devaluations the government pledged to make monthly devaluations equal to the change in the general price index of the previous month, a rule which remained practically intact until the monetary reform of February 1986. For practical purposes, therefore, the exchange rate may be regarded as being indexed and linked to the dollar, except for the two maxi-devaluations which may be thus considered as 'shocks' in the exchange rate regime.

Industrial prices are determined by a mark-up rule over prime costs defined by wage costs and the prices of imported inputs. The mark-up may be affected by activity levels but indications of this are uncertain both theoretically and empirically. There is some evidence of perverse mark-up behaviour in response to under-utilized capacity but these effects tend to be small, as reported by Camargo (1984) and Modiano (1985a), probably due to the Brazilian tradition of price controls based on fixed mark-up rules, as analyzed by Carneiro (1977). Fixed mark-up models do not behave badly empirically and are easier to use as a general hypothesis. In analysing stabilization policies it may be assumed that mark-up may jump in response to interest rates, to variations of activity levels which are perceived as 'permanent' by the industrial sector, or to changes in risk premia due to high levels of uncertainty in financial markets.

Agricultural prices are of two types. Prices of food products and industrial inputs in the domestic market tend to be flexible and respond to signs of excess demand. Control over the domestic supply of food is therefore an essential element in the maintenance of a stable rate of inflation. The government tends to intervene in food markets by several means: by holding stocks of basic staples, by guaranteeing minimum prices to producers, by granting special credit facilities (sometimes highly subsidized) for the production of basic items and by authorizing imports in order to head off shortages arising from climatic disasters

or other shocks. Notable agricultural supply shocks occurred in 1978, when drought reduced non-coffee crops by 10 per cent, and in 1983, when floods led to shortages in urban food markets and devaluation led to a substantial increase in the cost of imported agricultural inputs.

The second type of agriculture price is that of exportables such as coffee, soybeans, sugar, cocoa and orange. These account for around 20 per cent of total exports, tend to be determined essentially by international prices and movements in the exchange rate, and thus by and large are not responsive to domestic demand.

The most important area of price flexibility for demand management lies in the agriculture sector and especially in food prices. Hence the applicability of the 'dual' character of price formation as hypothesized in structuralist models for the Brazilian economy. Agricultural prices have a 30 per cent weight in the general price index (calculated by the Vargas Foundation, which until recently has been the most widely-used measure of inflation). The effect of variations in demand upon the determination of the rate of inflation thus turns out to be rather small when we consider the levels of inflation experienced by the Brazilian economy in recent years. According to some estimate, a 10 per cent decrease in capacity utilization could reduce the annual rate of inflation, which has been in the 200 per cent range, by some ten percentage points.

The main conclusion is that indexation schemes, which have been gradually introduced in the Brazilian economy since the 1960s as part of the process of minimizing the effects of inflation upon the normal functioning of the economy, have led to a pronounced inflexibility downwards in the rate of inflation. The basic determinant of the current rate of inflation became the level of the past rate plus or minus 'shocks'. Furthermore, as inflation climbed to each new plateau, expectations as well as the formal rules of

indexation tended to enhance the downward rigidity of inflation and thus diminish the effectiveness of demand measures. Generalized indexation throughout the economy, reflecting defensive behaviour throughout the private and public sectors, gives substance to the assumption of inertial inflation as analyzed by Lopes (1984). The importance of inertial elements in the determination of inflation has become one crucial point of divergence between orthodox and non-orthodox prescriptions for dealing with inflation, and a major cause for the failure of demand policies to control it.

3. Financial markets

Brazilian financial markets do not fit either the developed pattern of industrialized countries or the repressed-capital-market-model usual in developing countries. Ever since the financial reform of 1964-65, a somewhat sophisticated diversification of assets and of institutions has taken place, providing scope for the non-monetary financing of government deficits and for the rise of specialized organizations like investment banks (providing medium and long-run finance to the private sector) and savings and loan associations (designed to attract personal savings through indexed passbook savings deposits and to finance housing contruction) without cramping the scope of financial companies which have traditionally supplied consumer credit. Commercial banks, which before the reform were the main suppliers of private credit, were confined to short-term markets.[4] One may say that up to the mid-1970s, the institutional model adopted by the reformers was basically at work, with the exception of an optimistic view about the development of private long-term capital markets which remained essentially in the hands of the government. From 1975 onwards investment banks became one of the most important channels through which loans were raised in international markets and passed to private firms.

Following the acceleration in inflation after 1979, the financial fragility of the non-bank financial institutions became more evident. A process of concentration through acquisitions and government-sponsored rescue operations resulting in mergers gave rise to a new system based essentially on financial groups organized around a large commercial bank, typically without industrial linkages, although this new institutional framework is yet to be officially recognized. In practice, the financial system during the past ten years has evolved essentially around a process of providing assets which are basically near-money in the form of government bonds and certificates of deposits issued by private banks with daily repurchase agreements. The acceleration of inflation and generalized indexation has encouraged the private sector to hold only short-term assets, typically overnight deposits; the risk of capital losses because of changes in interest rates was assumed by the financial intermediary. In order to avoid major bankruptcies in the financial sector arising from frustrated speculative movements or attempts at monetary control, Central Bank intervention was called forth, with the inevitable consequences of encouraging the next speculative move. In order to offer a hedge against maxi-devaluations and prevent capital flight, dollar-denominated government bonds were issued, and indebted firms and banks were allowed to hold dollar deposits in the Central Bank. Needless to say, at the height of the debt crisis of 1982-83, exchange rate speculation became the major determinant of interest rates.

The existence of indexed public debt posed new facets for the design of IMF programmes aimed at controlling inflation. The nominal value of the public sector borrowing requirement increased from 2-4 per cent of nominal GDP in 1975 to 11.3 per cent in 1984 leading many analysts, including the IMF, to point to the extraordinary growth of PSBR as a major cause of the acceleration of inflation in the first half of the 1980s. This argument overlooks,

however, the fact that, unless there is a major shift in the private sector's asset preferences, inflation should leave unchanged the share of private wealth held in the form of public bonds. The nominal change in the public sector's liabilities which results from the indexation of public debt does not therefore result in any new stimulus to aggregate demand. Hence, the nominal increase in PSBR resulting from inflation should be discounted in evaluating the fiscal stance. Ignoring the effects of inflation on nominal borrowing requirements leads to the definition of fiscal targets which may not be feasible because of the extent of the contraction they imply in fiscal expenditure.[5]

IV. ORTHODOX STABILIZATION

Between 1980 and 1984 Brazil underwent two attempts at orthodox stabilization during the presidency of General Joao Figueiredo (1979-85): in 1981-82, without IMF supervision and in 1983-84 under an agreement with the IMF. The objective of this section is to outline the two programmes' major characteristics, evaluate their consistency, and compare their results.

By the third quarter of 1980, it was clear that the Figueiredo government would have to undertake a second major reversal in macroeconomic policy, abandoning its attempt (since Mario Simonsen was replaced by Delfim Netto as Minister of Planning) to maintain a high level of economic activity in order to undertake the structural adjustment needed to adapt the economy's external accounts to the new international conditions. Two facts stood behind this change. First, in December 1979 following the maxi-devaluation, the government announced limits of 40 per cent and 45 per cent respectively for monetary and exchange rate corrections during 1980 in an attempt to control inflationary pressures. The move failed to reduce inflation both because expectations proved to be not that easy to control and because the rate of indexation had been increased by the new wage law passed by Congress in November 1979. Inflation expectations were not reduced and, as the annualized rate of 101.3 per cent observed in the second semester of 1979 was projected into consumers', producers' and asset holders' decisions, partial de-indexation of financial assets meant cheap credit for consumption and working capital, negative real interest rates for passbook savings and government-indexed bonds, a windfall subsidy for mortgages and the Development Bank's debtors, cheap imports and so forth. As a result holdings of financial assets fell by 13.2 per cent in real terms, sales of durable goods soared and non-oil imports increased by more than US$ 2 billion.

Secondly, international bankers had decided to review their role in the 'debt-cum-growth' game as higher oil prices, accelerating inflation and rising interest payments from US$ 2.7 billion in 1978 to US$ 6.3 billion in 1980 signalled the fragility of both domestic and external positions. In consequence, by the end of 1980, an increase of almost US$ 3 billion in the current account deficit had to be financed by a corresponding drop in foreign currency reserves. Furthermore, the new level of international interest rates and oil prices raised doubts as to the feasibility of the long-run adjustment strategy launched by the previous government since its completion would still require some US$ 100 billion of new investments, both from domestic and external sources, and probably three to four years fully to mature.

Delfim's failure in promoting the non-recessive option in 1979-80 to deal with inflation and external disequilibrium undermined confidence in the short-run management of the economy, creating scope for criticism of the accommodating character of the adjustment pursued since the first oil shock, and leading the government to adopt, at the level of official discourse at least, the basic lines of macroeconomic orthodoxy.[6] On the other hand, the rise in international borrowing costs, the second oil shock and the world recession had worsened the external constraint on the Brazilian economy. The feasible path for adjustment during the following years would thus probably be more unfavourable irrespective of the worsening of domestic constraints generated by policy errors. In other words, improvements in the trade balance would be feasible only at lower levels of capacity utilization for as long as the fall in import coefficients allowed by the maturation of investment projects had been delayed by the new increase in the price of oil; they certainly became more costly because of higher interest rates.[7]

Furthermore, leaving aside foreign bankers' opinion of Delfim's policies, it should be noted that the increase in international lending rates and the accumulation of external debt had already led to a substantial increase in interest payments, as observed above. The average rate of interest paid by Brazil (defined as net interest payments divided by the net external debt at the beginning of the year) rose from 13.8 per cent in 1978 to 20 per cent in 1980, and gave no sign of declining. The risk of insolvency could thus be seen as a threat to the continuity of the 'growth-cum-debt' strategy, especially with the grim prospects for world trade growth. Finally it should be remembered that, according to the counterfactual exercises of Dias-Alejandro (1983), Brazil does not fare much better in the 'prudent planner's scenario' than under Delfim's wild experiments, suggesting that the worsening conditions of trade and financial markets would have been sufficient to explain the deterioration of external debt indicators.

From the adoption of demand restrictions at the end of 1980 to the debt crisis in 1982, the basic objective of the Brazilian government was to control domestic absorption in order to reduce foreign exchange needs. The idea was that the fall in productive capacity use for domestic needs would render export activities more attractive as well as reducing intermediate imports and consumption. The success of such a strategy in reducing the real resource gap depends on the resulting fall in GDP. The smaller the fall in GDP for a given reduction in domestic absorption the lesser the need for real resources from abroad, hence the value of expenditure-switching policies for more efficient adjustment. In the case of Brazil, raising the domestic price of oil was important in order to enhance direct substitution efforts, since investment in the production of alternative fuel (alcohol or coal) was already under way; the reinstatement of fiscal incentives to export activities which had been cancelled after the devaluation operated in the same direction.

In spite of the continuing deterioration in the terms of trade, a significant reversal in the trade balance was obtained, with a gain of 0.5 per cent in the export/output ratio and a reduction of one percentage point in the import coefficient. Interest payments, however, rose by almost US$ 3 billion in 1981 and by another US$ 2 billion in 1982, so that at the end of the second year of restrictive macropolicies, the current account deficit was almost US$ 6 billion above the figure for 1980, reaching 5.8 per cent of GDP.

After two years of restrictive demand policies, the Brazilian economy was ready for yet another round of orthodoxy, this time under IMF surveillance and motivated by the sudden halt of voluntary lending in international financial markets which followed the Mexican moratorium. The character of both experiments, their differences in scope and in internal and external conditions will be the subject of the next subsection.

1. Two orthodox policies compared

Table 2 summarizes the essentials of the two programmes, and facilitates a comparison of their respective diagnoses, aims and instruments. Although both were designed to control external borrowing, differences in motivation are clear since in 1980 there was still room for increased lending by private banks. The diagnosis was that, if a scarcity of domestic credit could induce the private sector to borrow abroad, a mere show of fiscal austerity would be sufficient to bring bankers back in the game.

The success of both programmes in obtaining external adjustment may be read in table 3, with the necessary qualifications. Both succeeded in boosting the trade balance but the success of the first tends to be blurred by the unfavourable behaviour of external conditions, as reflected in interest rates, terms of trade and the growth of

international trade. Using Balassa's procedure to attribute current account changes to external shocks (including slower world trade growth, deteriorating terms of trade and interest rate shocks), the accumulated debt burden and domestic policy actions, Bacha (1984) calculates that from 1979 to 1981 domestic policy actions to control the current account were virtually offset by the intensity of external shocks between 1979 and 1981 and were overridden by them in 1982 and 1983. On the other hand, the growth of exports in 1984 seems to have less to do with the IMF-sponsored programme of 1982 than with the vigorous response of manufactured exports to the recovery in world trade led by the US import boom that year.[8]

Finally, in analyzing the improvement observed in the trade balance after 1981, one has to take into consideration the fall in the import coefficient which was made possible by the maturing of import-substitution projects, especially in oildrilling, alcohol, non-ferrous metals, and selected industrial inputs. Increased domestic oil production and substitution reduced the share of imported oil in domestic consumption from 80 per cent in 1974 to around 40 per cent in 1985.

In table 4 some of the problems of both experiments are more visible. The combined effect of the programmes led to the deepest recession on record in Brazilian history. Between 1980 and 1983 income a head fell by more than 10 per cent, a figure that certainly underestimates the seriousness of the loss in output, due to the controversial effect of the growth in financial intermediation included in official national accounts computations. Alternative estimates by Lopes and Modiano (1985) show that in the fourth quarter of 1983 seasonally adjusted GDP, excluding government and financial services, was some 10 per cent below its level in the fourth quarter of 1980, or a loss in output a head of around 15 per cent. Real rates of growth in monetary and other financial stocks are strongly negative for the whole

period, with two exceptions. The first is the behaviour of total financial assets from 1982 onwards, reflecting the rise in government debt caused by the combination of restrictive monetary policy (selling bonds to control the monetary base) and asset substitution prompted by accelerating inflation. The second exception is the rise in loans to the private sector in 1982 during the mild recovery of economic activity that year.

Attempts to increase domestic real interest rates are also reflected in the average yield of government bills throughout the period, but it does not fully reveal the intensity of the rise in interest costs in the period. Short-term quarterly lending rates by commercial banks, for example, rose from -0.5 per cent in the fourth quarter of 1980 to 3.04 per cent in the fourth quarter of 1981 and to a peak of 6.38 per cent in the fourth quarter of 1982, a figure equivalent to a 28.1 per cent annual real interest rate. The worst aspects of monetary restraint during the whole period, however, were related to its effects on the instability of the financial system, giving rise to a period of intense financial speculation. The opportunities for extraordinary capital gains and losses stemming from the successive waves of short-lived announcements of liquidity restraints were inevitably followed by emergency rescue operations designed to avoid generalized bankruptcy since, as already explained in the previous section, in the absence of long-term holders of government bonds, virtually the whole stock of government debt was held by financial intermediaries which had to attract overnight deposits from the public.

After August 1982 another speculative element was added to the picture, caused by the risk of an exchange crisis that might lead to a sharp devaluation. From then until February 1984 the Brazilian financial markets were dominated by exchange rate uncertainties. Capital flight was kept at reasonably low figures compared with the experience of other

Latin American countries thanks mainly to three points: the availability of dollar-denominated government bonds, a tradition of strict control over capital movements and the practice of high domestic interest rates. The most pessimistic estimates indicate a figure of around US$ 2.5 billion for capital flight for the whole period. The international debt crisis, the uncertainties around the IMF agreement in the beginning of 1983, the devaluation of February 1983 and the successive rounds of negotiations between Brazilian authorities, the IMF staff and the international banks during the remainder of the year set the stage for exchange speculation which lasted until the recovery of export growth in the beginning of 1984 signalled better prospects for the current account.

In 1983 and 1984 the Brazilian government submitted seven letters of intent to the IMF Board. In practically all of them provisional agreements with respect to the future behaviour of the PSBR and some targets for monetary aggregates were subject to change. These successive negotiations reflected first of all the lack of realism of some targets, especially those for the public deficit. At the beginning the fund negotiators ignored difficulties in setting arbitrary nominal targets, like halving the ratio of nominal PSBR to GDP at a time of high inflation and indexed government debt, as analyzed by Bacha (1983) and Carneiro and Modiano (1983). After the third letter, new concepts of 'operational deficit' were adopted, but the peculiarities of the inflation dynamics of a highly indexed economy, as spelled out in section III above, tended to be ignored. A third aspect to be noted was that the timing of the suspension of disbursements and the succession of waivers reflected the objective (not written into any of the letters of intent or in technical memoranda of understanding) of promoting a change in the Brazilian wage law in order to reduce wage indexation.[9]

In spite of the fact that the agreement with the IMF was directed towards the financing of 'structural adjustment', it disregarded the need to complete investment projects designed to adapt the economy to the new international restrictions. Finally, the negotiations seemed to ignore the underlying socio-political constraints to feasible stabilization policies as summarized in section II above, although the peculiarities of the international scene at the peak of the international debt crisis have certainly played a decisive role in the concession of waivers during the period.

As illustrated by the figures in table 4, one common feature of both programmes was the complete failure to bring inflation down. The reason plainly lies in the use of the wrong inflation model, so that demand effects were overridden by supply shocks due to devaluation, the raising of public tariffs so as to control the public deficit, and by adverse agriculture supply shocks.

Our estimates for the ratio of PSBR to GDP for the period, with and without adjustment for inflation, also presented in table 4, reflect an important difference between the two programmes. In 1981-82 domestic credit restraint was the dominant instrument for stabilization, and external adjustment was obtained without any significant reduction in PSBR. When adjusted for the effect of inflation on government debt, this measure of the public deficit is found to have remained at practically the same level as in 1979.[10] In 1983, in spite of the increase in non-adjusted PSBR due to the doubling of the inflation rate, the adjusted figure reflects the fall in public deficit which was obtained mainly by a partial de-indexation of wages in the public sector and by cuts in public investment.[11]

Besides the welfare losses usually implied by recessive corrections of the current account - unemployment and real wages - it is hard to present at this point a reasonable

account of the two experiences in comparative terms from the distributive viewpoint. The dearth of data concerning income distribution for each year does not allow generalizations for the population as a whole. Available data for the working force, however, indicate that for the period 1979-85 middle-income groups (from the third to the seventh deciles) suffered the most significant losses in terms of average real income. This fact is consistent with a peculiarity of the 1979 wage law which granted wage-earners up to three minimum wages increases 10 per cent above past rises in the cost-of-living indices, thus providing some protection against an erosion of real wages to the remainder of the working class, at least for those who managed to keep their jobs. This protection was revoked in March 1983, after the first agreement with the IMF. Following this first change in the wage law, successive attempts at reducing the degree of wage indexation by decree were not approved by Congress, until a major negotiation was conducted by the government in the last quarter of the year. A new wage law was then approved which included some of the features originally proposed by the government implying a partial de-indexation of wages. The most important consequences of the changes in the wage law during 1983 was probably the further reduction in the relative wages of public employees, especially those in the highest income brackets.

2. A 'better' alternative

From these comments on the inadequacies of both programmes the elements for alternative programmes should be clear.

First, if the need to complete investment projects directed towards structural adjustment had been explicitly recognised, a more rational allocation of available external funds could have been tried, even involving a complete reordering of investment priorities and reducing the need to increase unused capacity

Secondly, had the correct inflation model been used, the doubling of the inflation rate in 1983 could have been avoided by means of an administered set of incomes and prices policies designed to minimize the inflationary effects of relative price changes.

Thirdly, had the public sector's role in promoting external adjustment in the long run been correctly evaluated, a policy of increased taxation and of not cutting back public investment would have been more appropriate in order to allow a higher level of economic activity and employment to be maintained by preserving public and private investment levels and reducing the consumption of upper income groups.

Fourth, a more accommodating monetary policy would have avoided the instability of interest rates which fuelled financial speculation and helped to disrupt private investment decisions. Monetary restraint seems to have played no role in the process of adjustment as such, being powerless to bring down the rate of inflation and unnecessarily increasing the internal public debt.

Finally, in an ideal situation, seen in hindsight, an adequate evaluation of foreign exchange needs could have provided, especially in 1981-83, external funds for the completion of relevant investment projects, without the instability of financial markets which followed the painful negotiations with international banks under the coordination of the IMF. Although the IMF seal of approval of economic policy has not contributed to a reduction in the internal costs of adjustment, the important political role of the IMF Managing Director, Jacques de Larosiere, in avoiding the total collapse of external financing which could have arisen from the free interplay of private international markets should be recognised, given the peculiar state of the international financial markets since August 1982.

V. NON-ORTHODOX STABILIZATION

The improvement in the external accounts following the recovery of exports in 1984 created a new situation for the Brazilian economy by relieving the grip of the external constraint for the first time since 1980. Sales of manufactures, especially to the US market, completely reversed the external outlook. In the first eight months of 1984 industrial exports totalled US$ 11.1 billion, almost 36 per cent more than in the same months of the previous year. This was in the wake of the US import boom which benefited almost every other Latin American country. In the case of Brazil, however, it meant more than a temporary relief.

The short-run effects of increased exports were of two kinds. First, industrial activity rose, with output in the second quarter of 1984 14 per cent higher than in the second quarter of 1983, the highest growth rate since 1980. Secondly, the upturn in economic activity was not accompanied by the upsurge in imports feared by analysts who were skeptical of the effectiveness of the long-run adjustment process.

Medium-run developments were more important. The impact of the sharp change in agricultural prices in the previous year (see table 4) upon the rural sector's demand for industrial inputs coupled with higher voluntary wage adjustments in the industrial sector as a result of the higher level of activity in the industrial sector helped to spread the boom, leading to a strong economic recovery. Industrial output rose by 6.7 per cent in 1984 and GDP rose by 4.5 per cent. Despite the economic recovery, total imports fell by 9,8 per cent (oil imports fell by 13.9 per cent and non-oil imports by 6.2 per cent). For the first time in ten years, balance-of-payments forecasts pointed to the maintenance of a relatively comfortable external position, with moderate economic growth of between 4 per cent and 6 per cent a year becoming possible without fresh money from private international banks.

The seventh letter of intent presented to the IMF was rejected by the IMF Board at the beginning of 1985 following signs of money and public spending growth in excess of the targets set in the sixth letter in the last quarter of 1984. Once again, criteria concerning domestic variables were the main obstacles to the renegotiation of foreign debt payments to private banks which insisted on the IMF seal of approval for Brazilian domestic policies. After March 1985 the new government spent most of its time trying to convince bankers that another round of restrictive demand policies would do no good to improve the value of their outstanding credit in Brazil.

The schedule of maturities resulting from the successive short-lived postponements of payments since 1982 was impossible to meet, since about half of the total debt to private banks - some US$ 35 billion - was due in the first year. Some kind of rescheduling was unavoidable, for which the banks were requiring Brazil to submit a programme to the IMF. For the IMF, the rate of inflation and the size of the PSBR were signs that Brazil's external adjustment would not last long, unless the government cut spending in order to stop inflation and adjust the domestic economy. Between March and December 1985 the new government tried to reach an agreement with the banks without an IMF agreement on the grounds that the country was not asking for new finance from the Fund or from the banks.

On 28 February 1986 the Sarney government decided to adopt the 'Cruzado programme', a stabilization programme which embodied several elements of the alternative proposals put forward by critics of the orthodox anti-inflationary policies sponsored by the IMF. The set of policies applied was a mixture of the monetary reform proposed by Arida and Lara Resende (1985), the general price-freeze of the so-called 'heterodox shock' proposed by Lopes (1984), using the wage and prices conversion formulae analysed by Modiano (1985c) as well as elements of the Austral plan applied in Argentina under the inspiration of Roberto Frenkel.

The basic diagnosis which inspired the programme was the inflation model of a highly-indexed economy as described in section III above. The programme's objective originally was to promote a sudden and generalized de-indexation of the economy, aimed at breaking the linkages between past and future price increases. The biggest difficulty, of course, lies in avoiding major, and possibly perverse, distributive effects arising from the fact that, when a general freeze is adopted at any point in time during an inflationary process, some prices and incomes have just been adjusted and therefore are at a momentary peak of real value, while others are just about to be adjusted and are thus at a trough of real values. Another difficulty with de-indexation relates to the existence of contracts, containing price formulae based on estimated future inflation. A monetary reform provides scope for the definition of rules for the conversion of future payments based on a high expected inflation into the new money, hopefully free of the inflation hysteresis. Finally, the wage conversion formulae tries to neutralize the distributive consequences of the sudden interruption of the process of 'catching up'.

1. The Cruzado Experiment[12]

The basic ingredients of the Cruzado programme were:

(a) A monetary reform introducing a new money unit, the cruzado, to replace the old cruzeiro, with the publication of a conversion table for the payment in cruzados of debts contracted in cruzeiros. The conversion table assumed that contracts were signed with an expected inflation of 0.45 per cent a day.

(b) Prohibition of indexation clauses for contracts of less than one year, except for passbook savings.

(c) A general price freeze in cruzados at their level of 28 February 1986.

(d) Conversion of wages from cruzeiros into cruzados based on the average real wage of the previous six months plus an 8 per cent bonus; future wage increases

would occur once a year based on free negotiation, with an automatic adjustment of 60 per cent of past increases (from 28 February 1986 onwards) in the official cost-of-living index. It was also decided that wages would automatically increase whenever the rate of inflation reached 20 per cent since the last negotiation.

(e) Nominal value freeze of government outstanding indexed bonds for one year.

(f) Revision of the federal budget for 1986 based on zero inflation expected for the remainder of the year.

(g) Adoption of a special emergency plan to guarantee the supply of basic staple food and granting the federal government the power to carry stocks of basic items in order to avoid speculation against the programme.

Items (a), (b), (e), and (f) are self explanatory, in view of the previous comments. Item (c), although not part of the original Arida and Resende monetary reform proposal[13], was an important part of the Lopes proposal in order to prevent defensive corrections of prices from undermining the success of the programme, whereas item (g) was seen as a guarantee that the government would have the means to avoid any major supply crisis.

Item (d) is more complex to explain.[14] As argued by Bacha (1986), it constituted a departure from the distributive neutrality of the programme in view of the recognition, on the part of the government, that, since real wages had been in an unfavourable situation since the exchange crisis of 1982 it would not be seen as fair to keep real wages frozen at their average real value during the previous six months. On the other hand, one problem for the rule's implementation lay in the fact that real wages had been growing in several sectors of the economy since 1985, and growing moreover at differing rates in different sectors. It was not clear therefore whether a general 8 per cent increase for all categories would generate price

increases in attempts at recovering the previous mark-ups. The adoption of the 20 per cent trigger scheme was seen as a guarantee, for workers, that no significant real losses would arise from the fact that wages would now be corrected annually rather than every six months.[15]

Popular acceptance was immediate. Economists known for their different views on stabilization and who had argued against the shock only a few weeks earlier lent their support to the government's action and helped to weaken opposition.[16] The formal announcement by the President was followed by immediate popular support for the freeze, the mass media helped in the task of explaining the nature of the programme to the population and the dollar black market rates fell immediately by around 20 per cent. Some union leaders tried to mount a general strike against the government plan on the grounds that it would be detrimental to workers, but the strike was called off for lack of public support.

Four main issues seem to have worried the economic team soon after the programme was launched: inflationary expectations, the immediate effect of frozen 'wrong prices', the fragility of the financial system and possible immediate recessive effects. The way the government chose to deal with these issues turned out to be crucial for the outcome of the process.

In order to deal with the first issue, immediately after the announcement of the Cruzado plan the government set a zero target for inflation in an effort to erase inflationary expectations. This led to the abandonment of any attempt to correct 'obviously wrong prices', meaning that the government opted for delaying as much as possible any corrective measure for fear of undermining confidence in the (short-run) effectiveness of the price freeze. As a consequence, the second issue was transferred to the future.

In the first month it became clear that most industrial prices could actually fall since they were usually fixed for a period of around three months based upon an expected inflation that did not materialize. A round of negotiations between wholesalers and retailers gave rise to some important reductions and, in March, average consumer prices according to the official index (IPC) fell by 0.11 per cent.[17] This was enough to promote a radical change in inflationary expectations and helped to alter economic agents' defensive behaviour which perpetuates inflation. In the following three months the rate of inflation remained below 1.4 per cent a month compared with levels of around 14 per cent before March. The annualized quarterly fell from 415 per cent in February to 8.6 per cent in May while wholesale prices fell continuously until May. Unfortunately, the room for manoeuvre for non-inflationary relative price corrections was not used by the government. Perhaps excessive concern with the zero target, coupled with a perplexing disregard for the need to proceed with the downwards correction of some nominal prices after the first month, are part of the explanation.

Two components of the price index demonstrate the difficulty of enforcing a freeze. In clothing price inflation tended to proceed at a high level (although at a slower pace than before the freeze), as had happened in the Argentine experience one year earlier. 'Transportation' reflected the overheated market for automobiles, new and used, for which demand had already been booming since the previous year in a natural recovery after four years of recession and falling real wages for middle-income groups. The fact that car prices had been scheduled to increase at the time of the freeze, and were thus seen as one of the first candidates for revision as soon as the government started correcting the 'wrong' prices, led to anticipation of purchases, adding fuel to excess demand.

Difficulties also started to appear in relation to the supply of products whose prices had been frozen in February 1986 at the 'wrong level'. Although the government had announced on February 28 that some prices would soon be corrected, such corrections were never made as the immediate success of the reform became the policy makers' dominant concern. This led to shortages and widespread illegal overpricing in the context of a demand boom whose intensity was neither anticipated nor viewed as a problem. These difficulties affected not only the market for manufactured goods - especially consumer durables - but also those for meat, eggs and dairy products which, in addition to being frozen at very low price levels, had been adversely affected by the previous year's drought and other disturbances related to their long-term cyclical behaviour.

The level of activity showed a significant increase: employment, industrial output, energy consumption and retail sales all boomed. Industrial output increased by 12.6 per cent in the first semester compared with the same period of 1985.

The demand boom may be explained by the accumulation of favourable impacts since February 1986 including the effect on the total monthly wage bill of the synchronization of wage adjustments and the 8 per cent bonus; the wealth effects associated with the sudden change of inflationary expectations, releasing funds for consumption; the reshuffling of portfolios related to the change in inflationary expectations in favour of consumer durables; the release of precautionary balances as accelerating economic growth reduced unemployment risk; and the fiscal measures of the end of 1985 which increased disposable income in the short-run.[18] Less favourable interpretations include excessive monetization, uncontrolled deficit spending and a run on goods caused by a lack of confidence in the programme. In other words, the support shown by the public in TV interviews was not necessarily matched by its behaviour in the market place.

With hindsight, there seems to be agreement that the monetary policy pursued by the Central Bank in the first months of the Cruzado Plan was too expansionist, especially in view of the fact that the government decided not to correct prices immediately after the freeze. The nominal money stock (M1) increased by almost 200 per cent between February and July. This alone is not sufficient to establish that monetary policy was too expansionist: it might simply reflect the sharp rise in the demand for money induced by the fall in the opportunity cost of holding cash and demand deposits. Excessive monetization of the economy is however suggested by the evolution of a broader monetary aggregate, such as M4. Price stability should lead only to a reshuffling of portfolios with indexed assets being replaced by non-indexed money. The data shows that M4 did not remain constant, rising by 22.3 per cent between February and July 1986.[19]

Another sign of excessive monetization of the economy is given by ex-post real interest rates, the boom in the stock market and the spread between the value of the US dollar in the parallel and official markets after February.[20] The ex-post net real return on both very short-term applications (overnight deposits) and on Certificates of Deposits (CDs) remained either at a very low or negative level. Besides, while the official exchange rate with respect to the dollar was kept constant, the rate of devaluation in the parallel market remained highly positive, signalling the uncertainty caused by the delay in the announcement of complementary measures. By August this spread, which was around 25 per cent when the Cruzado plan was launched, had climbed to 70 per cent.

The government somewhat timidly attempted, in July 1986, to take the heat off demand by imposing additional taxation designed to skim off the speculative gains made by suppliers of scarce goods such as automobiles and increased the sales tax on fuel.[21] The government opted for a compulsory saving

scheme: the proceeds of additional indirect taxation were supposed to be returned to taxpayers in three years' time. The government's financial needs arising from the fall in tax revenues relative to those which had been expected would thus be met by adding pressure where it was less needed, namely final prices. At the same time the government published a Plan of Targets (Plano de Metas) in an attempt to revive the aura of the Kuvitschek years by trying to channel public as well as private investments to priority sectors. It also announced that the increased financial requirements due to subsidies as a result of the price freeze, the most prominent example being milk, would be financed by additional taxation and not by correction of prices.

The July package did not do enough to contain demand and boost public savings and thus signal both a lower budget and a sustainable investment recovery. The dearth of dependable data on government finance was not eased by the creation of the Treasury Secretariat whose main objective was to promote centralization of the federal government's accounts and keep track of the fiscal deficit. Debate over the size of the public deficit continued to be based on very thin evidence. The official position that the fiscal deficit during 1986 was reduced to less than 2 per cent of GDP (from around 4.5 per cent in 1985) has been object of a great deal of controversy.[22]

By the end of the third quarter there were still no signs of the growth in supply matching demand. Failure to enforce the price freeze in some markets like meat, for example, in which producers displayed their contempt for governmental efforts at radical intervention, helped to erode public confidence in the possibilities of maintaining the freeze for much longer and added fuel to the buying spree. Sectoral growth data illustrate the difficulties in sustaining the boom: in the first eight months of 1986, when industrial output as a whole was 11.4 per cent higher than a

year earlier, production of durable consumer goods rose by 30 per cent but was still not enough to cope with the queues. The output of capital goods was up by 23.5 per cent on the same period of 1985. This, plus the 40 per cent or more increase in capital goods imports, indicated a strong investment recovery and helped to support the official view that producers' confidence was high enough and that capacity expansion would soon meet demand needs.

On 21 November as the government party was celebrating its victory in every state and news was reaching the press that a sudden drop in the monthly figures for exports had occurred in October,[23] a new package of policies was announced. The new measures, unfortunately labelled 'Cruzado II', had the explicit objectives of controlling the public deficit, stimulating savings and exports and reducing industrial growth for 1987 to around 5-6 per cent.

The measures involved a further increase in indirect taxes and in public tariffs which would add, according to official estimates, around 4 per cent of GDP to public revenue in a year's time. As a consequence of price corrections and tax increases, gasoline prices would be raised by 60 per cent, other energy prices by 21 per cent, telephone rates by 35 per cent, automobile prices by 80 per cent, cigarettes and beverages by 100 per cent, sugar by 60 per cent, milk and dairy products by around 100 per cent. In order to diminish the impact on the official consumer price index which, thanks to the trigger clause, would detonate a wave of wage corrections in January, the government announced that it would change the price index governing wage corrections and would purge the most significant effects of the package from the new index. The most adverse effect of the Cruzado II, however, was a vague announcement that more adjustments were to come in the near future, although neither the rules for price adjustments nor the pace of 'defrosting' seemed to be known by the authorities, who kept referring to a price freeze which had clearly been left behind.

For the first time since the announcement of the Cruzado plan, the government admitted that the distributive tensions caused by the need to correct profit margins would be absorbed by wage-earners. Following a difficult period of political turmoil, when the government party threatened to withdraw support from the new measures, the government abandoned the idea of tampering with the price index and thus allowed the trigger clause to be invoked in January. Unable to contain the distributive conflict implicit in relative price corrections, the government initiated a new wave of corrective inflation, the full consequences of which are still hard to evaluate.

2. Comparisons with 1980

The pattern of industrial growth in 1986 repeated the one observed in 1980 when a short-lived boom followed the frustrated attempt at partial de-indexation by the Figueiredo government. Memories of the 1980 Delfim Netto stabilization experiment are inevitable. In 1980, the foreign exchange crisis brought about by the resistance of foreign bankers to Delfim's odd experiments resulted in a loss of around US$ 3.5 billion in foreign reserves. In 1986 the comfortable reserve position, which gave Brazil a unique position for debt negotiation, may have been turned into a delicate external situation. In order to recover external credibility, Delfim had to promote a radical reversal of macropolicies described in the previous section, which initiated the fiercest recession on record. The Cruzado experiment may have cost more in foreign exchange as capital flight, stimulated by high black market exchange rates, may prove to have been more significant than in the worst years of the exchange crisis.

Lack of demand control and failure to adjust relative prices as soon as such measures were seen to be necessary were the main reason behind the difficulties faced by the Brazilian economy by the end of 1986. As favourable

expectations were not fulfilled, the government faced renewed credibility problems as to the future of stabilization policy.

The distributive aspects of the Cruzado programme seem to have been crucial to the decisions concerning the specific policy measure which accompanied the shock and its relatively short-lived success. First, as pointed out above, concern with possible adverse distributive effects of the programme lay behind the adoption of the wage bonus. Secondly, most criticism after the shock was directed to the fact that workers would certainly pay most of the costs of stabilization in unemployment and the fall in real wages which would, according to critics, be an inevitable outcome of the programme. Thirdly, although data on actual changes in income distribution are not available for the months after the programme, its distributive impact seems to have worsened supply shortages in most urban markets, since the prices of food items actually fell in nominal terms, thereby providing scope for increased consumption of other items. Finally, the government's hesitation in adopting corrective measures hinged upon what seems to be an inevitable reversal of distributive gains arising from price corrections with or without the maintenance of the trigger clause.

As to the future of stabilization, the delay in introducing credible corrective measures not only worsened the climate of uncertainty which tended to paralyse investors, but also meant that the more permanent gains to be expected from the experiment may vanish as inflation resumes.

With the Cruzado programme the Brazilian government missed an opportunity to bring about a radical change of prospects for the Brazilian economy, since high inflation had been regarded as the main obstacle to a strong and long-lasting recovery after the external debt crisis of the early 1980s. The sudden halt to inertial inflation was

enthusiastically received as the magic which could free the country from what looked like an eternal constraint to steady growth. Unfortunately, the failure to make use of the room for manoeuvre provided by the price freeze to implement measures which could sustain a path of low inflation without making income concentration worse was taken, as shortages undermined confidence in the programme, as a sign that heterodox stabilization policies aimed at stopping inertial inflation without recource to a long and disrupting recession are a structuralists' dream. The emotional charge in the evaluation of the cruzado experience seems to be, alas, inevitable. As happened in the aftermath of the 1980 experiment with partial de-indexation, stop-and-go demand controls will probably be the main characteristic of the next round of macro-policies in Brazil, if the government is unable to re-establish a consensus and find a way out of the trap into which post-cruzado economic policy was caught after November 1986.

VI. EXTERNAL ACCOUNT PROSPECTS

In 1986 GDP growth of around 8 per cent, in spite of a 4.5 per cent decline in agriculture, plus the congestion of port and tranportation facilities which occurred in the second semester, were the main factors accounting for the fall in exports which led to a trade surplus some US$ 3 billion below official projections. Although the exchange rate had been kept constant in nominal terms until September, there was no sign of a deterioration in the trade balance prior to then. The sudden worsening after September due to a steep fall in exports (a US$ 700 million decline in the monthly average between the third and fourth quarters), helped further to erode confidence as it signalled difficulties on the external front and validated a further increase in black market rates. The government returned to mini-devaluations and offered exporters the possibility of depositing their revenues in dollars at the Central Bank in an effort to insure them against a possible maxi-devaluation. Export revenues kept on falling during the last quarter and, by the end of the year, were some US$ 2 billion down on what had been previously expected.

The black market exchange rates which have prevailed since the beginning of the fourth quarter of 1986 signal a high level of uncertainty not only about the future external position but also about political developments and the overall management of economic policy in the wake of the Cruzado plan. Another sign of uncertainty is the sharp rise in the negative net flows for foreign direct investment which rose to almost US$ 360 million in the period to September in sharp contrast with behaviour before 1984.

An interesting question to ask at this point is whether the reasonably comfortable balance-of-payments position which had until recently been projected for the remainder of the decade may still be achieved after the sudden reduction of the trade surplus at the end of 1986.

Simulations performed by the author using an econometric model for the Brazilian economy indicate that before the Cruzado experiment, annual rates of GDP growth of 5-6 per cent were consistent with the maintenance of a trade surplus around 4.5 per cent of GDP and net transfer of real resources abroad measured by net exports of goods and non-factor services of around 3.5-4 per cent of GDP for the remainder of the decade.[24]

When we allow for faster growth by means of more expansionist demand policies, as happened during 1986, the resulting increases in the level of capacity utilization has two major consequences. The trade surplus tends to be smaller as manufactured exports are reduced (at the same level of price stimuli stemming from international prices, subsidies and the exchange rate) while intermediate imports rise. On the other hand, investment requirements tend to operate as a limit to the level of transfers abroad. With rates of GDP growth of between 8.5 per cent and 9.5 per cent, for example, the rate of capacity utilization is around 10 percentage points above the 5-6 per cent path meaning that, in order to maintain such high growth levels, net transfers abroad have to be reduced in order to increase domestic investment by at least 2 per cent of GDP.

Though no dramatic change in balance of payments prospects for the coming years are expected, provided that no unreasonable policies are adopted in the immediate future, disregard for import substitution and export promotion activities is likely to cause a continuous deterioration of the country's external position if no significant reduction is obtained in the present levels of tranfers abroad to service external debt.

The main conclusion is thus that the present difficulties can in principle be reasonably accommodated at least as long as the relief brought about by the lower price of oil and lower international interest rates is not

suddenly reversed. But lack of control of the foreign accounts in the short run, provoked by inconsistencies in relative prices made worse by expectations of devaluation, is certainly one factor which could undermine policy credibility, both at home and abroad.

Although international conditions for the Brazilian economy seem more favourable than in 1980, thanks to higher world growth prospects, lower interest rates and lower oil prices, the reappearance of external restrictions cannot be ruled out, given the fragility of the present pattern of external debt negotiations.

Keeping the economy at a high level of capacity utilization at the same time as maintaining the present level of real transfers abroad of 3-4 per cent of GDP seem to require not only the adoption of consistent macropolicies to prevent inflation getting out of hand, but also the resumption of the kind of industrial policy which fully exploits the country's comparative advantages, maintains a low import coefficient and provides scope for growing export capacity.

FOOTNOTES

1. This paper was prepared for the UNU/WIDER Project on Stabilization and Adjustment Programmes and Policies. The author expresses his gratefulness to Eduardo Loyo for assistance. Lance Taylor, Gerry Helleiner, Jaime Ros, Marcelo Abreu and Carlos Massad made valuable comments on previous versions which were helpful in the preparation of this final version.

2. For a detailed account of the effects of this process on the evaluation of the financial situation of the Brazilian government see Werneck (1986). Carneiro (1986b) presents a homogeneous series for public sector debt and deficits for the period 1970-1984.

3. See, for example, Resende-Lopes (1981), Lemgruber (1973), Contador (1979 and 1981) and Modiano (1983).

4. See, for example, Sochaczewsky (1980), for an account of the main elements of the financial reforms.

5. The point has been analyzed in Carneiro and Modiano (1983).

6. The issue is taken up in Carneiro (1986a).

7. The actual fall in import coefficients became noticeable in aggregate terms only after 1983, when most projects started to produce results.

8. In the first quarter of 1983 manufactured exports were still 7.6 per cent below their level one year before. Following the recovery of the US economy, in the last quarter of 1983 they were up by 19 per cent compared with the last quarter of 1982. In the fourth quarter of 1984, they were 44 per cent higher than a year before.

9. For analyses of the seven letters of intent and of the process of negotiation during this period, see Marques (1985) and Carneiro (1986c). On the issue of the wage law, it should suffice to note that during 1983, the rules for the correction of wages were changed four times by Presidential decree, but only after a long negotiation Congress approved a change in the law.

10. Note that the figure for 1980 reflects the gain due to partial de-indexation.

11. Most wages in the public sector were corrected by 80 per cent of past inflation during the second half of the year.

12. The following sub-sections draw heavily on Carneiro (1987).

13. See the original Arida and Resende proposal in Arida and Resende (1985), and the Lopes heterodox shock scheme in Lopes (1984).

14. In the companion paper prepared for the same seminar, Modiano extensively analyses the details of the wage correction formulae the rationale of which he has abundantly examined in previous works. See Modiano (1986a and b).

15. There was much controversy over the issue of the trigger clause. Economists who had been engaged in studying analytical aspects of the monetary reform worried that the instability caused by a trigger clause for wages could ruin any attempt at correction if the inflation rate went out of control for a short period. On the other hand, the existence of the clause was seen by some analysts as a guarantee that the government would adopt very conservative demand policies for fear that an upsurge of inflation would bring back high rates and therefore demoralize the whole scheme.

16. Behind this apparent unanimity, quite different positions may be identified. One brand of economists saw in the programme a fantastic success of 'marketing' by means of which inflationary expectations could be brought down overnight. Another variant pointed to wage de-indexation as the main element which would open room for rapid disinflation. Finally, another group of economists saw the sudden end of 'financial speculation', meaning essentially high nominal rates of interest, as the crucial element by which inflation could be brought down. It should be easy to imagine the kind of complementary measures each group would support following the initial steps.

17. According to non-official indices, the deflation was still more significant.

18. A fiscal package passed by government on December 1985 had been designed to reduce the inflationary loss of government revenue, and to increase the incidence of taxation on the gains made by the financial system from inflation. Although many government officials had referred to the package as a 'preparation for the reform', its adoption is evidence that the decision to implement a shock had not been reached. For wage earners, the effect of the package was to increase take-home pay.

19. It should be noted that in March M4 increased by 12 per cent. Part of this increase, however, had nothing to do with excessive monetization but was due to the fact that a fraction of the stock of indexed deposits had readjustment dates between the last day of February and the last day of March.

20. On February 1986 the spread between black market and the official rate was of 44.5 per cent dropping to 26 per cent in the following month and returning to the pre-shock level by the end of April.

21. The July package stopped short of signalling a major reversal in demand policies. Analysts were divided about the issue of how long the demand boom would last, but there was less controversy on the type of measure the government should be adopting, specifically an increase in income tax retention which would immediately reduce wage-earners' take-home pay without creating additional pressure on prices.

22. According to official data published by the press, by the end of October the financial position of the Federal Treasury, inclusive of transfers to State companies, exhibited a cash surplus of Crz$ 16.1 billion, including revenue obtained by the sale of federal bonds of Crz$ 39.9 billion.

23. A drop of around 28 per cent compared with the previous month was observed.

24. The core of the simulation model used is an empirical simplified version of the structure described in subsection III.1. A more complete version of the model is presented in Modiano (1983). The basic idea is the simultaneous determination of the growth rate (and capacity utilization) and of net exports of goods and non-factor services. The basic equations are a global demand determining output as a function of exports and

monetary and fiscal variables, export and import equations. For assumptions concerning international data, the scenarios presented in Marris (1985) have been used.

REFERENCES

Abreu, M. de P. (1985). 'Politicas e Indicadores Sociais no Brasil: A relevancia dos paradigmas historicos e comparativos', mimeo., PUC-RJ, Deccember

Arida, P. and Resende, A.L. (1985). 'Inertial Inflation and Monetary Reform: Brazil'. In J. Williamson, (ed.), INFLATION AND INDEXATION, Washington, DC: Institute for International Economics, March

Bacha, E.L. (1982). ANALISE MACROECONOMICA: UM TEXTO INTERMEDIARIO. Rio de Janeiro: INPES/IPEA; Serie PNPE nb. 6.

Bacha, E.L. (1983). 'Vicissitudes of Recent Stabilizations Attempts in Brazil and the IMF Alternative', in J. Wiliamson, (ed.), THE IMF CONDITIONALITY, Washington, DC: Institute for International Economics.

Bacha, E.L. (1984). 'External Shocks and Growth Prospects: the of Brazil 1973-89', Texto para Discussao nb. 73, Departamento de Economia, PUC-RJ.

Bacha, E.L. (1985). 'The future role of the IMF in Latin America: Issues and Proposals'. Texto para Discussao nb. 97, Department of Economics, PUC-RJ, June.

Bacha, E.L. (1986). 'A Inercia e o Conflito: o Plano Cruzado e seus Desafios'. Texto para Discussao no. 131, Dept. of Economics, PUC.-RJ, June

Batista, J.C. (1986). 'Brazil's Second Development Plan and its Growth-cum-Debt Strategy'. Texto para Discussao nb 93, Economics Institute, Federal University of Rio de Janeiro.

Beluzzio, L.G. and Tavares, M.C. (1984). 'Uma Reflexao sobre a Natureza da Inflacao Contemporanea', mimeo., ANPEC, November.

Camargo, J.M. and Landau, E. (1983). 'Variacoes de Demanda, Estrutura de Custos e Margem Bruta de Lucrosno Brasil: 1974/81'. PESQUISA E PLANEJAMENTO ECONOMICO; 13(3) Rio de Janeiro: INPES/IPEA, December.

Carneiro, D.D. (1986a). 'El Ajuste a Largo Plazo, la Crisis de la Deuda y el Papel Cambiante de las Politicas de Estabilizacion en la Reciente Experiencia Brasilena', in R. Thorp and L. Whitehead, eds., La Crisis de La Deuda en America Latina. Bogota: Siglo Veintiuno Editores, 1986.

Carneiro, D.D. (1986b). 'Passivo do Governo e Deficit Publico: a experiencia da economia brasileira no periodo 1970-85'. Texto para Discussao nb. 125, Department of Economics, PUC-RJ, February.

Carneiro, D.D. (1987). 'The Cruzado experience: an untimely evaluation after ten months'. Paper presented at the IDRC Seminar on Recent Stabilization Experiences in Latin America, Bogota, January.

Carvalho, J.A.M. de (1984). 'Declinio da Fdecundidade no Brasil, Ritmo de Crescimento Demografico e Distribuicao Etaria da Populacao', REVISTA DA ANPEC, ano VII, nb. 8, November.

Diaz-Alejandro, C.F. (1983) 'Some Aspects of the 1982-83 Brazilian Payments Crisis', BROOKINGS PAPERS ON ECONOMIC ACTIVITY, 2: 1983.

Lara-Resende, A. e Lopes, F.L. (1981). 'Sobre as Causas da Recente da Aceleracao Inflacionaria'. PESQUISA E PLANEJAMENTO ECONOMICO, Rio de Janeiro, 11(3), December.

Lemgruber, A.C. (1973). 'A Inflacao Brasileira e a Controversia sobre a Aceleracao Inflacionaria', REVISTA BRASILEIRA DE ECONOMIA, 27(4).

Lopes, F.L. e Bacha, E.L. (1983). 'Inflation, Growth and Wage Policy: a Brazilian Perspective', JOURNAL OF DEVELOPMENT ECONOMICS.

Lopes, F.L. (1984). 'Inflacao Inercial, Hiperinflacao e Desinflacao: Notas e Conjecturas', REVISTA DA ANPEC, VII(8), November.

Marques, M.S.B. (1985) 'FMI: a Experiencia Brasileira Recente', mimeo., F.G.V., Rio de Janeiro.

Marris, S. (1985). DEFICITS AND THE DOLLAR. Washington: Institute for International Economics.

Modiano, E.M. (1985). 'O Repasse Gradual: da Inflacao Passada aos Precos Futuros', PESQUISA E PLANEJAMENTO ECONOMICO, Rio de Janeiro, December 1985.

Modiano, E.M. (1986). Da Inflacao ao Cruzao. Rio de Janeiro: Editora Campus, 1986.

Modiano, E.M. (1987). 'The Cruzado Plan: Theoretical Aspects and Practical Limitations'. Paper presented at the IDRC Seminar on Recent Stabilization Experiences in Latin America, FEDESARROLLO, Bogota, January.

Modiano, E.M. (1983a). 'A Dinamica de Salarios e Precos na Economia Brasileira: 1966/81'. PESQUISA E PLANEJAMENTO ECONOMICO, Rio de Janeiro, 13(1), April.

Modiano, E.M. (1983b). 'Consequencias Macroeconomicas da Restricao Externa em 1983: Simulacoes com um Modelo Econometrico para a Economia Brasileira', REVISTA BRASILEIRA DE ECONOMIA, June/August.

Modiano, E.M. (1985). 'A Inflacao e a Moeda Indexada'. Texto para Discussao nb. 99, Department of Economics, PUC-RJ, Rio de Janeiro, June.

Modiano, E.M. (1986). 'O Choque Argentino e o Dilema Brasileiro', REVISTA DE ECONOMIA POLITICA, 6(2), April-June.

Okun, A.M. (1975). 'Inflation its Mechanics and Welfare Costs'. BROOKINGS PAPERS ON ECONOMIC ACTIVITY, 2: 1975.

Pombal-Dib, M.F.S. (1985). IMPORTACOES BRASILEIRAS: POLITICAS DE CONTROLE E DETERMINANTES DA DEMANDA, Rio de Janeiro, BNDES.

Sochaczewski, A.C. (1980). 'Financial and Economic Development of Brazil, 1952-1968', unpub. Ph.D. Dissertation, LSE.

Taylor, L.J. (1983). STRUCTURALIST MACROECONOMICS, New York: Basic Books.

Taylor, L.J. (1986). Stabilization and Growth in Developing Countries: How Sensible People Stand', mimeo., MIT.

Werneck, R.L.F. (1986). 'Poupanca Estatal, Divida Esterna e Crise Financeira do Setor Publico'. Texto para Discussao nb. 121, Department of Economics, PUC-RJ, January.

Table 1.

Brazil: Government Disposable Income
(1973-1983)

Components	As a % of GDP			Decomposition
	1973	1983	Change	
	(A)	(B)	(A-B)	%
Gross Taxation	26.52	24.44	-2.08	-25.46
Direct Taxes	(10.91)	(11.95	(1.04)	(+12.73)
Indirect Taxes	(15.61)	(12.49)	(-3.12)	(-38.19)
Other Current Revenues (net)	-0.16	-1.22	-1.06	-12.97
(-) Subsidies	-1.23	-2.27	-1.04	-12.73
(-) Transfers	-8.29	-12.27	-3.98	-48.72
Government Disposable Income	16.84	8.67	-8.17	100.00

Reproduced from R. Werneck - "Poupança Estatal, Dívida Externa e Crise Financeira do Setor Público", Texto para Discussão nº 121, Deptº de Economia, PUC-RJ, jan 1986, p. 12.

Table 2. - Two Orthodox Programmes Compared

	1981/82	1983/84
Diagnosis:	(1) Excess demand due to monetary and fiscal slackness had led to both inflation acceleration and increase in current account deficit; (2) Low interest rates and abundant domestic credit had led to excess consumption and discouraged private borrowing abroad; (3) Foreign bankers were unwilling to extend credit unless there was a convincing display of austerity in order to reduce consumption and induce export growth.	(1) Need to adjust the economy to the new situation in credit markets after the Mexican moratorium; (2) Control excessive domestic absorption to provide room for interest payments; (3) Public deficit as a symptom of the need to promote internal adjustment and control inflation;
Aims:	(1) Reduce demand to show controllability over the current account deficit; (2) Display of austerity to bring foreign bankers back to finance long-run adjustment programme. (3) Induce private sector external borrowing	(1) Reduce the need of external credit; (2) Reduce inflation; (3) Increase exports.
Hidden objectives:	(1) Gain more time to permit investment projects directed to self-reliance objectives to mature; (2) Limit wage control to upper income groups to maintain trade unions under control and minimize "social unrest".	
Instruments:	(1) Liberalization of interest rates; (2) Ceilings of 50% on the growth of the monetary base and M_1; (3) Ceiling on credit aggregates for non-priority sectors; (4) Reduction of public sector consumption spending in order to open room for the growth of private sector; (5) Definition of an import budget for state companies; (6) Tax incentives to manufactures exports;	(1) Control PSBR, having it cut by 1/2 in nomi terms; (2) Control domestic credit of the Monetary Authorities; (3) Promote mild devaluation by accelerating mini-devaluations; (4) Liberalize trade.
Hidden Instrument:		- Reduction of wage indexation

Table 3.

BRAZIL : SELECTED DATA ON EXTERNAL ACCOUNTS
(1971-1978)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Exports (US$ billion)	2.9	3.9	6.2	7.9	8.7	10.1	12.1	12.7	15.2	20.1	23.3	20.4	21.9	27.0	25.6
% GDP	5.9	6.6	7.7	7.5	7.0	6.6	6.8	6.3	6.7	8.4	8.7	7.6	10.7	12.8	11.6
Imports (US$ billion)	3.2	4.2	6.2	12.6	12.2	12.4	12.0	13.7	18.1	22.9	22.1	19.6	15.4	13.9	13.2
% GDP	6.5	7.1	7.7	11.9	9.8	8.1	6.8	6.8	8.0	9.5	8.3	7.3	7.5	6.6	6.0
Trade Balance (US$ billion)	-.3	-.3	0.0	-4.7	-3.5	-2.3	.1	-1.0	-2.8	-2.8	1.2	.8	6.5	13.1	12.4
Terms of Trade (1977=100)															
Total	82	87	95	78	76	85	100	86	79	65	55	54	53	58	58
Non-oil	65	72	82	78	76	85	100	84	81	78	71	69	64	71	79
Growth of World Imports (%)	5.9	8.9	11.9	3.7	-4.8	11.7	5.3	5.8	5.4	1.0	.7	-.3	1.4	9.0	3.0
Net exports (goods and services)															
US$ billion	-.9	-.9	-1.0	-6.2	-5.1	-3.8	-1.5	-2.8	-5.2	-5.9	-1.6	-2.8	4.1	11.4	10.5
% GDP	-1.8	-1.5	-1.2	-5.9	-4.1	-2.5	-.8	-1.4	-2.3	-2.5	-.6	-1.0	2.0	5.4	4.7
Interest payments (US$ billion)	.3	.4	.5	.7	1.5	1.8	2.1	2.7	4.2	6.3	9.2	11.4	9.6	10.1	10.4
% Exports	10.4	9.2	8.3	8.3	16.8	17.9	17.4	21.2	27.5	31.3	39.3	56.8	43.6	37.3	40.6
Interest rates (average)	7.4	7.4	9.6	10.6	12.3	10.6	10.8	10.9	13.2	15.7	19.5	21.1	14.6	13.3	12.7
Net Debt / Exports	1.7	1.4	.9	1.5	1.9	1.9	2.0	2.5	2.6	2.3	2.3	3.3	3.5	3.0	3.1
Real Exchange Rate (1977=100)	167.1	159.9	143.6	123.7	115.8	107.7	100.0	92.6	88.8	87.3	79.8	72.7	91.9	90.9	93.6

Sources of raw data: Boletim do Banco Central (several issues)
National Accounts Tables (FGV)
International Financial Statistics

Table 4.

BRAZIL : GROWTH, INFLATION, REAL WAGES, MONETARY AND FISCAL DATA
(1971-1978)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
GDP (1)	11.3	12.1	14.0	9.0	5.2	10.1	4.5	4.7	7.2	9.1	-3.4	.9	-2.5	5.7	8.3
Industrial output (1)	—	14.0	16.6	7.8	2.1	11.9	2.2	6.1	6.9	9.2	-10.2	-.2	-5.5	7.0	8.5
Inflation (2)	19.8	15.5	15.7	34.5	29.2	46.4	38.7	40.9	77.2	110.2	95.2	99.7	211.0	223.8	235.1
Agricultural prices (2)	24.7	22.3	16.7	31.2	33.7	67.0	34.2	47.6	80.5	138.2	70.7	89.5	335.8	230.5	267.7
Industrial prices (2)	16.7	15.4	16.4	35.6	29.2	40.3	35.5	39.9	78.8	110.3	99.6	99.8	200.5	233.2	221.1
Industrial real wages (3)	63.6	68.1	73.3	74.3	82.1	84.7	89.3	96.7	100.0	96.0	100.1	109.9	94.5	87.3	93.4
Monetary Base (1)	5.6	10.3	16.7	9.4	-3.9	2.6	13.0	5.2	2.9	-15.0	-22.9	-5.4	-23.0	-20.4	2.1
Money Supply (1)	8.4	11.7	27.9	7.5	4.0	-.3	-3.5	-1.2	-.8	-12.2	-21.0	-6.5	-27.7	-24.4	7.9
Financial Assets (1)	18.4	28.1	37.0	7.5	14.4	9.5	3.6	7.5	1.9	-13.2	-2.2	24.8	.1	1.2	20.3
Loans to Private Sector (1)	24.5	30.2	36.8	20.5	22.4	12.7	7.6	8.3	2.1	-12.5	-11.3	7.7	-6.5	-12.3	3.8
Loans from Monetary Authorities (1)	17.0	19.3	31.8	46.8	40.2	13.2	7.4	2.8	-4.5	-11.8	-24.9	-15.3	-26.9	-37.6	-3.5
PSBR / GDP (4)	1.7	5.8	3.9	1.9	2.4	3.1	5.1	4.8	4.9	4.3	5.8	7.1	7.5	9.3	--
Adjusted Deficit / GDP (4)	1.5	5.6	3.0	.8	1.6	2.0	4.0	3.0	3.0	1.9	3.2	3.1	.1	2.2	--
Average nominal interest rates (5)	20.6	17.9	15.3	18.2	21.1	36.8	40.8	44.5	41.2	38.3	90.7	115.7	170.1	245.3	248.2

Notes: (1) Real rates of growth
(2) December to December
(3) Deflated by the General Prices Index (IGP-DI), 1979=100
(4) Author's estimates. For details see Carneiro (1986a)
(5) Short term (91 days) government bills (LTN's), annual averages

Sources of raw data: Boletim do Banco Central (several issues)
Conjuntura Economica (several issues)
FIBGE - Indicadores da Industria (several issues)