Peter T. Knight

Brazilian Socioeconomic Development: Issues for the Eighties

Brazilian Socioeconomic Development: Issues for the Eighties

PETER T. KNIGHT*
World Bank, Washington, D.C.

Summary. - Since 1964 Brazil has experienced rapid economic growth, exclusionary politics and a persistently unequal distribution of income. After 1973 rapid growth was maintained only at the cost of accelerating inflation and massive foreign borrowing, while a process of political liberalization was begun. A change in economic development strategy could increase the number of jobs created per unit of capital invested, concentrate benefits on those who have least profited from the growth process to date, decrease imports, and increase the productivity of the poor. Such a strategy, the outlines of which can be found in Brazil's Third National Development Plan, makes good social as well as economic sense.

1. INTRODUCTION

During the last two decades several countries experienced rapid economic growth while income distribution remained very unequal. Brazil has often been taken as an example of this type of experience, shared by countries such as Mexico, Malaysia, the Philippines, Turkey and Venezuela. The Brazilian economy grew at the spectacular rate of 8.5% annually in real terms from 1960 to 1980. After a period of economic stabilization in the mid 1960s came the 'miracle' years when growth averaged 11.5%, buoyed by a favourable international environment, propelled by a cyclical upswing, and stimulated by innovative policy reforms. Since the 1973 oil shock, growth has slowed, averaging 7.1%.

Though still high, Brazil's growth has been sustained only at the cost of accelerating inflation and massive foreign borrowing. While inflation was running at less than 20% in 1973, during 1980 it reached 110%, the highest level in Brazilian history and more than triple the average rate for the period 1965-1980. In addition, foreign debt increased by over $40 billion between the end of 1973 and the end of 1980, reaching a total of over $54 billion, the largest of any developing country. By April 1981 Brazil's international reserves had fallen to $6.3 billion, equivalent to the cost of only two months' imports.

The outlook for the medium term is not rosy. It is likely that even with continued rapid export growth and a relatively slow rate of GDP growth (5 or 6% a year), the bill for debt service and petroleum imports alone will absorb total export earnings for the next three years at least. This rate of GDP growth is probably insufficient to absorb new entrants to the labour force, much less reduce the level of underemployment, if the recent style of growth is maintained. But even this slower growth scenario depends on developments in the international economy. Events beyond Brazil's control — further increases in real oil prices, continued slower growth in the OECD countries, growing protectionism in Brazil's export markets, and restricted access to international capital markets — might force a further reduction in the rate of economic growth.

Contemplating the economic crisis facing Brazil leads to the question of whether Brazil might alter its strategy of economic development so as to achieve higher employment per unit of capital invested, lower energy requirements per unit of output, and less imports per

* The author is an economist in the Policy Planning and Program Review Department at the World Bank. An earlier version of this paper was prepared for the Commission on United States-Brazilian Relations. The views and interpretations presented here are those of the author and should not be attributed to the Commission, the World Bank, or to any individual acting on their behalf. The author wishes to thank Peter Cleaves, Michael Crowe, Tom Farer, Alan Gelb, Peter Hakim, Margaret Daly Hayes, Fred Levy, Ricardo Moran, Adroaldo Moura da Silva, Phyllis Pomerantz, Joseph Quinn, Bruce Ross-Larson, Alfred Stepan, Hamilton Tolosa and Adrian Wood for helpful comments on earlier drafts.
unit of output, thus restructuring the economy to take into account the higher real price of energy and less favourable international economic environment which are likely to characterize the 1980s.

In this paper I will argue that it is by expanding the internal market, through a series of redistributive reforms designed to satisfy the latent demand of Brazil's millions of poor families for basic public services and wage goods, that the profile of final demand (consumption and investment) can be shifted to achieve these three economic objectives. Further, I will argue that what makes good economic sense also makes good political and social sense.

Consensus has been building among important Brazilian elites -- the military, the church, civilian politicians, technocrats, intellectuals and private businessmen -- that the 'social question' must be addressed if the widely held goal of creating a democratic and developed society is to be achieved. Responding to strong pressures from below as well as their own professed values, Brazil's current leaders have opted for gradual political liberalization and have declared their commitment to improve the living conditions of the poor.

In principle progress toward democracy, the resolution of deep social problems, and structural adjustment of the economy along the lines indicated are mutually reinforcing. The political power of the poor would be strengthened by a successful democratization, thus facilitating the redistributive reforms necessary for the economic restructuring. And it is hard to conceive how the process of political liberalization which began under President Geisel and intensified under President Figureido can long persist without substantial economic and social progress for those who, as the present government publicly admits, have not gotten a fair share of Brazil's rapid economic growth.

But while simultaneous progress toward all three objectives may be the most desirable scenario, it is by no means clear that it can be achieved. The necessity of coping with pressing economic problems in the short run, before the poorest elements in Brazilian society have been able to organize to play an effective role in democratic politics, may pose a trade-off between the depth of redistributive reforms and the extent of democracy. On the other hand, while progress toward democracy may not benefit the poorest in the short run, there is clearly a strong possibility that an authoritarian solution to the current economic problems would not be socially progressive. It could be aimed at repressing demand rather than structural change of the economy, favouring the rich rather than the poor.

The objective of this paper is not to predict the development path which Brazil will take in the 1980s, but rather to show why a reorientation of economic development to meet social needs may be a politically as well as an economically viable option, and to suggest how the international community could help make it a reality if Brazil chooses this course. The strategy suggested here is relevant for other middle-income countries with marked income inequalities and relatively underdeveloped human resources -- such as Algeria, Mexico, Peru and Turkey, and a number of other Latin American countries. Such countries have the financial capabilities to invest more in the poor and have the organizational skills necessary to carry out such programmes, while at the same time expanding the internal market for wage goods, most of which can be produced domestically.

Since Brazilian policy-makers are acting in a context that has historical roots, in this paper's second section I sketch the nature of the closely related paths of economic and political development pursued in Brazil since 1964. The extraordinary achievements of this period are noted, as is what has been left undone. The third section analyses how internal contradictions in the post-1964 Brazilian development model and externally-imposed economic shocks resulted in political changes since 1974. Next I discuss the key issues in socioeconomic development which policy-makers in Brazil must successfully manage to keep political development on course toward democratic institutions. These include making available basic public services -- education, health care, family planning, food supplements, water supply and sanitation -- to those citizens who cannot afford to purchase them in the market; expanding the production and consumption of basic wage goods, such as food, clothing, popular housing and mass urban transportation; providing productive employment to a growing labour force, and assuring a sufficient energy supply. Financial, tax and land reforms, which could help achieve these goals are also outlined. In a concluding section, I discuss ways in which the international community might assist Brazil in these endeavours.

2. CHARACTERISTICS OF POST-1964 BRAZILIAN DEVELOPMENT

Four elements distinguish the Brazilian style of development since 1964: the clear priority given to economic growth, with the objective of
building in Brazil an economy modelled on those of the developed Western industrial nations; the exclusion of major sectors of Brazilian society from the political process; concentration of the benefits of growth, but with significant if uneven trickle-down; and a legacy of unmet social needs.

(a) Priority on rapid economic growth

The military leaders who took power in 1964 clearly opted to give economic growth priority over social development. After a period of economic stabilization and reform, during which growth performance was lackluster, from 1968 to 1973 Brazil's per capita GDP grew at an average rate of more than 8%, almost twice the already impressive rate for the entire period since World War II. By most standard measures of aggregate economic performance, the country made extraordinarily rapid progress during this period. Since 1973 inflation has accelerated and growth slackened. Nevertheless, over the past 15 years Brazil’s economy has outperformed any other in Latin America in terms of GDP growth. Real GDP increased at 8.5% (5.5% per capita), reaching the equivalent of over $230 billion in 1980 (roughly $1940 per capita), thus making Brazil’s national economy the world’s tenth largest, roughly on a par with that of the People’s Republic of China or Canada. Brazil is also the tenth largest producer of automotive vehicles, the third largest agricultural exporter, and is reported to be the seventh largest arms exporter. Table 1 gives a few figures indicative of the rapid growth process over the period 1965–1980. A hint of vulnerability in the country’s economic performance has been lagging primary energy production, which has grown at a rate one fourth less than that of energy consumption between 1967 and 1980. The shortfall has been made up by rapidly increasing imports of petroleum and, to a much lesser extent, coal, though in 1980, compared with 1979, the volume of petroleum imports fell by about 9% under the impact of conservation measures and substitution of domestically produced substitutes, notably fuel alcohol.

A major national goal, shared by the dominant military and civilian elites during this period, was to build in Brazil an economy modelled on those of the Western industrial nations. As a result, development projects often utilized the most modern technologies as soon as they could be brought to Brazil. Exchange

<table>
<thead>
<tr>
<th>Table 1. Growth of the Brazilian economy, 1965–1980</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (millions)</td>
</tr>
<tr>
<td>Real GDP (1970 prices)</td>
</tr>
<tr>
<td>Real GDP per capita</td>
</tr>
<tr>
<td>General price index, domestic supply</td>
</tr>
<tr>
<td>Total exports (1970 prices)</td>
</tr>
<tr>
<td>Total imports (1970 prices)</td>
</tr>
<tr>
<td>Agricultural production</td>
</tr>
<tr>
<td>Industrial production</td>
</tr>
<tr>
<td>Automotive vehicle production</td>
</tr>
<tr>
<td>(thousands)</td>
</tr>
<tr>
<td>1967</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Primary energy production (million metric tons petroleum equivalent)</td>
</tr>
<tr>
<td>Primary energy consumption</td>
</tr>
<tr>
<td>Primary energy imports</td>
</tr>
</tbody>
</table>


rate policy, fiscal incentives and subsidized credit reduced the cost of capital goods, while the use of labour was taxed. Whether alternative technologies could be imported or developed that might make more appropriate use of a large underemployed labour force, simultaneously meeting the goal of growth while fostering a more equal distribution of income and wealth, was a question seldom asked in Brazil or in other countries with smaller domestic markets which followed similar policies, usually with less success.

Adopting the technologies of the most developed economies often involved choices that could, with the benefit of hindsight, be called mistakes, especially since the rise in the real price of energy. A prime example is building a transportation system which relies heavily on private automobiles and trucks when it might have been better in terms of equity and cheaper in cost to have invested more in urban mass transportation systems, railroads and coastal shipping facilities. But the creation of a transport system dependent on cheap petroleum was neither a uniquely Brazilian mistake nor necessarily irrational given reasonable oil price expectations at the time. Directly or through tax and credit incentives, massive government resources went into capital projects which benefited mainly the rich and the middle class. As a result perhaps a quarter of the Brazilian population lives like North Americans or Europeans. It is generally agreed that the incentives for investment in capital goods were so great that firms often chose automated rather than labour-intensive production techniques.

(b) Exclusionary politics

Brazil's economic achievements had political costs. Beginning immediately after the military takeover in 1964, institutions such as peasant unions and political parties through which workers could unite to present economic and political demands were systematically dismantled and repressed while non-agricultural unions were brought back into firm control using the corporativist labour laws of Getulio Vargas' Estado Novo. Numerous political leaders, including three former presidents, were deprived of their political rights. Many went into exile. The repression intensified after the promulgation of Institutional Act Number Five in December 1968, coinciding with the period of the economic 'miracle'. Elections lost meaning for most workers, even when they were permitted. During the Medici Government, attempts by leftist groups to organize armed resistance to the regime were harshly put down and also the labour movement was repressed.

The style of Brazilian economic growth (not only how much was produced, but what was produced for whom) was strongly influenced by the fact that the poor and a large part of the working class had neither effective political voice nor economic power. And at the same time, rapid economic growth was one of three important factors legitimizing the regime among the military itself, the middle class and a significant fraction of the working class. Other major sources of legitimacy were the military's attack on 'corruption' and 'subversion', both of which were seen as real deficiencies of the country's political structure overthrown in 1964; and the promise to restore democracy, which many felt was threatened by the rise of the left under Goulart.

The military maintained substantial internal cohesion and ruled with the aid of civilian technocrats. It received strong support from business interests (including a rapidly expanding sector of state enterprises) and a burgeoning middle class, which were the sectors that reaped the lion's share of the fruits of economic growth. Even these sectors, however, did not participate in the decision-making process in any institutionalized way. The military made key political decisions after consultations of their own choosing and taking into consideration only those who could somehow make their voices heard. These decisions were then implemented by civilian and military bureaucrats. In the economic sphere, civilian ministers were delegated considerable power to make policy within broad parameters. The political process never stopped but the channels within which it moved were informal, shifting and inaccessible to most Brazilians.

Whether exclusionary politics was an integral part of the Brazilian economic model or reflected an entirely separate set of objectives and decision-makers is a debatable question. Was it essential for economic success? Account for its failures? These issues will continue to spark controversy among social scientists and historians for years to come and may never be answered clearly. But an important legacy of the political system installed in 1964 was the political inactivity of leaders on the left with any popular following. Another was the blocking of the normal channels for political participation, not just for workers, but for many other segments of Brazilian society including students and the middle class. At the same time, a formal political superstructure was
maintained: two parties without any real power to influence major political and economic decisions, Congress (which was closed on occasions when it overstepped the strict bounds dictated by its military mentors), and even elections, though candidates going beyond tolerated political parameters were promptly deprived of their political rights.

As a result, those politicians who chose to stay within the system lost much of their legitimacy in the eyes of voters who rejected this system. Perhaps most importantly, for 15 years there was little opportunity for a new generation of politicians — either of the opposition or the government party — to gain political experience and followings. Those in exile lost touch with much of what was going on in Brazilian society. Censorship of the press and mass media also deprived Brazilians of information necessary to form educated opinions on economic and social as well as political issues.

(c) Concentration and trickle-down

In the early 1970s many Brazilian economists argued that the 'cake had to grow before it could be distributed', but that rapid economic growth would trickle down to the poor and help solve Brazil's social problems almost automatically. The available evidence suggests that to some extent growth did benefit the poor. Most Brazilians shared some of the real economic growth. But the gains of the rich were enormously larger than those of the poor in absolute terms. And in relative terms the rich grew richer faster than the poor grew less poor. While the available statistics leave considerable room for debate on some questions of income distribution (Pfeffermann and Webb, 1979), it is indisputable that Brazil's income was extremely unevenly distributed in 1960 and remains so today.

The 1978 National Household Sample Survey (PNAD) showed that in that year 43% of Brazilian families had a total income (including income in kind) less than two minimum wages (equivalent to less than about $216 per month in today's prices or about $42 monthly per family member), a limit often used as a poverty line. While published data for 1978 do not allow precise estimates, it is still likely that the richest 10% of the families received over 50% of the income as shown by every official national survey or census from 1960 onwards, once adjustments have been made to make the estimate as comparable as possible, while the poorest 40% received well under 10% (see Table 2).

The structure of production which has evolved reflects and indeed helps shape the distribution of income. The rich have more money than the poor, and the market responds only to effective demand. Brazil's industrial structure is heavily influenced by the automotive industry, its suppliers, and those industries producing and maintaining the infrastructure necessary for automobiles, from roads to service stations and parking lots. Over a million new vehicles are now produced each year. By 1976, 17% of Brazilians lived in families with at least one automobile and 2% lived in families with two or more (see Table 3). Looking at family budget surveys it is hard to see how even

<table>
<thead>
<tr>
<th>Year</th>
<th>Source</th>
<th>Poorest 40%</th>
<th>Top 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>Census</td>
<td>9.4</td>
<td>44.5</td>
</tr>
<tr>
<td></td>
<td>P &amp; W's estimate</td>
<td>9.8</td>
<td>50.0</td>
</tr>
<tr>
<td>1970</td>
<td>Census</td>
<td>8.1</td>
<td>46.2</td>
</tr>
<tr>
<td></td>
<td>P &amp; W's estimate</td>
<td>8.4</td>
<td>51.5</td>
</tr>
<tr>
<td>1972</td>
<td>PNAD: money income only</td>
<td>7.4</td>
<td>50.5</td>
</tr>
<tr>
<td></td>
<td>P &amp; W's estimate</td>
<td>8.9</td>
<td>53.6</td>
</tr>
<tr>
<td>1975</td>
<td>ENDEF: expenditure and gross saving</td>
<td>9.4</td>
<td>46.0</td>
</tr>
<tr>
<td></td>
<td>P &amp; W's estimate</td>
<td>8.5</td>
<td>51.9</td>
</tr>
<tr>
<td>1976</td>
<td>PNAD</td>
<td>7.5</td>
<td>n.a.</td>
</tr>
<tr>
<td></td>
<td>P &amp; W's estimate</td>
<td>7.8</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Pfeffermann and Webb (1979), Table 1, p. 10. n.a. = not available.
Table 3. Durable goods ownership and electric lighting: Brazil and Northeast, 1976

(percentage of residents in permanent residences with the good or service)

<table>
<thead>
<tr>
<th></th>
<th>Brazil*</th>
<th></th>
<th>Northeast</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Urban†</td>
<td>Rural‡</td>
<td>Total</td>
</tr>
<tr>
<td>Electric light</td>
<td>60</td>
<td>84</td>
<td>19</td>
<td>34</td>
</tr>
<tr>
<td>Gas or electric stove</td>
<td>58</td>
<td>82</td>
<td>17</td>
<td>30</td>
</tr>
<tr>
<td>Radio</td>
<td>77</td>
<td>80</td>
<td>71</td>
<td>63</td>
</tr>
<tr>
<td>Sewing machine</td>
<td>56</td>
<td>61</td>
<td>47</td>
<td>42</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>40</td>
<td>58</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>(One)</td>
<td>(39)</td>
<td>(56)</td>
<td>(9)</td>
<td>(18)</td>
</tr>
<tr>
<td>(Two or more)</td>
<td>(1)</td>
<td>(2)</td>
<td>(—)</td>
<td>(—)</td>
</tr>
<tr>
<td>Television</td>
<td>45</td>
<td>65</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>(Black and white)</td>
<td>(39)</td>
<td>(56)</td>
<td>(9)</td>
<td>(18)</td>
</tr>
<tr>
<td>(Colour)</td>
<td>(3)</td>
<td>(5)</td>
<td>(—)</td>
<td>(1)</td>
</tr>
<tr>
<td>(Black and white and colour)</td>
<td>(3)</td>
<td>(5)</td>
<td>(—)</td>
<td>(1)</td>
</tr>
<tr>
<td>Automobile</td>
<td>17</td>
<td>23</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>(One)</td>
<td>(15)</td>
<td>(20)</td>
<td>(6)</td>
<td>(5)</td>
</tr>
<tr>
<td>(Two or more)</td>
<td>(2)</td>
<td>(3)</td>
<td>(—)</td>
<td>(1)</td>
</tr>
</tbody>
</table>

Source: FIBGE, Pesquisa Nacional por Amostra de Domicílios, 1976, Vol. 1, Tomos 5, 8, Domicílios, Table 2.
* Excludes rural areas of the Centre West and North regions, roughly 5% of total population.
† 64% of the residents lived in urban areas.
‡ 36% of the residents lived in rural areas.
§ 45% of the residents lived in urban areas.
¶ 55% of the residents lived in rural areas.

This many Brazilians can afford private automobiles — rapid expansion of consumer credit undoubtedly has played a role and may have gone too far. Like many others, the automobile industry was established with the help of large governmental incentives, even though it is in the private sector. The choice of investment influenced who would get the gains. Capital-intensive and high technology industries like petrochemicals, aircraft and nuclear power absorbed large amounts of capital and led to rapid increases in the demand for skilled labour that helped raise the salaries of skilled technical and managerial personnel to levels at or above those paid in much richer countries.

Table 3 also shows that other consumer durables are more widely distributed, and provides a good feel for how far the process of trickle-down has proceeded. In 1976, 77% of Brazilians lived in homes with radios, even though only 60% lived in homes with electricity. In all rural areas 70% had radios, while only 19% had electricity — and in the rural Northeast, Brazil’s poorest region, 59% had radios and only 6% had electricity. This is evidence of the transistor revolution and means that radio has the potential of reaching the vast majority of Brazilians in their homes.

Television was less common, but still available at home to 45% of all Brazilians — 64% in urban areas and 9% in rural areas. In an increasing number of rural towns public television sets are set up in the town squares, and almost all Brazilians living in cities of any size have access to a television set in the corner bar. Forty per cent of all Brazilians live in homes with refrigerators.

Over the period 1960–1978 rapid economic growth expanded the number of jobs paying more than one minimum wage in 1970 prices (or about $76 per month in today’s prices) almost twice as fast as the working age population, but roughly 30% slower than GDP. By 1978 such jobs were held by about half the employed labour force compared with one-third in 1960. Jobs paying more than one minimum wage held by low-skilled workers (those with four or less years of schooling), however, increased about one-third as fast as those held by workers with five or more years of formal education, 40% as fast as GDP and only slightly faster than the working age population. Between 1973 and 1976 total employment of adults (aged 20 and above) outside the agricultural sector increased at 4.4% per year while GDP growth averaged 8.1%.
Though much remains to be done if the basic needs of the entire Brazilian population are to be met, over the past two decades significant progress has been made, particularly in urban areas and in the Southern and South-eastern regions. A national financing system for urban water and sewerage has been established under the National Housing Bank (BNH4) along with state water and sewerage companies in every state. A system of curative health care in urban areas has been consolidated under the social security system, and while it has many deficiencies, coverage of the rapidly increasing urban population has risen from 43% in 1960 to about 80% today. A start has been made on extending it to rural areas with greater emphasis on preventive medicine through collaboration between the Ministry of Health, state Secretariats of Health and the national social security system. Food supplements are now being provided to some of the most needy urban and rural poor under a National Nutrition Programme. And the basic education system in rural areas is slowly being upgraded. A detailed analysis of the progress achieved and review of the government programmes involved is available in a recent World Bank study (Knight et al., 1979).

Some idea of the current Brazilian population's access to basic public services and progress achieved since 1960 is provided in Table 4, which gives selected social indicators for recent years drawn from official sources. Again separate data is presented for the poorest region, the Northeast, where almost 30% of Brazilians live. In general these indicators show that there has been substantial progress, faster in the Northeast than for Brazil as a whole and faster for some indicators than others, but that the Northeast still lags far behind the national average. Separate data for urban and rural areas almost always show a pronounced differential in favour of urban areas, with the worst levels for most indicators found in the rural Northeast.

In 1978, 76% of Brazilians aged 15 years and older and 56% of those living in the Northeast claimed to be able to read and write. The average for all Brazil had improved by 16 percentage points since 1960. In the rural Northeast adult literacy in 1978 was only 41%; there only 5% of the population aged 15 and above had five or more years of education, a criterion sometimes used to indicate functional literacy. Also, in the rural Northeast gross enrolment in

Table 4. Selected social indicators, 1960–1978

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth†</td>
<td>52</td>
<td>42</td>
<td>61</td>
<td>53</td>
</tr>
<tr>
<td>Deaths of infants aged 0–12 months per thousand live births</td>
<td></td>
<td>89</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td>Infant mortality‡</td>
<td>123</td>
<td>169</td>
<td>89</td>
<td>122</td>
</tr>
<tr>
<td>% total population</td>
<td>52</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population with access to general water networks</td>
<td>21</td>
<td>5</td>
<td>52</td>
<td>28</td>
</tr>
<tr>
<td>Population living in homes with any sanitary device (latrine, septic tank, flush toilet, etc.)</td>
<td>49</td>
<td>24</td>
<td>75</td>
<td>42</td>
</tr>
<tr>
<td>Adult literacy rate</td>
<td>60</td>
<td>40</td>
<td>76</td>
<td>56</td>
</tr>
<tr>
<td>% population aged 7–14 years</td>
<td></td>
<td>94</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>Students in grades 1–8</td>
<td>57</td>
<td>37</td>
<td>94</td>
<td>79</td>
</tr>
<tr>
<td>% of all children aged 0–17 years</td>
<td></td>
<td>21</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Children with second or third degree malnutrition‡‡</td>
<td>n.a.</td>
<td>n.a.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Knight et al. (1979); FIBGE, Pesquisa Nacional por Amostra de Domicílios, 1978; FIBGE, Censo Demográfico do Brasil, 1960; and United States National Academy of Sciences Committee on Population and Demography, Panel on Brazil, Preliminary Report, 1979.

* Brazil data for 1978 excludes the rural areas of the North and Centre West regions, roughly 5% of total population.
† Estimates centred on the end of 1957 and of 1973, derived from data in the 1960 demographic census and 1976 National Household Sample Survey, the latter excluding rural areas of the North and Centre West regions.
‡ 75% or less of normal body weight.
the first eight grades of school (including repeaters and over-age students) in 1974 was 45% of the 7–14 age group compared with an average of 85% for all Brazil, but in the rural Northeast 63% dropped out before the second grade. Data on dropout, repetition and promotion in the rural Northeast for the same year suggest that, even if all students who repeat were automatically promoted after the second year in the same grade, less than 4% would graduate from the fourth grade.

In all of Brazil 21% of the children aged 0–17 were less than 75% of normal body weight (second or third degree malnutrition according to the commonly-used Gomez classification) – the proportion was 30% in the Northeast. Fifty-two per cent of dwellings in all Brazil were either connected with general water networks or had relatively easy access to general network water through yard taps or collective standpipes. The comparable global figure for 1960 was 21%. In 1978 25% of the Brazilian population still lived in homes with no kind of sanitary device whatsoever, even a latrine.

Reliable indicators of health are hard to come by, but life expectancy is one of the most sensitive general indicators of health status. For Brazil as a whole, life expectancy at birth has risen from 52 years in 1960 to an estimated 61 years in 1976. In the Northeast the gain was somewhat larger, from 42 years in 1960 to 53 years in 1976. Precise estimates for 1980 must await the full processing of the 1980 census. But analyses based on the 1970 census showed that the lowest income group in the urban areas of the central Northeast states had an average life expectancy of only 40 years, whereas for the richest group in the urban areas of Brazil's extreme southern states it was 67, 27 years greater and comparable to that in many developed countries (Carvalho and Wood, 1977).

How does Brazil's life expectancy compare with that of other developing countries in Latin America and elsewhere in the world? Figure 1 shows the 'normal' relationship between life expectancy and per capita GNP in 1978, derived by regression analysis using data published by the World Bank (World Bank, 1980). This analysis suggests that the health status of Brazil's population lags behind the norm for its income level.

Thus, despite some trickle-down of incomes and significant progress in extending basic public services such as primary education, urban water supply and health care in the larger towns and cities, serious social problems persist in Brazil: illiteracy, malnutrition and lack of access to basic public services still affect large proportions of the population, especially in the Northeast.

What is the human cost of these unmet

Figure 1. Life expectancy in relation to per capita GNP, 1978.
social needs? This year some 3.8 million babies will be born in Brazil. Before they are one year old, approximately 306,000 of them will die. If Brazil had the same infant mortality rate as Sri Lanka, a country where the GNP per capita is one-seventh what it is in Brazil, 146,000—just under one-half of these babies—would not die. If Brazil’s infant mortality rate were that of Costa Rica, whose GNP per capita is very close to that of Brazil, 199,000 of the 306,000 would live. And if Brazil had Cuba’s infant mortality rate, 210,000 young lives would be spared. This tragic loss of life does not have to continue. But stopping it will require better health care, improved nutrition, more education for mothers, lower fertility, improved water supply and better sanitation. And this means government action.

3. INTERNAL CONTRADICTIONS AND EXTERNAL CONSTRAINTS

Rapid economic growth was one of the major factors legitimizing Brazil’s military regime. But the very success of the growth process in transforming many aspects of the Brazilian economy and society undermined other sources of political support for the regime. And when external shocks, particularly the quadrupling of petroleum prices in late 1973 and the doubling again in 1979–1980, resulted in slower growth accompanied by accelerating inflation, it became clear that relying on strong economic performance for regime legitimation could be politically risky. This led to a process of political liberalization as the regime sought to broaden its political base and divide an increasingly effective opposition.

(a) The contradictions of growth

Consider first the effects of rapid economic growth itself. Improved transportation and communication systems—including the highways, telephones, radio and especially television—have increasingly unified the national market and polity. The volume and quality of Brazilian economic and social statistics available to analysts has increased tremendously. Here the role of the Brazilian Geography and Statistics Foundation (FIBGE) has been most important. There has been an explosion in social science research and the educational status of the population has greatly improved. These developments make the inequities of Brazilian society increasingly visible while increasing popular understanding of their nature and causes. Fighting within official sectors loosened censorship enough to allow a major debate on income distribution in the press in 1973. This was the first sign of things to come.

While the economy was experiencing ‘miracle’ growth rates and inflation was falling steadily, the rapid growth facilitated the absorption of new entrants into the labour force and also allowed some reduction in Brazil’s backlog of underemployment. This helped legitimize the regime in the eyes of many Brazilians. But when an already overheated economy received a direct hit in the gastank with the OPEC oil shock, growth could only be sustained, albeit at a lower level, by a rapid increase in foreign borrowing. Inflation also accelerated as the increased price of energy was transmitted through the economy and a new import substitution boom in basic industry and capital goods was initiated under the Geisel Government. But this has required increasing amounts of investment to produce an additional unit of output. The incremental capital output ratio (ICOR) rose from an average of 3.0 for 1970–1975 to 3.9 for 1975–1979. Rising ICORs have been experienced to varying degrees by a number of other middle-income countries including Argentina, the Ivory Coast, Korea, Peru, Turkey and Yugoslavia. This phenomenon may be at last partly attributable to a restructuring of capital to adjust to higher energy prices.

(b) External shocks

By the end of 1980 inflation had reached 110%, and the foreign debt had risen to $54.4 billion compared with $12.6 billion at the end of 1973. While in most years the interest on the foreign debt has been negative in real terms, in 1980 net debt service (interest on the debt, minus interest received on foreign exchange reserves plus amortization) absorbed 61% of export earnings. Since over two-thirds of the debt is subject to variable interest rates, recent sharp fluctuations in interest rates have added a new element of uncertainty in the balance of payments. Given the trend towards heavy reliance on monetary policy to fight inflation in the industrialized countries, positive real interest rates may become the rule rather than the exception over the next few years.

This is not the place to make detailed balance-of-payments projections for Brazil. Suffice it to re-emphasize that even with continued
very rapid export growth and a reduction in the rate of growth of the Brazilian economy to 5 or 6% per year (probably insufficient to absorb the new entrants to the labour force, which will be growing at 2.8% per year in the 1980s, if the recent style of growth is maintained), the bill for debt service plus petroleum imports could approximate or exceed export earnings for the next three years at least. But even this slower growth scenario is highly dependent on at least four factors not fully within the control of Brazilian policy-makers:

(1) Brazil imports over 80% of its petroleum and even if more oil is discovered in Brazil and progress in substituting other energy sources for petroleum continues, the country will remain extremely vulnerable to further real price increases or supply interruptions by its foreign suppliers, at least for the rest of the decade.

(2) The slowdown of economic growth in the OECD countries is stimulating an increase in protectionism which threatens Brazil's rapidly expanding exports of manufactures.

(3) Even without increased protectionism, slower OECI growth tends to reduce prices of Brazil's exports and demand for them.

(4) Internal portfolio considerations and restrictions imposed by monetary authorities suggest that it may be harder in the future for private international banks to increase their exposure in Brazil even if they continue to receive large deposits of petrodollars.

Thus events beyond Brazil's control might force a further slowdown in economic growth, with consequent further increases in political tensions as more members of the labour force find their expectations for employment and income frustrated.

(c) Erosion of political support

With the crushing of the urban guerilla groups during the Medici Government, the argument that democratic institutions could not be restored because of the internal threat of 'subversion' lost much of whatever force it may have had. Even that part of the Brazilian public which had benefited most from the regime's economic policies began to question the utility of continued military rule. Indeed, many argued that the military themselves were subverting democracy and the rule of law through their use of the repressive apparatus, censorship and the straightjacket placed on political institutions.

Two other factors helped accelerate the movement toward re-democratization. The first was the fear of the increasing strength of the state sector in the Brazilian economy. All of the largest enterprises in banking, basic industry, petroleum, mining, electricity, aircraft, and military equipment are now state enterprises. The giants - such as Petrobras, Electrobras and Companhia Valle do Rio Doce - have spawned subsidiaries to the point that they are now among the world's larger conglomerates. 'Statization', as this trend is called in Brazil, has accelerated during the military regime despite its proclaimed position in favour of private enterprise. The regime's determination to promote rapid development of Brazil's resources, to control industries deemed vital to national security, and to compete successfully with transnational corporations have been more powerful forces in practice. The domestic private sector began a vigorous attack on statization in the press and other public forums in 1975. The antistatization campaign include attacks on corruption and poor performance in some state enterprises. Though keeping a low profile, transnational corporations have shared this fear of the state sector's expansionary tendencies.

The second factor was the role of the Catholic church, both in reacting against violations of human rights and increasingly in advocating greater economic and social justice. Cardinal Paulo Evaristo Arns of Sao Paulo has lent his prestige to the union movement in Sao Paulo, and in many parts of Brazil the church is supporting grassroots organizations, called Basic Christian Communities, which almost inevitably take on opposition overtones. During his visit to Brazil in July 1980, Pope John Paul II called for social justice and clearly struck a responsive chord with the population. The largest crowds in Brazilian history turned out to see the Pope, turning his visit into a major political as well as religious event.

(d) Political liberalization

All of these factors led first the Geisel and then the Figureido Governments to undertake a policy of political liberalization. The beginning of this process antedated the emphasis on human rights in United States foreign policy under President Carter, though not the international campaign against human rights violations in Brazil. But the US policy probably
strengthened those elements in Brazilian so-
ciety who were fighting for re-democratization.

The process was given additional impetus by
the fact that the tolerated opposition party, the
Brazilian Democratic Movement (MDB), won
resounding victories in the congressional elec-
tions of 1974 and again in 1978, despite heavy
intervention by the Government which con-
trolled access to television, deprived a number of
MDB candidates of their political rights,
directly appointed one-third of the senators in
the 1978 elections, and manipulated the normal
levels of power of an incumbent regime. As the
economic difficulties mounted, each election
became a plebiscite against the Government.
Without any other political channels available,
scientifc and professional meetings turned into
political events. The Government retained con-
tral of congress, however, by winning in the
more conservative rural areas and smaller states
which have representation in Congress out of
proportion to their population.

While maintaining control of the re-demo-
kratization process, and even conducting
occasional strategic retreats, Brazil's military
politicians definitely have been responding to
strong pressures in Brazilian society. And these
pressures, coupled with tensions within the
bureaucratic-authoritarian state itself, have led
the military to attempt their gradual extrication
from the direct conduct of the nation's politics.
This has not been an easy task and has oc-
casioned considerable dissension within the
military. 1

But the liberalization has been real, and
many argue that it is irreversible. Over the past
seven years, torture of political prisoners has
apparently ceased, freedom of the press has
been restored, even the more heavily censored
television has been allowed to indulge in pro-
grames of political satire and discussions of
political issues, large-scale strikes and collective
bargaining have taken place, a political amnesty
has been declared, most of the political exiles
have returned, and the two officially permitted
parties, the National Renovating Alliance
(ARENA) and the MDB have been dissolved.
A variety of political parties, including the
class-based Workers Party, are being allowed to
organize. That this process has not been sup-
sported by some elements in the military was
evidenced by bombings in Rio de Janeiro in
May 1981 involving army personnel and the evi-
dent problems the Figureido Government has
had in the investigation of this incident. But
following the bombings all major opposition
parties joined the government party in support-
ing President Figureido's stand against terrorist
activities and in favour of continuing the re-
democratization process.

Historians will probably record 1974 as the
year in which the post-1964 Brazilian political
model became obsolete. What will take its place
is not yet clear, but it will be different. As for
the economic model, the reforms to date have
touched only tangentially the mechanisms
which concentrate income and wealth, such as
the tax system and the extensive use of subsi-
dized credit. However, the political opening
cannot be continued for long and culminate in
Western-style democracy without some funda-
mental changes in the economic model consist-
ent with increased political participation by
the working class. To be viable, these changes
must include significant redistributive measures
which would correct the extreme social in-
equalities that characterize Brazil today. This
does not mean that such changes must precede
military extrication.

The close relationship between changes in
the political system, the economy and social
development has been perceived by at least
some members of the present government. In a
recent interview with two reporters from Veja,
Brazil's equivalent of Newsweek and Time, the
present Minister of Industry and Commerce,
Joao Camilo Penna, articulated the challenge
facing Brazil's current rulers (Veja, No. 607,
23 April 1980):

Penna. The difficulties which we have at the
moment reflect, in good measure, the deliberate
policy of economic growth, even at high financial
cost, but also in social and political terms. Brazil
had a clear disequilibrium between its territory,
its population, and its output. It was one of the
largest countries of the planet in area and popu-
lation, but mediocre in economic product. It was
resolved, with success, to bring the output into
line with [Brazil's] relative position in population
and area.

Veja. This, however, resulted in a great concen-
tration of development.

Penna. Exactly. And hence the political opening,
because without it economic development is con-
centrating, both at the level of regions and among
the population. It is necessary to make it clear that
the problems that we have today, and that are the
fruit of growth, are less than those we would have
had if the economy had stagnated. It would have
been much worse if we had adopted a policy of re-
cession, as many countries smaller than Brazil did.

Veja. You often say that, beyond financial debts,
foreign and domestic, there is another, a social
debt, that is the fruit of the concentration of
wealth. Could you explain this better?

Penna. The country possesses today a social
stratum with high managerial capacity that has,
however, a great debt with 40 million humble
Brazilians. A debt that, if it is not paid, will result in these humble people being turned into humiliated people. And after humiliated people, I don't know. Veja. How can this debt be paid? Penna. Precisely to avoid that the humble be transformed into humiliated the Figureido government, in a wise gesture, decided to undertake the political opening. The Government is convinced that, without political development, economic development does not serve social development.

4. REDISTRIBUTION WITH GROWTH: A CHALLENGE FOR THE 1980S

How can Brazil's economic development in the 1980s be made to serve social needs? Two things are necessary:

(1) an economic development strategy which is feasible within the economic constraints faced by Brazil; and
(2) building a political base to initiate and sustain this strategy.

The economic strategy may be labelled redistribution with growth — but growth of a qualitatively different nature from that of the past 15 years. The idea is to alter, at least on the margin, the profile of investment and consumption — to change what is produced and whom it is produced for. Many elements of the proposed strategy may be found in Brazil's Third National Development Plan for the years 1980—1985, elaborated by the present government (República Federativa do Brasil, 1980) which calls for improving income distribution and accelerating the growth of income and employment while fighting inflation and achieving equilibrium in the balance of payments. This plan, however, has neither quantitative goals nor a timetable for reaching them.

The strategy will be more effective — will achieve its redistributive goals faster — if absolute as well as relative redistribution takes place; that is if not only the additional output is of a different nature and directed to different individuals, but also some of the existing productive structure is reoriented to serve new ends. This requires 'taking from the rich and giving to the poor' — by tax reform and land reform, for example. Such reforms might be imposed by the military in the name of national security. In a more democratic setting, they would require to a greater extent than redistribution on the margin that one or both of the following conditions hold:

(1) that the rich come to see their long-term interests being served by some reduction in the real value of their wealth and/or incomes at present to diminish social inequities that are not sustainable over the long run; and
(2) that the political power of the beneficiaries of this process grow to the point where this redistribution can take place against the wishes of some elites who are politically influential today.

The essence of the strategy is to invest in basic public services (through the state sector) and in basic wage goods (through the private sector). The former would be financed by a combination of taxes and user charges. Production of the latter would be stimulated by tax and credit reforms designed to increase employment and reduce the market price of such goods, thus expanding effective demand for them. A land reform, not mentioned in the Government's plan, could also increase employment, the production of foodstuffs and effective demand for wage goods among the rural poor. The growth of the Brazilian economy in the 1980s to satisfy domestic demand would be in these areas — education and basic health services, water supply, sewerage, popular housing, food, clothing, bicycles and buses rather than luxury housing, private automobiles, colour television sets, cosmetic surgery and the like. But there would be no reduction of Brazil's successful drive to expand exports, which research has shown to have been much more labour-intensive than import substitutes (Zaghan and Rego, 1979).

Is what is good for social development economically viable? It is not only viable — it may be necessary to avoid an economic impasse. For the next five or ten years, growth will almost certainly be slower than over the past 15 years — independently of the development strategy chosen. This is due to the less favourable international environment to be expected, the higher cost of energy (and probably other non-renewable resources) and the need to bring down the rate of inflation. But pricing capital and labour more in accord with their relative scarcities, technological change, qualitative improvement in human resources and better use of natural resources could probably all add to the sustainable growth rate for any given level of investment. A sectoral restructuring of production and greater emphasis on internally abundant factors could reduce the need for capital formation. As a consequence both the capital—output ratio and the capital—labour ratio could fall.

Brazil, with a per capita GNP already above $2000, has the financial resources to meet the
basic needs of all its citizens within ten years without any really drastic sacrifices from the upper 30%. But despite some significant progress in recent years, Brazil presently lacks the administrative capability to implement such an ambitious plan. Eradicating absolute poverty would involve major changes in values among the poor as well as the rich. For example, in Brazil, as in many other countries, recent attempts to expand rural health services have encountered severe administrative problems and resistance to recommendations regarding sanitation and hygiene practices (Knight et al., 1979; World Bank, 1980). Many poor Brazilians apparently place a higher value on acquiring modern consumer durables such as television sets than they do on meeting nutritional requirements (Knight et al., 1979). Thus, even with strong political support, creating the necessary administrative infrastructure, changing some deeply engrained cultural traditions when they run directly counter to modern scientific findings and altering consumption values inculcated by the mass media will take a long-term effort - at least through the end of the century. But substantial progress towards the goal of poverty eradication could be accomplished by the end of the 1980s.

The redistribution of investment is a crucial part of the strategy. Direct acts of public policy can change the investment decisions affecting basic public services. Improved health, education and nutrition can have a strong impact on the productivity of the poor, potentially increasing their incomes (World Bank, 1980). Part of the productivity gains will be recaptured in the form of taxes and user charges (such as water and sewer tariffs and small registration fees for visits to health posts or hospitals, which also help discourage indiscriminate use). It is likely that the state would need to help induce changes in private sector investment decisions. Clear enunciation of the strategy by the Government, appropriate tax incentives, a growing demand as employment of the poor expands, and support generated from the re-democratization process would help convince private investors that investment in basic consumption goods and/or a reorientation of their existing productive facilities in that direction would be profitable.

Reorienting both public and private investment can also increase the productivity of labour employed in the wage goods sector, thereby increasing the goods and services available and laying the basis for their transformation into increased wages, salaries and profits which can then be reinvested (Moura da Silva, 1979). Basic public services and consumer goods are likely to be more labour and less energy intensive - to invest in, produce and use - than the mix of goods and services into which growth has been directed over the past 15 years.

But perhaps the key economic constraint is that provided by the balance of payments. The strategy proposed above could result in consumption and investment profiles less intensive in imports than the current one - particularly imports of petroleum, wheat and technology - without sacrificing economic efficiency as appears to have happened with the marked compression of imports as a percentage of GDP since 1974. They are also likely to require less profit remittances and debt service payments. I will elaborate on some of these points and indicate areas in which research is needed in the following sections.

(a) Extending basic public services and expanding production of basic wage goods

The existing government programmes in health, nutrition, education, housing, water supply and sewerage as well as the kinds of reforms necessary to improve their efficiency and extend basic coverage to the entire Brazilian population in need of these services are analysed in considerable depth in Brazil: Human Resources Special Report, published by the World Bank (Knight et al., 1979).

Estimates presented there suggest that virtually full coverage of the population in need could be achieved between the years 1990 and 2000 by the government spending on the order of 5 to 6% of GDP annually between now and then, with maximum additional taxation (beyond taxes or other charges already on the books) of approximately 2% of GDP. Thus achieving this objective is not, at its root, a major economic or financial problem. The binding constraints are more likely to be organizational, staffing and logistical bottlenecks, which could retard the pace of extending services, especially in rural areas. These are serious obstacles. Much remains to be learned about how to deal with them effectively. But if priority is given to meeting basic needs the obstacles can be overcome.

Higher standards of service (particularly in health and popular housing) and faster implementation would require more financial resources. But even if twice as much - 4% of GDP were required in additional taxation,
the significant economic benefits could be derived both in the short and long term. Workers who are better educated, healthier and eat enough produce more. They also tend to have fewer children. The increased productivity will be reflected in a combination of higher worker incomes, business profits and tax revenues. Thus much of what is spent by the Government on basic public services may rightfully be regarded as an investment in people rather than consumption — an investment which requires relatively little foreign exchange, generates a relatively large number of jobs for Brazilians and increases the flexibility of the labour force to adapt to new challenges and opportunities in the future.

The private sector can probably produce basic wage goods most efficiently, except for some forms of mass urban transportation such as bus and rail systems. Often families that will use them can produce housing, food and clothing if they obtain the necessary inputs. The Government needs to provide the proper incentives — low or null indirect taxation on these goods, and possibly subsidization of the social security charges for labour used in producing items. Credit should be made available but not subsidized. In general, subsidized credit (that is loans at interest rates well below the rate of inflation) to producers works against the objective of generating greater employment for any value of investment. Subsidies to — or better, the elimination of taxes on — labour use have the opposite effect, subject, of course, to the limitations imposed by the range of technologies available. The greatest incentive to invest in the production of basic wage goods is the presence of effective demand for them, which highlights the importance of expanding productive employment.

There is one important wage good which has received direct price subsidies: in recent years wheat has been sold to the mills at far below international prices, while producers were usually paid more than the international price. Price subsidies to both producers and consumers of wheat cost the equivalent of over SI billion in 1980. Consumption has therefore been stimulated, as has high-cost domestic production and imports. Wheat imports cost Brazil almost $900 million in 1980 and in principle could be substituted for by other grains which Brazil produces at much lower cost in terms of domestic resources. And, if necessary, consumption of these substitutes could be subsidized. The Government has announced its intention to phase out the wheat consumption subsidies, but no campaign to change consumption patterns towards other foodstuffs by methods other than price changes has been initiated. Clearly such a campaign could be part of a strategy to reduce non-essential imports.

The technologies necessary for producing most basic wage goods are well known and available for purchase on the international market if they are not already available from Brazilian sources. The present Brazilian market for such goods is supplied largely by domestic producers. If there is any area in which the domestic private sector should have a comparative advantage over transnational corporations or state enterprises, this is it. Food, footwear, clothing, bicycles, furniture and construction materials for the domestic market do not require either extremely large-scale production, international marketing networks, or secret technologies. They are industries where competition generally prevails, not monopoly or oligopoly. And basic consumer goods can be, and are, exported as well.

The domestic private sector can also produce many of the inputs needed for public sector programmes in education, health, nutrition, housing, water supply, sewerage and mass transportation. Indeed, if the public sector confined itself to basic inputs (steel, petroleum, minerals, fertilizers, etc.) and agreed not to move ‘downstream’ into more processed intermediate inputs and consumer goods, there would be a basis of a ‘truce’ of political significance — the state could expand in the area of public services, utilities and basic industrial inputs, leaving the private sector to produce final consumer goods, capital goods and most intermediate inputs. With clear guidelines, private investment, including foreign investment, where appropriate, would be stimulated. And the weakest leg of the ‘tripod’ composed of private national, transnational and state enterprises would be strengthened. This should help obtain political support from a substantial portion of the Brazilian business community for the redistribution with growth strategy. And the potential domestic market in Brazil, unified by the significant public investments in transportation and communications over the past 15 years, is enormous. A look at Tables 3 and 4 provides a hint of its dimensions.

(b) Assuring a sufficient supply of energy

The era of cheap energy is over. While there are clearly ways to meet Brazil’s increasing energy demands which are less costly — in both economic and social terms — than others, there
are no miracle solutions in sight. Commercial energy in all of its forms, but particularly liquid fuels, have higher real costs today and this is one of the fundamental facts to which the Brazilian economy must adjust. Given the potential interruptibility of imported petroleum supplies as well as the high probability of further real price rises, planners have persuasive arguments to consider investments in domestic substitutes for imported petroleum even when the costs are well above current import prices.

Of course cheaper forms of petroleum import substitution should be pursued in preference to more expensive ones. Conservation is probably the cheapest way not only to cut the oil import bill, but also to reduce the amount of resources which must be invested in domestic energy production, including that not directly replacing liquid fuels — investments in hydroelectric and nuclear power generation, for example. A style of development less dependent on the private automobile would help, not just by reducing the large energy requirements of producing automobiles and all the materials that go into them and the fuels they consume, but also by decreasing the need for expensive infrastructure required by a transportation system geared to private automobiles. For example, concrete for viaducts, freeways and parking facilities requires large amounts of cement, and the cement industry is one of the largest users of fuel oil. If fuel oil is replaced by domestically mined coal, as is planned, the real costs of mining and transporting this coal will be higher than for fuel oil in the past.

But even assuming much more strenuous efforts at conservation than have been made to date and a less energy-intensive style of development, total energy requirements for the Brazilian economy are likely to continue to rise through the end of the century. This is because meeting unmet basic needs will require energy inputs, even though they are likely to be less than those necessary to meet less basic needs. The problem may then be seen as one of obtaining, increasingly from domestic sources, the energy necessary to fuel the new development strategy at the lowest possible economic costs, assuming prices for labour, capital and foreign exchange reflecting their true scarcity value to the Brazilian economy. Equity and environmental considerations also need to be factored into the planning process.

Difficult choices are inevitable. A striking example is a potential conflict between the production of basic wage goods and domestic energy inherent in the fuel alcohol programme launched in 1975. By 1977 the estimated national average ratio of alcohol to gasoline was 4.3%, in 1980 it had risen to 19%, and it will rise further as more cars are run on pure alcohol. Brazil’s alcohol is still obtained almost exclusively from sugar-cane, which requires high quality land. Though tax incentives and subsidized credit have made the production of fuel alcohol financially profitable since 1976, direct production of alcohol from sugar-cane is not now economically competitive with gasoline in Brazil, especially given the high sugar prices which have recently prevailed on international markets (Homen de Melo and Pelin, 1980). But as the real price of petroleum rises, and assuming sugar prices return to more normal levels, the more the immediate issue of the economic viability of fuel alcohol will recede. This leaves a broader question of development strategy to be dealt with: can total agricultural production be increased fast enough to meet food requirements as well as to provide sufficient biomass for fuel without significantly increasing the price of food, particularly for people already undernourished or barely meeting their food requirements? Put another way, should some of Brazil’s best cropland be diverted from feeding people to filling gas tanks?

Although Brazil has the potential to feed its people well, expand agricultural exports rapidly and have sufficient land left to produce a substantial portion of its liquid fuel requirements from biomass, the fact is that, between 1966 and 1979, the output of domestic food crops has hardly kept up with population. On the other hand, export and industrial crops, dominated by soybeans, have increased over seven times as fast as population. Estimates suggest that, if recent trends in agricultural productivity persist, Brazil would need roughly to double the annual rate of increase in cultivated area observed over the period 1968–1977 if it is to produce enough for domestic consumption, exports and energy production between 1978 and 1985 (Homen de Melo, 1980). This would require substantial new investments in economic and social infrastructure.

There could thus be a three-way competition for good agricultural land. Given the relative power of the automobile and sugar lobbies, which strongly back the alcohol programme, the urgent need to expand agricultural exports to pay for petroleum imports and service the foreign debt (in part to pay for past petroleum imports), and the lack of political clout of the malnourished, there is a distinct danger that food for domestic consumption could come out on the short end, with pernicious social consequences and potentially explosive political
results. Expansion of alcohol production from sugar-cane is also likely to further the concentration of landholding in Brazil, particularly since the alcohol programme is being pushed using highly subsidized credit and since distilleries would seek to control the associated crop production in their vicinity (Saint, 1980).

There are three ways to reduce the potential for food–fuel conflict: by increasing yields of both food and fuel crops; by developing fuel crops, including wood, that can be grown economically on land of little or no food-producing potential; and by converting agricultural wastes into alcohol. All of these approaches require a major research effort to develop the technology — a task on which Brazil has embarked but which could be accelerated. But over the next five years, the Government’s plan to more than double 1980 alcohol production to 10.7 billion litres (2.8 billion gallons) is likely to be achieved almost entirely by expanding sugar-cane production — and the potential for displacing food crop production from prime lands is real, particularly towards the end of the period and especially in the Northeast. It would become more severe after 1985 unless other sources of biomass are substituted.

On the other hand, the production of energy from biomass is relatively labour-intensive compared to electric power or petroleum production and, if carefully planned and supported by improved technology, could offer new sources of agricultural incomes and employment. The potential for exploiting biomass energy is not limited to alcohol, whether from conventional crops or wood, but also includes production of fuelwood and vegetable oils, the latter being one of the alternatives under consideration to substitute diesel fuel.

While there are still technological, agronomic and organizational problems with alcohol production from cassava, it has considerable promise for a more decentralized and labour-intensive form of production with better annual distribution of labour requirements and consequently less demand for temporary labour than sugar-cane. Cassava can be produced on much poorer lands, and is currently grown largely by smallholders, but has a major drawback that it does not produce bagasse to fuel distilleries (Saint, 1980). Alcohol from wood also holds considerable promise for use of lands not suitable for foodcrop production.

Hydroelectric and nuclear power are also substitutes for petroleum in electricity generation and a number of other uses, including mass urban transportation, railways, and home cooking. Brazil’s nuclear programme is by far the most expensive source of energy being developed and raises environmental as well as strictly economic issues. With increased petroleum prices and steeply rising costs for uranium fuel as well as for the construction of nuclear generating plants, more and more previously uneconomic hydro sites become economic. Improvements in transmission technology are working in the same direction by reducing the cost of using sites more distant from consumption points. All of this suggests that Brazil is likely to maintain a comparative advantage in hydroelectric generation over other forms of electricity production for the rest of the century.

At present direct solar energy utilization looks economically attractive only for heating water. The major obstacle has been a high subsidy to fuel oil which is now being removed. In Brazil as in other countries with relatively high insolation, the potential for direct utilization of solar energy can be expected to increase as the necessary technological developments take place. To date relatively little money or scientific manpower has been devoted to solar energy research in Brazil. The contrast with the nuclear programme is striking. Much more solar research is probably justified, particularly as part of a strategy to increase equity since it would appear that the decentralized nature of solar flows would support a more decentralized and equitable pattern of development.

(c) Financial reform

There are many ways to improve the workings of the Brazilian financial system. But in the context of the economic strategy outlined here, the single most important move would be to restore the role of interest rates as incentives to the mobilization of domestic saving and the efficient allocation of capital.

As inflation accelerated after 1973, the range of nominal interest rates to borrowers widened enormously, reaching a peak in 1981 when they ranged from 5% to well over 200%, depending on the institution making the loan, the sector of the economy in which the recipient worked, the type of activity involved and even the ownership of the firms receiving loans. At the same time, an increasing percentage of the total flow of credit was made available at interest rates below the rate of inflation, most of it originating from the Monetary Authorities (the Central Bank and the Bank of Brazil), even if the final lender was a private financial institution.
Credit subsidies have assumed truly macro-economic porportions — roughly the equivalent of 5% of GDP in 1977 and 1978 and perhaps as high as 10% in 1979 (World Bank, 1981). These subsidies are essentially unrequited transfers, often from poorer towards richer Brazilians. The combination of selective credit coupled with the maintenance of these huge credit subsidies tends to work against the kind of development strategy outlined here and make rational economic calculation extremely difficult.

A financial reform, to minimize these features of the Brazilian financial system, could:

1. Eliminate one of the major mechanisms propagating inflation by curtailing the power of the Monetary Authorities to expand the money supply in an inflationary fashion in trying to maintain or increase the real level of credit from year to year;
2. Increase the economic efficiency of investment decisions by reducing incentives for arbitrage and unproductive speculation while raising the cost of capital to its real opportunity cost to the economy;
3. Increase the employment generated per unit of capital investment;
4. Reduce the huge administrative costs incurred by the present system of selective subsidized credit;
5. Encourage domestic saving via the financial system;
6. Decrease the price of agricultural land to what is justified by its agricultural potential by the premium associated with access to subsidized credit; and
7. Eliminate one of the major mechanisms for concentrating income and wealth, since subsidized credit is normally available in quantities proportional to wealth that can be used as collateral.

Such a reform should probably be gradual, but not overly prolonged. It could be carried out, say, over a two-year period. In November 1980 the Brazilian Government announced a series of measures tending in the direction outlined here, but definitely not eliminating either selective credit or subsidies. The Third National Development Plan indicates that the Government plans to reduce credit subsidies gradually and notes their regressive impact on income distribution.

(d) Tax reform

_tax reform offers many opportunities for increasing economic efficiency and changing the structure of investment and consumption as well as raising government revenues needed to extend basic public services. The Brazilian tax system is shot through with fiscal incentives which cost the Treasury an estimated 1.8% of GDP in 1978 (Conjuntura Económica, 1979). These incentives tend to distort factor prices against labour in favour of capital, thus reducing potential employment generation of investments. They also favour the continued concentration of income since individuals and firms can invest part of their income tax obligations, further increasing the value of their assets. There is no capital gains tax (though in April 1980 a measure was announced which amounts to a limited de facto capital gains tax), no wealth tax, and only very limited inheritance tax. The fiscal incentives took 0.7% of GDP in 1978 which otherwise would have gone to the personal income tax. These fiscal incentives greatly reduce the progressivity of the personal income tax, as do the many deductions allowed. Reforming the existing taxes and introducing capital gains and wealth taxes have figured prominently in proposals made both inside and outside government agencies in recent years [see, for example, IPEA/INPES (1978), Bacha and Unger (1978), and Sahota and Rocca (1981)].

The first objective of a tax reform could be to raise total general government tax receipts from the 1978 level of roughly 26% of GDP to 30% by 1985. The increased tax receipts could finance the extension of basic public services and possibly substitute for some reductions in indirect taxes. This could be accomplished by increasing the effective progressivity of the individual income tax, taxing capital gains and raising the inheritance tax.

The second objective of the tax reform could be to provide incentives for production of basic wage goods by removing or considerably lowering indirect taxes on them, thereby lowering prices to the consumer and stimulating demand — since these goods are normally produced under competitive rather than oligopolistic conditions. At the same time, the indirect taxes on luxury consumption goods could be increased.

A third objective could be to encourage labour use by shifting the taxes and quasi-tax on labour that respectively finance the social security system and the FGTS (Time on Job Guarantee Fund) — a form of forced savings which funds the National Housing Bank — so that they fall on value added instead. This need not diminish the yield of these taxes and quasi-
tax, but it would eliminate a disincentive to labour use, thus complementing the effect of rising real interest rates on the choice of technology so as to stimulate employment. The additional labour income generated would help expand demand for wage goods. Eliminating the fiscal incentives in both the corporate and individual income taxes, which allow those with high incomes to make a variety of direct and financial investments at the expense of the Treasury, would work in the same direction.

This broad range of tax reforms could be implemented gradually over the five-year period ending in 1985. It might be argued that since Brazil's tax burden is already relatively high, raising it by 4% of GDP would affect growth by decreasing private investment. These new taxes would primarily fall on the 10% of Brazilian families who receive over 50% of personal incomes. If: (a) the marginal savings rate for this income class were 100%, (b) all of the savings went to productive investment, and (c) the public services financed were pure consumption, the domestic savings rate would fall by 4%. With an incremental capital—output ratio of four this would reduce growth by one percentage point. But few would argue that the marginal savings rate of the rich is 100% and, as the World Bank's World Development Report 1980 clearly points out, expenditures improving health (including health services, water supply, sewerage and nutrition programmes) and education have an important investment component and also help reduce fertility. If an increase in the tax burden equivalent to 4% of GDP implemented gradually over five years seems too drastic, remember that the value of credit subsidies alone was equal to 5% of GDP in 1977 and 1978, may have doubled in real terms in 1979, and was probably less than 1% of GDP in 1973.

(e) Land reform

There is strong evidence from many countries that small farms are more productive than large ones (Berry, 1973; Griffin, 1974; Bhalla, 1979; Berry and Cline, 1979). The inverse relationship between land productivity and farm size has also been observed in Brazil (Cline, 1970; Berry and Cline, 1979). In the Northeast alone, the 1975 agricultural census found 15.3 million hectares of productive but unutilized land (FIBGE, 1979a). The World Bank and SUDENE examined 8000 farms in 1973/1974 and found that, depending on the ecological zone, small farms based principally on family labour apply 5 to 22 times as much labour per hectare as large farms relying primarily on hired labour, although the proportion of high- or medium-yielding soils did not vary significantly with the size of the farm. Large farms tended to employ less labour than would be required to maximize profits, even though there was no shortage of labour available for employment. On these farms the additional output that could have been derived from additional labour was found to be on the average twice the going wage rate, while small farms tend to employ more labour than profit maximization would warrant, probably in part because family members have difficulty in obtaining employment elsewhere (Kutcher and Scandizzo, 1981).

This suggests that redistribution of land in larger farms into smaller ones in many cases could increase output and employment (and of course equity) significantly. This has been demonstrated in a sophisticated simulation exercise for the Northeast (Kutcher and Scandizzo, 1981). An independent econometric analysis for the Centre South and Northeast regions (Sahota and Rocca, 1981) concluded that a land reform that broke up large farms would increase both efficiency and equity. But there are important qualifications. For example, where literacy rates are low among small farmers, middle-sized farms tend to be quicker to adopt innovations. For some combinations of crops and soils, mechanization — and thus large fields — may increase output. Of course land reform is not costless — it is politically and administratively demanding. And in many cases both before and after land reform agricultural activity may be disrupted with an accompanying loss of potential output. These costs must be weighed against the potential gains. Brazil is so large and diverse that any land reform would have to be tailored to the specific needs of each area where it is implemented. But recent statements by government officials and the announcement of limited reforms in some areas where violence related to disputes between squatters and landowners has flared suggest that the 1980s may well see the first serious land reform in Brazil's history. This could eventually result in a large increase in food production and employment while greatly expanding the market for wage goods.

(f) Summary

Brazil's serious balance-of-payments problems, a relatively unfavourable international
environment, rising energy costs and the need to bring down the rate of inflation suggest that the sustainable rate of GDP growth in the 1980s will be of the order of 5 to 6%, at least during the first half of the decade. Unexpected difficulties could reduce it further. If Brazil is to continue or accelerate its social progress under these difficult conditions, a continuation of the recent style of development will not suffice. The strategy of development I have outlined here, which in many respects reflects official Brazilian policy, could do four things:

1. Decrease imports as a percentage of GDP, essentially by reducing demand for foreign petroleum, wheat and technology;
2. Increase the number of jobs per unit of capital invested;
3. Concentrate benefits on those who have least profited from the growth process to date, with beneficial social and political impact, strengthening national cohesion; and
4. Increase the productivity of the labour force by providing access to agricultural land or urban jobs and investing heavily in human development — education, health, family planning and nutrition — thus paving the way for faster and more broadly-based growth in the future.

5. THE ROLE OF INTERNATIONAL ASSISTANCE

Addressing the issues raised in this paper is fundamentally a task for Brazilians. Correcting some of the extreme disparities in well-being now found among Brazilians will require building political support for a change in development strategy. The Brazilian press, the academic community and politicians can help build this support by focusing national attention on these development issues. A broadly-based national debate should help clarify both the issues and possible solutions. The provision of basic public services will be demanding of public administrative resources. But the human and financial capacity to get the job done is present in Brazil, if the necessary political support can be mobilized.

This does not mean there is no role for foreign assistance. For example, the World Bank is already providing financial support for programmes in water supply, sewerage, low income housing, education, nutrition, alcohol production and research and rural development projects for small farmers. The latter often contain health and education components for the population in the area covered, including families with no land of their own. The Inter-American Development Bank has also been active in many of these areas.

But if the Brazilian Government should decide to intensify its efforts to restructure the economy to increase its long-term social and political as well as economic viability, international financial institutions might also provide non-project loans, both to reduce the social costs of the necessary economic stabilization and to help finance the necessary investments. For example, the IMF could provide general balance-of-payments support, allowing the necessary economic stabilization and macroeconomic reforms to take place at a lower cost in growth and employment forgone than would otherwise be the case given the urgent need to bring down inflation and grapple with a serious balance-of-payments problem. The World Bank could help finance the required investments with a series of 'structural adjustment' loans and sector loans for basic public services, possibly in collaboration with the Inter-American Development Bank and private international banks.

Official bilateral development assistance is now at a low level in Brazil and there does not seem to be a high probability of its being reactivated. But this is not impossible, especially if Brazil were to enunciate a clear objective of attacking its social problems and request assistance.

Transnational corporations with direct investments in Brazil could also play a role. Here a deeper understanding of Brazilian problems is critical, particularly if it means that demand in some currently profitable areas will be curtailed by a change in development strategy. But switching the product mix in the direction of basic wage goods may be possible for many such corporations. For goods like automobiles there will still be a substantial domestic market, even if it expands much more slowly or shrinks. And there is always the export market, for luxury goods as well as basic wage goods and capital equipment.

Finally, there are many important ways in which private foundations, research institutions and think-tanks could provide assistance. Good examples are research on new crops and technologies for the production of alcohol and other biomass-based fuel, developing solar energy technologies and finding simple vaccinates or cures for schistosomiasis and Chagas' disease which are prevalent in Brazil.

In short, the international community can
make it easier for Brazil to reorient its development strategy in a direction favouring the country's emergence as a successful democratic society by the turn of the century. It is not in the interest of the Western democracies that Brazil should fail in this endeavour.

NOTES

1. The difficulties of institutionalizing a stable bureaucratic-authoritarian regime and the consequent extrication problem are not unique to Brazil, of course (Cardoso, 1979; O'Donnell, 1979; Stepan, 1978).

2. General government includes the Federal government (Treasury, social security funds and autonomous federal funds), state government and municipal governments.

REFERENCES


Bhalla, Surjit S., 'Farm size, productivity and technical change in Indian agriculture', Appendix A in Berry and Cline (1979).


Homen de Melo, Fernando Bento, 'A agricultura nos anos 80: perspectivas e conflitos entre objetivos de política', Trabalho para Discussão No. 35 IPE, Universidade de São Paulo, 1980.

Homen de Melo, Fernando Bento and Eli Roberto Pelin, 'A crise energética e o setor agrícola no Brasil', mimeo (São Paulo: 1980).


World Bank

Headquarters:
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

Telephone: (202) 477-1234
Telex: RCA 248423 WORLDBK
WUI 64145 WORLDBANK
Cable address: INTBAFRAD
WASHINGTONDC

European Office:
66, avenue d'Iéna
75116 Paris, France

Telephone: 723.54.21
Telex: 842-620628

Tokyo Office:
Kokusai Building
1-1, Marunouchi 3-chome
Chiyoda-ku, Tokyo 100, Japan

Telephone: 214-5001
Telex: 781-26838

The full range of World Bank publications, both free and for sale, is described in the World Bank Catalog of Publications, and of the continuing research program of the World Bank, in World Bank Research Program: Abstracts of Current Studies. The most recent edition of each is available without charge from:

PUBLICATIONS UNIT
THE WORLD BANK
1818 H STREET, N.W.
WASHINGTON, D.C. 20433
U.S.A.