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Crisis and Change

The pattern of financing investment in Brazil changed in the 1980s as an outcome of the fiscal crisis of the state. During the 1970s investment was based on the classical pattern that usually prevails in the early stages of development—that is, on state and foreign savings. In the 1990s, as growth has resumed, the role of the private sector has become strategic. In this chapter I deal with the crisis of the 1980s and this changing pattern of financing investment. My main concern is with the funding of investments. The basic assumption is that the stage of primitive accumulation, when the rate of investment grows from precapitalist levels to around 20 percent of GDP, definitely ended in the 1970s. Brazil is a mature, although unevenly developed, capitalist economy facing a deep cyclical crisis—a crisis that is also a transition to a new form of financing capital accumulation.

This chapter is divided into eight sections. In section 1, I build a model to show that, in the early stages of development, in addition to external finance, forced saving is imposed by the state, and the resulting resources are used to finance either private investment or state investment. In a second phase, after the basic stock of capital has been built up, the private sector—through regular increases in productivity and profits—assumes a more important role in investment. In section 2, I analyze the decline in the state's capacity to save and to invest. Section 3 demonstrates that during the 1970s total investment was a function of both external and state savings. The state not only invested directly but was also responsible for financing and subsidizing private investment. Section 4 analyzes how external financing as a source of funds for investment ended beginning in 1979. Section 5 analyzes the deterioration of public finance or the increasing decline in the state's capacity to impose forced savings. The reduction of the fiscal burden, the artificial price controls of the state-owned corporations, the increase in the state's indebtedness—which was aggravated by higher interest rates—the pressure to reduce the public deficit, and the political weakening of the state technobureaucracy are also examined.

Section 6 is an analysis of the falling rate of profit of state-owned and private national and multinational corporations. This fall is related to the adjustment process, the loss of the state's capacity to subsidize the private sector, and an increase in capital intensity or a reduction in the marginal output-capital relation as a result of capital-intensive import-substituting

investments. Section 7 presents a short analysis of the relationship between wages and productivity. Finally, in section 8, I discuss the likely patterns of financing investment in the second half of the 1990s. Two questions are posed: what will the new pattern of investment be, and what will be its results? Rogério Furquim Werneck's article on the subject is reviewed. Although there is a clear need to recover the state's savings and investment capacity, it is not reasonable to try to return to the 1970s pattern of financing investments. The indebtedness of the state, the new strength of the private sector, and the existence of a new financial market and a much bigger stock of capital suggest a new strategy based on exporting manufactured goods and increasing the marginal output-capital relation.

The basic variable in any process of industrialization is the rate of investment. Given the productivity of investment, which is the consequence of technological innovation and can be measured by the marginal product-capital relation, the rate of growth in the long run will depend on the rate of investment.

Investment is the result of decisions of private business firms, multinational corporations, state-owned corporations, and the state itself. Depending on the stage of development and the industrialization strategy adopted, investment will be undertaken predominantly by one or two of these economic agents. In the early periods of development the state and state-owned corporations frequently assume a dominant role. This was the case with Japan and Germany and is presently the case in Korea and Taiwan. In other instances local business enterprises start the process, and the state and the multinationals become involved later. In any case the interplay among these agents—entrepreneurs, the state, and state-owned and multinational enterprises—is essential for understanding a given pattern of industrial development.

The rate of investment is defined by the ratio of total investment to GDP. It depends in the long run on: (1) business enterprises' capacity to finance themselves through their profit rates; (2) their ability to obtain internal and external financing, including new capital; and (3) exclusively for the state, the capacity to promote forced saving. In the short run the rate of investment also depends on the cyclical fluctuations of the expected rate of profit, which is directly tied to the relation between aggregate supply and aggregate demand. The laws that govern short-run economic processes are not the same as those that explain the long-run processes, but short-run investment decisions necessarily influence the long run. So although I will not give priority to short-run analysis, I must consider it. Although the decision to invest depends essentially on profit expectations, it also depends on the fear of losing market shares and on the danger of being defeated by technological competition. If expectations of positive profits or negative fears

related to the market share and technological competition are strong, investment may be sustained in the face of relatively high interest rates.

It could be said that, in the long run, investment capacity depends on savings. Under conditions of full employment this is true. In the more common situation of unemployment it will be investment, through the multiplier, that will determine income and aggregate savings. But even when full employment exists I prefer to put savings in a subordinate position—dependent on business enterprises' capacity to self-finance, the availability of internal and external financing, and the state's capacity to impose forced saving.

The capacity of business enterprises to finance their investments depends on the size of their capital and the rate of profit. Given the assumption that investment, I , is equal to profits, R , a high rate of profit, $R:K$, will mean a high rate of accumulation, $I:Y$, unless the capital-output ratio, $K:Y$, is considerably higher than 1. The higher the capital-output ratio—that is, the more inefficient or capital-expending technical progress is—the lower the accumulation rate, given the rate of profit. This can be clearly seen by dividing the numerator and the denominator of the accumulation rate by K :

$$\frac{I/K}{Y/X}$$

In the first stages of development the total stock of capital is small in relation to current production—that is, the capital-output ratio tends to be small. Thus the average rate of profit would have to be exceptionally high to permit a high rate of accumulation. The problem, however, is that the average rate of profit will also tend to be small. Thus, even if the marginal rate of profit on new investments is high, the average rate of accumulation will not be high.

The rate of profit depends on: (1) the rate and type of technological progress; (2) the profit-wage ratio, which is based on the rate of surplus value; and (3) the role of primitive accumulation.¹ Primitive accumulation encompasses all forms of appropriation of surplus or realization of profits by capitalists outside the regular market process. Karl Marx (1867:ch. 24) said that in the early stages of development primitive accumulation is essential for building the basic stock of capital. Only in a later stage does the surplus value mechanism—which presupposes an existing stock of capital—work as a means of appropriation of a surplus through market mechanisms. Primitive accumulation is obtained in modern times through monopoly practices, particularly through state protection and subsidies.

The availability of funds for the accumulation of capital depends internally on the existence of a rentier class and a financial system to transfer savings from rentiers to business enterprises.² Externally it depends on the availability of international credit and on the country's creditworthiness.

Since in the early stages of development the rentier class tends to be small, the state's forced savings, imposed through either taxes or inflation, are usually an important substitute.

Forced savings imposed by the state can be channeled to private business enterprises through loans made by state-owned banks or through several kinds of subsidies (primitive accumulation). They can also be invested directly by the state or transferred to state-owned enterprises. In any circumstance, forced savings and primitive accumulation will play a decisive role in financing investment in the early stages of development because the stock of capital in the hands of business enterprises and rentiers will necessarily be small in relation to production. After a certain period of development, given the increase in the total capital-output relation, these extra-market mechanisms will have less importance, and capital accumulation will be able to proceed based on technical progress and the surplus value mechanism, with supernormal profits being derived from innovation, speculation, and monopoly power.

The pattern of investment financing changed markedly in the 1980s compared with the 1970s. During the 1980s the rate of savings and investment declined, and the rate of growth of output fluctuated sharply (see Table 4.1).

The reduction in the savings rate is clearly related to the decline of external savings and particularly of public savings. From a high of 31.7 percent of GDP in 1975, total savings fell to 15.7 percent in 1984; in this period external savings fell from 5.3 to minus 0.1 percent, and state savings declined from 8.2 percent of GDP to 0.8 percent whereas private savings remained relatively stable. Investment fell correspondingly from 31.7 percent of the GDP in 1975 to 16.7 percent in 1983. In this period private investment fell sharply, whereas public investment suffered a small decline. Since this behavior is not compatible with that of savings, it indicates a strong increase in the indebtedness of the public sector. In fact, since 1976 the rate of investment of the public sector has been consistently higher than its rate of savings, further indicating the increasing indebtedness of the public sector.

This increasing indebtedness can be seen in the increase of state-owned corporations' ratio of financial costs to operational revenue, which went from an index of 100 in 1980 to an index of 237.39 in 1983 (see Werneck 1985:12). It can also be seen in the relation of the real or operational public deficit (the variation in PSBR during the year, excluding monetary correction) to the GDP. PSBR averaged 7 percent of GDP between 1979 and 1982 and fell to an average of 4 percent of GDP in the following four years. The internal public debt, according to the Central Bank definition, increased 81 percent in real terms from December 1981 to December 1985, and the total debt—including the external debt—increased 78 percent.

Table 4.1 Growth, Savings, and Investment (percentage of GDP)

| | GDP (growth rate) | Internal Savings ^a | | | External Savings ^a | Investment ^a | | |
|------|-------------------------|----------------------------------|-------|-------|----------------------------------|-------------------------|-------|-------|
| | | Private | State | Total | | Private | State | Total |
| 1970 | 8.3 | — | — | 24.1 | 1.4 | — | — | 25.5 |
| 1971 | 11.3 | — | — | 23.3 | 2.7 | — | — | 26.0 |
| 1972 | 12.1 | — | — | 23.5 | 2.6 | — | — | 26.1 |
| 1973 | 14.0 | 15.7 | 9.5 | 25.2 | 2.0 | 19.7 | 5.7 | 27.2 |
| 1974 | 9.0 | 15.4 | 8.1 | 23.5 | 6.7 | 19.6 | 8.0 | 30.2 |
| 1975 | 5.2 | 18.2 | 8.2 | 26.4 | 5.3 | 20.9 | 8.6 | 31.7 |
| 1976 | 10.1 | 16.2 | 7.1 | 23.3 | 3.8 | 16.1 | 10.5 | 27.1 |
| 1977 | 4.5 | 15.9 | 7.6 | 23.5 | 2.2 | 15.7 | 9.4 | 25.7 |
| 1978 | 4.7 | 15.6 | 7.6 | 23.2 | 3.3 | 13.6 | 10.7 | 26.5 |
| 1979 | 7.2 | 15.1 | 3.8 | 18.9 | 3.1 | 8.2 | 14.0 | 22.0 |
| 1980 | 9.1 | 15.6 | 2.2 | 17.8 | 4.5 | 12.6 | 9.0 | 22.3 |
| 1981 | -3.1 | 16.3 | 2.3 | 18.6 | 4.5 | 13.0 | 10.1 | 23.1 |
| 1982 | 1.1 | 13.5 | 1.8 | 15.3 | 5.8 | 12.2 | 8.9 | 21.1 |
| 1983 | -2.8 | 12.7 | 0.6 | 13.3 | 3.4 | 9.6 | 7.1 | 16.7 |
| 1984 | 5.7 | 15.0 | 0.8 | 15.8 | -0.1 | 8.3 | 7.4 | 15.7 |
| 1985 | 8.4 | 18.8 | 0.3 | 19.1 | 0.1 | 9.8 | 9.4 | 19.2 |
| 1986 | 8.0 | 15.2 | 1.9 | 17.1 | 2.0 | 7.3 | 11.8 | 19.1 |
| 1987 | 2.9 | 23.0 | -1.2 | 21.8 | 0.5 | 12.6 | 9.7 | 22.3 |
| 1988 | -1.0 | 26.5 | -2.4 | 24.1 | -1.3 | 14.1 | 8.7 | 22.8 |
| 1989 | 3.3 | 30.4 | -5.3 | 25.1 | -0.2 | 17.6 | 7.3 | 24.9 |
| 1990 | -4.0 | 20.4 | 0.8 | 21.2 | 0.5 | 6.9 | 14.8 | 21.7 |

Source: Central Bank, *Brazil Economic Program*, several issues.

Note: a. Gross formation of fixed capital includes savings, uses, and investment.

The basic question now is whether a reasonable GDP growth of, say, 6 percent a year is compatible with this reduction of savings and investment, as well as with this increase in public debt. If it is not, an additional question is whether this decrease in savings and investment is reversible. To answer these questions, I examine the pattern of investment financing in Brazil in the 1970s and 1980s.

In Brazil during the 1970s financing investment followed the classical pattern of the early stages of development. Total investment during those years was a direct function of external indebtedness and state investment. If one takes, for instance, the period 1974–1976, external savings accounted for 32 percent of total savings, and state investment accounted for 30 percent of total investments.

In fact, the state's contribution to investment was greater than 30 percent, given the process of primitive accumulation. In addition to investing directly or through state-owned corporations, the state strongly subsidized

private investment. No precise figures exist for these subsidies. During the 1970s there were many kinds of subsidies: export, credit, fiscal subsidies (tax incentives) for industrial sectors and regions, and artificially low prices of goods and services produced by state-owned corporations. The cost of credit subsidies alone averaged 3.5 percent of GDP during the period 1980–1982 (World Bank 1984a:52). If one adds to this value the fiscal subsidies to, and the artificially low prices of, the products of the state-owned corporations, particularly the prices of steel and electric energy, this figure would probably be doubled, or around 7 percent of GDP for subsidies to the private sector. These subsidies as a whole represent primitive accumulation (I am not considering consumption subsidies). They represent an addition to the profits of the private sector, and an indeterminate part—say, 5 percent—represents additional investment. Thus, in addition to the 30 percent share of investments directly conducted by the state and state-owned corporations, around 20 percent of total investments were financed by primitive accumulation, that is, by state subsidies.

State participation in promoting (financing, in the broad sense of the expression) investment is, however, even greater because it is necessary to include the specific financing of investments that in Brazil was done through the state and, in the 1970s, also occurred through foreign borrowing. It is well known that the private financial system is, or was, unable to finance long-term investment. Long-term industrial lending was carried out almost entirely through the BNDES system. According to a World Bank report (1984b:xix) on the Brazilian financial system, in 1978 BNDES disbursements were equivalent to 40 percent of the industrial fixed capital formation. Most of this credit was either explicitly subsidized or carried low real interest rates when fully corrected for inflation.

This pattern of investment—based on external and state financing, direct state investment, and subsidized private investment—which prevailed during the 1970s, entered a deep crisis when the flow of net external financing dried up in 1982 at the same time the state began to lose its ability to impose forced saving. In fact, the process of foreign indebtedness stopped being a source of funds for new investments early in 1979, when the increase in the total external debt became approximately equal to the interest payments that were being made, as can be seen by comparing columns 3 and 4 of Table 4.2. From that point on, new loans were made only to roll over the interest. On the other hand, the inflow of real resources, which during the 1970s had averaged 2.1 percent of GDP per year, turned into an outflow in 1983 when the country started attaining high trade surpluses.

To the real resources transfers, which reached around 5 percent of GDP in 1984 and 1985, should be added the net outflow of foreign money represented by the excess of remittances of profits and dividends in relation to

Table 4.2 External Debt and Transfer of Resources (US\$ million)

| | External Debt | External Debt Increase | Interest | Transfer of Real Resources ^a (% GDP) |
|------|------------------|------------------------------|----------|---|
| 1970 | 6.049 | – | – | (0.5) |
| 1971 | 7.947 | 1.898 | 302 | (2.2) |
| 1972 | 11.026 | 3.079 | 359 | (2.0) |
| 1973 | 13.962 | 2.936 | 514 | (1.8) |
| 1974 | 18.871 | 4.909 | 652 | (8.3) |
| 1975 | 24.186 | 5.315 | 1,498 | (6.5) |
| 1976 | 30.970 | 6.784 | 1,809 | (4.1) |
| 1977 | 32.037 | 1.067 | 2,103 | (1.2) |
| 1978 | 43.511 | 11,474 | 2,696 | (2.1) |
| 1979 | 49.904 | 6,393 | 4,185 | (3.5) |
| 1980 | 53.848 | 3,944 | 6,311 | (3.3) |
| 1981 | 61.411 | 7,563 | 9,161 | (0.6) |
| 1982 | 69.654 | 8,243 | 11,353 | (1.0) |
| 1983 | 81.319 | 11,665 | 9,555 | 2.7 |
| 1984 | 91.091 | 9,772 | 10,203 | 5.9 |
| 1985 | 95.857 | 4,766 | 9,589 | 5.2 |
| 1986 | 101.759 | 5,902 | 9,300 | 2.7 |
| 1987 | 107.514 | 5,755 | 8,792 | 3.6 |
| 1988 | 102.555 | (4,959) | 9,900 | 6.2 |
| 1989 | 99.285 | (3,270) | 9,633 | 4.9 |
| 1990 | 96.546 | (2,739) | 8,906 | 2.8 |

Sources: Central Bank, *Brazil Economic Program*, several issues; Paulo N. Batista, Jr. (1987) for column 4 (until 1985).

Note: a. Transfer of real resources equals surplus on trade account, including real service.

Table 4.3 Foreign Investment Balance (US\$ million)

| Discrimination | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 |
|---|------|-------|-------|--------|-------|--------|--------|--------|
| 1. Direct investment(net) | 664 | 1,077 | 710 | 70 | 531 | 2,267 | 125 | 68 |
| 2. Conversion of loans into investment | 425 | 731 | 537 | 176 | 336 | 2,087 | 946 | 283 |
| 3. New investment (3=1–2) | 239 | 346 | 173 | –106 | 195 | 180 | –821 | 215 |
| 4. Remittance of profits and dividends | 758 | 796 | 1,059 | 1,100 | –909 | 1,539 | 2,383 | 1,614 |
| 5. Net inflow of money (5=3–4) | –519 | –450 | –886 | –1,206 | 1,104 | –1,359 | –3,204 | –1,399 |

Sources: Central Bank, *Brazil Economic Program*, several issues; Paulo N. Batista, Jr. (1987).

direct foreign investment (see Table 4.3). This net outflow of foreign money reached \$1,430 million in 1986 and represented 0.5 percent of GDP.

The deterioration of public finance, or the state's increasing incapacity to impose forced savings, is the second negative factor contributing to the decrease in the rate of investment during the 1980s. A clear picture of this deterioration of public finances emerges from an analysis of the fiscal burden. The net fiscal burden fell from 17.4 percent of GDP in 1970 to 9.5 percent in 1984 (see Table 4.4). In 1975 the gross fiscal burden reached a high of 26.3 percent and fell after that. Recovery started only after the

Table 4.4 Fiscal Burden (percentage of GDP)

| | Transferences | | | | | Total (6) | Net Fiscal Burden ^a (7) |
|------|----------------------------------|---|--|----------------------------|--------------|--------------|---|
| | Gross Fiscal Burden (1) | Interest on Internal Public Debt (2) | Social Security and Assistance (3) | Fiscal Subsidies (4) | Other (5) | | |
| 1970 | 26.0 | 0.7 | 8.2 | 0.8 | -1.1 | 8.6 | 17.4 |
| 1971 | 25.1 | 0.5 | 7.0 | 0.8 | -0.8 | 7.5 | 17.6 |
| 1972 | 25.9 | 0.5 | 7.3 | 0.7 | 0.2 | 8.7 | 17.2 |
| 1973 | 26.3 | 0.5 | 7.0 | 1.2 | 1.6 | 10.3 | 16.0 |
| 1974 | 26.2 | 0.5 | 6.3 | 2.3 | 2.2 | 11.3 | 14.9 |
| 1975 | 26.3 | 0.4 | 7.0 | 2.8 | 0.8 | 11.0 | 15.3 |
| 1976 | 25.3 | 0.5 | 7.2 | 1.6 | 0.2 | 9.5 | 15.8 |
| 1977 | 25.6 | 0.5 | 7.3 | 1.5 | 1.6 | 10.9 | 14.7 |
| 1978 | 25.7 | 0.5 | 8.1 | 1.9 | 1.5 | 12.0 | 13.7 |
| 1979 | 24.3 | 0.5 | 7.7 | 1.9 | 0.6 | 10.7 | 13.6 |
| 1980 | 24.2 | 0.7 | 7.6 | 3.6 | 0.9 | 12.8 | 11.4 |
| 1981 | 24.6 | 1.1 | 8.2 | 2.7 | 1.1 | 13.1 | 11.5 |
| 1982 | 26.2 | 1.2 | 9.0 | 2.6 | 1.3 | 14.1 | 12.1 |
| 1983 | 24.7 | 1.7 | 8.3 | 2.6 | 1.5 | 14.1 | 10.6 |
| 1984 | 21.6 | 2.1 | 7.7 | 1.6 | 0.7 | 12.1 | 9.5 |
| 1985 | 22.0 | 2.2 | 7.1 | 1.6 | 0.9 | 11.8 | 10.2 |
| 1986 | 24.3 | 1.1 | 8.0 | 1.5 | 1.4 | 12.0 | 12.3 |
| 1987 | 22.6 | 1.1 | 7.5 | 1.6 | 1.4 | 11.6 | 11.0 |
| 1988 | 21.9 | 1.6 | 7.2 | 1.2 | 0.2 | 10.2 | 11.7 |
| 1989 | 21.9 | 1.4 | 7.5 | 1.9 | -1.7 | 9.1 | 12.8 |
| 1990 | 27.4 | 1.1 | 8.3 | 1.7 | 5.3 | 16.4 | 11.0 |

Sources: Secretaria de Planejamento da Presidencia da República, unpublished reports; Central Bank, *Brazil Economic Program*, several issues.

Note: a. Column (1) less Column (6).

decrease in the fiscal burden accelerated in 1984 and 1985, when recession, monetarist policies, and the acceleration of inflation caused, respectively, an increase of transfers to the private sector, an increase in the interest rate on the internal debt, and a loss in tax revenues. On the other hand, fiscal subsidies, which reached 3.6 percent of GDP in 1980, fell to 1.6 percent in 1984. The general explanation for this consistent fall in the fiscal burden is the acceleration of inflation. The inflationary tax is actually smaller than the loss of taxes because of the inflation that occurs between the moment the tax is incurred and the moment it is paid (the Olivera-Tanzi effect). The indexation devices developed in Brazil were unable to avoid this financial loss for the state.

Since 1979 the real public deficit has had a tendency to fall. The decrease in the deficit in 1981, 1983, and 1984 was clearly related to the country's adjustment process (see Table 4.5). Since the public deficit—or the increase in the public-sector borrowing requirements—decreased, it could be said that public finances improved. But it can also be said that the investment capacity of the state diminished. As can be seen in Table 4.4, the fiscal burden started decreasing in 1975; Table 4.1 shows that the state's saving capacity suffered a great decline in the 1980s.

Table 4.5 Operational Public Deficit (percentage of GDP)

| 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 8.3 | 6.7 | 6.0 | 7.3 | 4.4 | 2.7 | 4.3 | 3.6 | 5.5 | 4.8 | 6.9 | -1.2 |

Source: Central Bank, *Brazil Economic Program*, several issues.

In fact, the deterioration of the savings and investment capacities of the state began in 1975, when the bourgeoisie initiated a vociferous campaign against state interventionism. Although the bourgeoisie was the main beneficiary of the authoritarian regime and of state interventionism, it began to be afraid of, or at least unhappy with, the power of the state technobureaucracy. The campaign against state interventionism was the first sign of the rupture of the alliance between the bourgeoisie and the state bureaucracy, particularly the military (see Bresser Pereira 1978, 1984). The basic economic reason for the fracture of the class coalition was the end of the economic miracle (1967–1974); that is, the start of a slowdown or of a relative diminution of the economic surplus, to be divided among the bourgeoisie and the technobureaucracy. This process was begun after the PND II had been launched and was instrumental in its partial suspension beginning in 1976. The extremely ambitious targets of this plan depended on an increase

in the savings capacity of the state—including an increase in the prices and profits of state-owned corporations—that the bourgeoisie was not ready to sustain.

The deterioration of the savings and investment capacities of the state was accentuated by the change in priorities following democratization. The democratic government that took power in March 1985 established social expenditures as its top priority. Several social programs aimed at the distribution of income were started. Although the government assured that these social expenditures would not substitute for investments, maintaining a reasonable level of public investment in 1985 was possible only because of an increase in the public deficit.

As the state lost part of its ability to impose forced savings, it diminished its subsidies to the private sector. In other words, the process of financing private investment through primitive accumulation began to lose importance. As can be seen in Table 4.4, fiscal subsidies, which had reached 3.6 percent of GDP in 1980, were down to 1.6 percent in 1984.

An explanation for the deterioration of the state's savings capacity in the long run can be found in the price controls imposed on state-owned corporations. These price controls on large corporations—mainly state-owned and multinational corporations—had been a constant in Brazil during the 1970s, but they were accentuated beginning in August 1979.³ The only exception occurred in 1981 when prices were liberalized. The CIP, used as a device to control inflation, was in fact a powerful instrument for reducing the profits of state-owned and multinational corporations. Private national corporations were also subjected to price controls, but because they were smaller and politically more influential, they suffered less.

The decreasing profitability of the state-owned corporations between 1978 and 1987 is both a consequence and a cause of the deterioration of the savings and investment capacities of the state. The profit rate for all corporations decreased sharply during this period (see Table 4.6). There is a clear relationship between corporations' loss of profitability and the economic cycle. The profit rate of the thousand largest corporations was lowest in 1983, the year of the deepest recession in Brazil's industrial history. The recovery of the profit rate in 1984 and 1985 was clearly insufficient. In 1985, a year of great economic expansion, the general rate of profit was almost one-third that of 1978 and less than half that of 1979. For the state-owned and multinational corporations, this fall was related to price controls. For the private national corporations, the influence of price controls was less important, whereas the reduction of subsidies played a decisive role. The 1989 share increase of the market rate was the perverse outcome of excess demand that prevailed that year. It anticipated hyperinflation in the first months of 1990.

Table 4.6 Rate of Profit of the 1,000 Largest Brazilian Corporations (percentage of net worth)

| | Private | State-Owned | Multinational | Total ^a |
|------|---------|-------------|---------------|--------------------|
| 1978 | 30.9 | 11.0 | 23.6 | 17.6 |
| 1979 | 23.2 | 8.8 | 12.6 | 13.4 |
| 1980 | 22.1 | 6.0 | 15.8 | 12.0 |
| 1981 | 13.6 | 7.1 | 11.8 | 10.8 |
| 1982 | 10.7 | 6.4 | 12.8 | 8.3 |
| 1983 | 7.6 | 2.6 | 9.1 | 4.7 |
| 1984 | 10.1 | 6.0 | 12.1 | 7.8 |
| 1985 | 11.7 | (4.3) | 6.5 | 7.0 |
| 1986 | 9.3 | 8.5 | 8.1 | 8.9 |
| 1987 | 11.4 | (9.4) | 5.0 | 6.0 |
| 1988 | 13.0 | 1.3 | 11.4 | 9.1 |
| 1989 | 20.2 | 8.9 | 19.9 | 17.7 |
| 1990 | (0.7) | (29.0) | (3.2) | (8.4) |

Source: Getúlio Vargas Foundation, Grupo de Análise Contábil, in *Conjuntura Econômica*, November 1985 and 1991.

Note: a. Weighted average.

For all corporations, this fall in profitability can probably be explained by an increase in the organic composition of capital or a reduction of the marginal output-capital rate. This reduction was particularly accentuated in the case of state-owned corporations, but it can be generalized for all corporations. The strategy of the PND II was basically to complete the import substitution process of basic inputs and capital goods. These large import substitution investments in the areas of oil, electric energy, steel, nonferrous metals, petrochemicals, paper, and cellulose, as well as the export-oriented mining investments (particularly iron), were highly capital-intensive and thus led to an increase in the organic composition of capital. This kind of investment is usually associated with capital-using technical progress—a progress defined by the reduction of the marginal output-capital relationship—that makes the rate of profit decline. Only in the second stage, after these import substitution projects have been carried out, can export-oriented manufacturing investments be undertaken. Then technical progress tends to become neutral or even capital-saving, and the output-capital relation and the rate of profit increase again. Antonio Barros de Castro and Pires de Souza (1985) and Jorge Chami Batista (1987) demonstrated that the PND II, launched in 1974, was—contrary to many superficial analyses—a bold and successful strategy to consolidate Brazilian industrial development at a time of worldwide economic recession and crisis. The large trade surpluses after 1983 are in large part a result of the great investment projects of the PND II.

But the cost entailed not only the increase of the external debt and the deterioration of public finance but also an increase in the organic composition of capital and a fall in the rate of profit.

Finally, to understand the deterioration of the savings and investment capacities not only of the state but also of the entire economy, it is appropriate to consider the relation between the behavior of the real average wage and productivity. Per capita income is taken as a proxy for productivity.

As can be seen in Table 4.7, and more easily in Figure 4.1, during the economic miracle between 1970 and 1974 productivity increased very rapidly, and wages increased at a much slower pace. The consequent increase in the rate of surplus value resulted in an increasing rate of profits. From 1974 to 1978 the rate of increase in productivity slowed down, and the rate of growth of wages increased. As a consequence, both increased at approximately the same rate. The years 1979 and 1980 were a transition

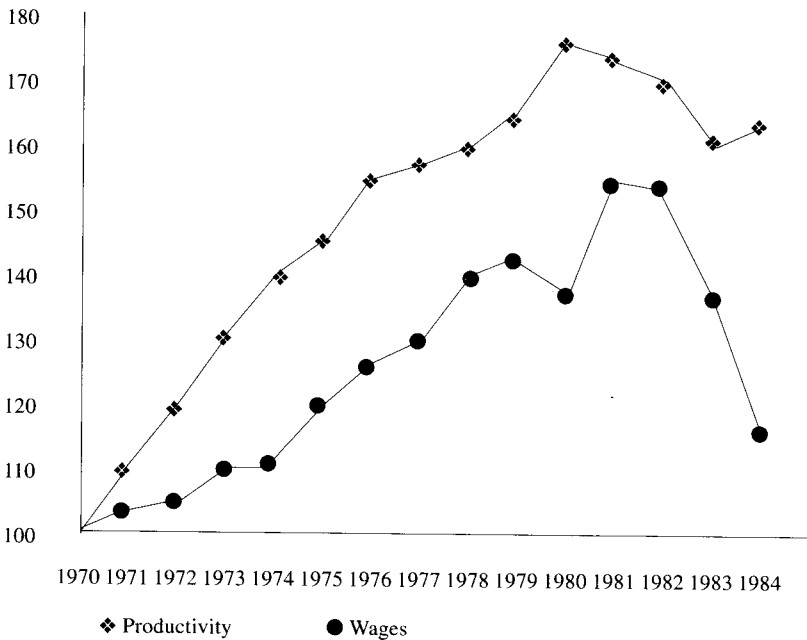
Table 4.7 Wages and Productivity

| | Average Real Wage | Productivity ^a |
|------|----------------------|---------------------------|
| 1970 | 100 ^b | 100 |
| 1971 | 102 | 109 |
| 1972 | 106 | 118 |
| 1973 | 111 | 130 |
| 1974 | 111 | 139 |
| 1975 | 120 | 143 |
| 1976 | 127 | 152 |
| 1977 | 129 | 157 |
| 1978 | 139 | 160 |
| 1979 | 142 | 165 |
| 1980 | 137 | 176 |
| 1981 | 133 | 171 |
| 1982 | 152 | 169 |
| 1983 | 134 | 159 |
| 1984 | 115 | 162 |
| 1985 | 129 | 173 |
| 1986 | 145 | 182 |
| 1987 | 133 | 185 |
| 1988 | 149 | 181 |
| 1989 | 172 | 183 |
| 1990 | 135 | 173 |

Sources: Domingo Zurrón Ocio (1986) for average real wage (until 1984); Getúlio Vargas Foundation for productivity.

Notes: a. Productivity equals increase in income per capita.

b. 1970 = 100.

Figure 4.1 Wages and Productivity

period. After 1980 productivity decreased until 1983, and wages followed with a one-year lag.

Therefore, during the fifteen years examined here, only in the first four years (1970–1974) were the profit-wage ratio and the correlate productivity-wage ratio highly favorable to capital. Since 1975 the relation between capital and labor has been more or less balanced. The decrease in the rate of profit since 1978 cannot be explained by wage increases above productivity.

Since the end of the 1970s the Brazilian economy has faced a serious deterioration in its capacities to save and invest. The deterioration in the capacity to save is related to: (1) the loss of the state's ability to impose forced savings and to subsidize the private sector; (2) the decrease of the fiscal burden; and (3) the decrease of the profit rate, caused by the slowdown of the growth rate, the imposition of price controls to fight inflation, and the increase of the organic composition of capital derived from the huge PND II import substitution investments. The first two variables indicated a serious deterioration in the finances of the state and pointed to the need for a fiscal adjustment aimed at reducing the size of the public deficit. The last factor was a signal of the imbalances the import substitution strategy had imposed

on the Brazilian economy. The deterioration of the economy's investment capacity is also clearly related to the end of the inflow of net external resources aimed at effectively financing new investments, which occurred in 1979.

The task now is to know, first, what the new pattern of investments will be, and, second, whether this new pattern will be able to produce an acceptable rate of growth.

Werneck (1986) developed a model for analyzing the various alternatives conducive to increasing the country's total rate of saving from the 16 percent of GDP prevailing in 1984 to 24 percent. This rate would be necessary to ensure a growth rate of 7 percent of GDP in the following year (marginal output-capital relation of 0.3). He showed that, in theory, an increase in the rate of savings can originate from: (1) an increase in the capitalists' and workers' propensity to save and a concentration of income benefiting the capitalists; (2) an increase in the fiscal burden and in the investment-consumption relation of the state; (3) an increase in the profit rate of state-owned corporations; and (4) a reduction in the interest rates on the external debt and the internal public debt, including the debt of the state-owned corporations (Werneck 1986:11). After making several simulations with these variables and partially dismissing the Keynesian proposition that investment creates its own savings, Werneck (1986:29) concluded that

The recovery of the average rate of growth observed between the end of World War II and the end of the 1970s will necessarily require that the public sector assume again its historical role as an important gatherer of resources for financing investments. The lack of realism implicit in the idea that the increase in the saving effort can be the basic responsibility of the private sector has been demonstrated.

Werneck's conclusions are essentially correct. There is no doubt that it is unrealistic to base the Brazilian strategy of development exclusively on an increase in the private sector's propensity to save. Given the impossibility of resorting to external finance, an increase in the state's savings and investment capacities—through an increase of the fiscal burden, the control of consumption expenditures (wages of the civil servants), and the setting of realistic prices for state-owned corporations—is a more efficient and more socially equitable strategy for assuring the required increase in savings.

Yet it is important not to try to return to the pattern of investment that prevailed between the 1950s and the PND II. This idea, which is almost explicit in Werneck's analysis, is also unrealistic.

Brazil in the 1980s was very different from Brazil in the 1950s, 1960s, and 1970s. State indebtedness was very high. The internal debt of the state, including state-owned corporations, represented 48.1 percent of GDP in 1985. The private sector, however, was capitalized. For the 550 corporations studied in "Melhores e Maiores" (*Exame*, São Paulo, April, September

1986), the ratio of general indebtedness decreased from 57.1 percent of total assets in 1981 to 46.3 percent in 1985. Since the end of the 1970s Ignácio Rangel (1978) has insisted that it is essential to transfer the excess savings existing in the private sector, where idle capacity prevails, to the public sector, where there are great opportunities for investment. To achieve this objective, he could have proposed an increase in the fiscal burden, but instead he insisted on the privatization of public utilities. This strategy may also be unrealistic, but it emphasizes the existence of unused savings capacity in the private sector that could be put to work either through an increase in the fiscal burden or by opening new profitable opportunities for investment in the private sector.

On the other hand, it is not acceptable to dismiss an improvement in the marginal output-capital ratio as easily as Werneck did (1986:3). The large import substitution investments of the 1970s lowered this ratio. To establish a basic stock of capital, it is necessary to lower this relation or to increase the marginal capital-output ratio. The resulting increase in the total capital-output ratio cannot always be detected in the national accounts, not only because the measurements of the stock of capital are imprecise but also because the depreciation of capital made by accountants is larger than the real depreciation. As the more important, highly capital-intensive import substitution investments are made, it is reasonable to admit that the marginal output-capital relation will increase. It is true that large investments will have to be made in hydroelectric energy, steel, and nonferrous metals, but it is also reasonable to expect that the emphasis of the new investments—particularly in the private sector—will be on export-oriented industries with low capital intensity and a high output-capital relation.

In the past twenty-five years Brazil has developed an internationally competitive manufacturing industry. In 1967 this industry accounted for around 6 percent of total Brazilian exports; today it accounts for ten times that amount. Brazilian exports of manufactured goods—which accounted for 0.35 percent of world exports of manufactured goods, 5.03 percent of the exports of developing countries, and 33.34 percent of exports of the ALADI countries in 1973—increased their share to 0.69, 6.33, and 54.88 percent, respectively, in 1982 (Chami Batista 1987). This extraordinary increase in the export of manufactured goods in relation to other Latin American countries is a fundamental explanation for the Brazilian economy's superior long-term performance compared with these countries. The more modest increase in relation to the exports of all developing countries results from the successful export strategies of countries like Korea, Taiwan, Singapore, and Hong Kong.

Simultaneous to the recovery of the saving capacity of the state—a basic strategy for the Brazilian economy that will increase private savings, especially the output-capital relation—is the stimulation of the export of manufactured goods. The usual argument that this strategy leads to concen-

tration of income is incorrect. Several studies have demonstrated that, because they are less capital-intensive, investments in export-oriented manufacturing industries are compatible with a more equitable distribution of income than are import substitution investments (see Little 1982:142).

Brazil must face its large external debt objectively. Since the debt cannot increase forever by the amount of interest due each year, a given transfer of real resources is unavoidable. What is important is for Brazil to negotiate a reduction in the interest rate—specifically a reduction in the spreads—and to be able to obtain large trade surpluses, which would be consistent with the payment of part of the interest on the external debt and with an expansion of GDP. Only an export-oriented strategy will be able to achieve this goal.

Finally, we should consider that international trade will probably continue to grow at a higher rate than the growth rate of the industrialized countries. Brazil, which pays lower wages than many countries, presumably has a competitive advantage that could and should be used to increase internal employment and obtain external surpluses. As the demand for more-specialized labor increases, real wages will tend to increase internally. The pressure to increase productivity, essential for economic growth, will be stronger because the Brazilian manufacturing industry's profits depend on its international competitiveness.

The state-owned corporations will continue to play an important role in conducting investment, but the role of the private national and multinational corporations will likely increase as well. The state, which initially financed and subsidized private investment, is now in debt and is being financed by the private sector through open market operations. An adequate objective of economic policy would be to recover the capacity of the state and state-owned corporations to generate funds internally for their investments, whereas the private national and multinational corporations should have a profit rate sufficiently attractive to stimulate their investments. The financial system that finances the state today would have to give priority to financing private investment. As long as private business enterprises feel stimulated to invest, savings will appear to finance investments.

In conclusion, an adequate rate of growth for the Brazilian economy will be possible as long as the state recovers part of its saving and investment capacity and as long as private businesses have profitable opportunities for investing and their investments are oriented toward sectors with a higher output-capital relation. Primitive accumulation—that is, the complex system of subsidies that was essential in the first stages of Brazilian industrial development—can now play only a secondary role. Brazil already possesses a basic stock of capital that allows investment and growth to be based on profits regularly achieved in the market by the private sector and that systematically incorporates technical progress.