

The perverse logic of stagnation: debt, deficit, and inflation in Brazil

Stagnation and high rates of inflation were the main characteristics of the Brazilian economy in the 1980s. A country that in the last century experienced high growth rates suddenly stopped its growth pattern in 1981. By 1988 per capita income was below that of 1980. Between 1981 and 1983, the slowdown was correctly attributed to the adjustment effort imposed by the debt crisis; between 1984 to 1986, the crisis seemed overcome, the adjustment process appeared successful. Since 1987 the crisis is back. In 1987 GDP grew at the same rate as the population; in 1988 GDP growth was negative (0.3 percent) and in 1989 GDP will again grow at the same rate of population increase: 2.5 percent.

This crisis can be explained in several ways. Its connection with the external debt is clear. The fiscal crisis that developed from foreign indebtedness is obviously at the core of economic stagnation. The acceleration of inflation during the 1980s may be partially explained by the fiscal crisis, but certainly the distributive conflict, which characterizes an economy where income is so unevenly distributed as the Brazilian economy, is the fundamental cause of inflation and its acceleration. The external debt, which aggravated the distributive conflict, obviously played an important role in the acceleration of inflation. In turn, inflation fed back crisis in the real sector of the economy as it aggravated the public debt, hindered investments, and lowered the productivity of capital. By 1986 the current account was in equilibrium, and the belief was that the

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external debt crisis had been overcome and the budget deficit was under control, so the idea that the only cause of Brazilian troubles was inflation became popular in Brazil.

All these factors are interrelated. There is a dictum that nothing succeeds like success; the reverse the true, the vicious circle of a crisis is or seems to be endless. There is a perverse logic in the stagnation process of the Brazilian economy that will be described and formalized in this paper on the macroeconomics of stagnation in Brazil.

1. The perverse logic of external debt

The crisis of the Brazilian economy clearly starts in 1979, when Brazil (and all the highly indebted countries) should have engaged in a strong adjustment process. The second oil shock, the rate of interest shock, and the recession in the U.S. were clear messages that adjustments had to be made immediately. Korea was one of the few highly indebted countries that decided in 1979 to adjust. Brazil, as all other Latin American countries, did not. When Brazil started adjusting in 1981, after two years of accelerated growth,¹ it was too late. The external debt had become too high to be serviced.

The perverse logic of the external debt appears when it becomes "too high." But when does a debt become too high and what is a debt that is too high?

The process of indebtedness undergoes consecutive phases: first, loans finance additional expenditure, that is, when the process of indebtedness begins, the debtor countries receive loans to finance real expenditures (consumption or, hopefully, investment). Then, loans finance additional expenditures and interests. Later loans finance just interest due; then, loans finance only part of the interest to be paid on the old loans. Finally, new loans are suspended. A debt becomes "too high" from the standpoint of creditors when they decide to suspend the process of rolling over the existing debt and financing any interest repayments.

In 1982, the suspension of new loans for Brazil was part of a more general decision of the creditor bankers, after the Mexican default in

¹ A populist-developmentist economic policy adopted by the rightist authoritarian government during these two years achieved rates of GDP growth above 8 percent, while the external debt increased from 38 to 60 billion dollars. Populism may be distributivist, when it has origin in the left, or developmentist, when its origin is in the right. Its results are not much different in terms of internal and external adjustments.

August of that year. But it was based on some objective considerations that made the bankers consider the Brazilian debt too high. There are basically two parameters. First, there is a "stock" rule of thumb that says the relation between the external debt, D_x , and exports, X , of a country should never exceed 2 (in Brazil the debt/export ratio achieved this limit in 1989). Second, there is a "flow" reasoning that says, when this ratio is achieved, the rate of interest, j , should not exceed the rate of growth of exports, x' , so that

$$D_x/X < 2$$

and

if
$$D_x/X > 2 - j < x'.$$

After the suspension of the "market," i.e., of voluntary loans to a debtor country, there are certain conditions where a debt is too high from the standpoint of the debtor. Basically it is too high if, after a reasonable internal adjustment process, it remains impossible to service the debt fully. In this case, full payment of external interest due, J_x , (1) requires additional loans, which lead to an increase in total debt, dD_x , and/or (2) can only be paid if a too large trade surplus, R , has to be produced. A "too large trade surplus" is a trade surplus that implies a transference of real resources to the creditor countries that, to be achieved, depends on the reduction of imports, M , rather than the increase of exports, X . The reduction of imports is basically achieved by reducing domestic investments, I , rather than consumption, C . In this case the actual trade surplus, R , would be bigger than the potential surplus R^* , if we define potential surplus as the trade surplus that can be achieved while maintaining the "necessary" level of investment, I , to foster per capita real growth in the debtor economy.

Another situation where debt that is too high can occur is one where the external debt is almost entirely a state responsibility, D_{xGt} , while the foreign revenues earned are private, X_{pr} . In this case servicing the external debt becomes a basic reason for the crisis, even if the country is producing a sufficient trade surplus. The interests paid on the external public debt become a basic cause for the public deficit. As the public deficit can no longer be financed by an increase in the external debt, it is financed by increasing the internal debt or by printing money. Fiscal crisis and inflation are the obvious outcomes.

Thus, an external debt is too high when, in order to pay fully the respective interests, we have:

$$(1) \quad D_{x_{t+1}} > D_{x_t}$$

and/or

$$(2) \quad R > R^* - I < I^*$$

and/or when

$$(3) \quad D_{x_{Gt}} \text{ versus } X_{Pr}$$

In Brazil, these three conditions were met during the 1980s. Let us take 1980 as a basis, since it was at the end of this year that the adjustment process induced by the debt crisis began in Brazil. Since 1980 (1) total foreign debt practically doubled, (2) the rate of investments fell 5 percentage points below the previous level, and (3) the public external debt increased from 68 to 87 percent of total foreign debt, while export earnings and the trade surplus continue to be almost entirely in the private sector.

2. Stock disequilibrium leading to flow disequilibrium

Let us start this section reasoning in terms of conventional or textbook models of stabilization. Suppose that, in the first half of the 1970s, the Brazilian macroeconomic variables were basically balanced, i.e., aggregate demand was equal to aggregate supply so that

$$I + G + X = S + T + M$$

where G is government expenditures, including expenditures of public owned enterprises, S , private savings, and T , state revenues (taxes and sales of public owned enterprises).

This nice equilibrium, where sectoral interests can be disregarded, is completed by an equilibrium for each sector and:

$$\text{in the private sector} \quad I = S,$$

$$\text{in the public sector} \quad G = T,$$

$$\text{and in the foreign trade sector} \quad X = M.$$

External indebtedness during the 1970s disrupted the potential for all three sector equilibriums. The external indebtedness of the public sector was synonymous with public deficit ($G > T$), which had as counterpart a trade deficit ($X < M$), financed by external savings, S_x . Following text-

book or conventional economics of adjustment—so much used and misused by policymakers everywhere—the private sector remains in equilibrium. When we come finally to the moment of stabilization (1981 to 1983), the adjustment of the public sector was given priority.

The basic objectives of adjustment were, externally, to produce an equilibrium in the current account, and, internally, to eliminate public deficit, E . Both objectives were supposed to be achieved simultaneously. By reducing and eventually eliminating the public deficit, the country would reach current account balance.

$$E = G + J_x - T = 0$$

and so

$$M + J_x = X$$

where M now excludes explicitly interest and J_x represents net interests paid on the external debt.

The reduction of the public deficit was achieved, perversely through the reduction of public sector investments, since the reduction of current public expenditure is always very difficult, even for an authoritarian government. Some public expenditure reductions were achieved by reducing salaries of public officials and state-owned enterprises' employees. After the end of the authoritarian regime, however, the new democratic government that took office in 1985 was unable to maintain this reduction of salaries, and the public deficit increased again.²

On the other hand, the basic objective of the external creditors—the equilibrium in current account—was basically or nearly achieved by 1984.

It is interesting to observe that, contrary to conventional adjustment models, achieving current account balance did not imply achieving government budget equilibrium. In other words, the permanence of a large public deficit was consistent with a large trade surplus and an equilibrium of current account.

The explanation for this fact is not difficult. Conventional macroeconomic adjustment models are just "flow models." They only take into

² Between 1980 and 1984 state expenditures for personnel were reduced from 6.18 percent to 5.59 percent of GDP; in 1988, however, total government expenditures for personnel were back to 7.80 percent of GDP. It is interesting to note that a considerable part of this change was reached at municipal and state level, which decreased from 2.71 to 2.39 percent of GDP between 1980 and 1984 and increased to 3.30 percent in 1988.

account the basic flows of an economy. This is a reasonable approach when the stock of debt (particularly the public debt and the external debt, which, by the way, may have a large overlap as is the case of Brazil) is modest. When the stock of existing debt is too high, the conventional flow models just do not apply. One needs a flow model that takes into account the stock of debt. The imbalances in the economy are not just flow imbalances, but also stock imbalances. The economy may achieve a current account equilibrium, but, due to the volume of interest paid by the state, the public deficit may remain high.

In these circumstances, the basic macroeconomic equation must be rewritten, by making explicit in the left side the interest paid by the state on its foreign debt, J_{Gx} (assuming either no internal public debt or that interest on the internal debt are included in G), and on the right side total interests paid on the foreign debt, J_x .

$$I + G + J_{Gx} + X = S + T + M + J_x.$$

It therefore no longer follows that it is the nonfinancial public deficit ($G > T$) that leads to excess demand and causes trade deficits ($X < M$). Trade balance, as well as the nonfinancial public accounts, may be balanced, but the country remains with a current account deficit ($X < M + J_x$). And the more likely causal relation is just the opposite of conventional models. It is the current account deficit caused by the payment of interests that causes total public deficit including interests paid by the state. We have a public deficit that does not lead to excess demand but is a consequence of the external (and, as we will see in the next sections, also of the internal) indebtedness of the state.

3. The perverse character of adjustment

The adjustment process so described is perverse and self-defeating in several ways. First, it is achieved by reduction of imports, and hence the increase in transferences of real resources and reduction of home investments. Second, it was accompanied by the nationalization of the external debt, which aggravates the imbalance of the public accounts. Third, the increase in interest to be paid by the state implies a reduction of public savings and—as current expenditure and public investments have to be minimally maintained—an increase of public deficit. Fourth, real devaluations of the exchange rate, besides accelerating inflation, increased further the public deficit by increasing the real costs of interest payments. Fifth, since the foreign banks decided not to increase their exposure in

highly indebted countries, the financing of the public deficit caused by interest to be paid on a high external debt had to be done by increasing internal indebtedness or printing money.

Theoretically the public deficit, E , may be financed by increasing public external indebtedment, dD_{xG} , by increasing public internal indebtedment, dD_{IG} , and the state printing money, dB , that is, by increasing the monetary basis (high powered money):

$$E = dD_{xG} + dD_{IG} + dB .$$

During the 1970s and early 1980s the public deficit in Brazil was financed more or less evenly by these three sources. But when the debt crisis appeared, the source of external finance for the state was reduced and finally closed. The state had to pay the interest on the external public debt, but could not finance it externally anymore. Thus, the only solution was to increase internal debt and/or to print money.³ The increase of internal debt flotation to the public could be achieved only by increasing the interest rate and/or by reducing maturities; and the increase of the interest rate aggravated the public deficit. The alternative of printing money validated the going rate of inflation.⁴ The perverse character of the suspension of external debts as a source for financing the public deficit is quite obvious. While a great effort was made to reduce the public deficit,⁵ the suspension of external finance for the small public deficit that was not eliminated by the 1981–83 adjustment led to an increase in internal debts, to an increase in internal interest rates—which aggravated the public deficit, since interests were mostly paid by the state—and to a reduction in the maturities of public debt.

4. Public sector savings and the public deficit

Another consequence of the increasingly high interest burden, besides the increase in the public deficit, is the reduction of public sector savings. Public savings, S_G , are equal to state revenues, T , minus current total

³ Brazilian economists realized this early in 1985. See Arida (1985), Fraga Neto and Lara Resende (1985), and Bresser Pereira (1985).

⁴ About the validating character of the money supply in the Brazilian inflation, see Rangel (1963), Bresser Pereira (1987 [1980]), Bresser Pereira and Nakano (1987 [1983]). It is interesting to observe the pioneering character of Rangel's contribution, made seven years before Kaldor's well-known paper (1970).

⁵ After, and as a result of the 1981–1983 recession, public deficit was not eliminated but achieved its lowest level in the decade, 3 percent of GDP, in 1984.

public expenditures, G (here including interest in order to simplify), minus public investment, I_G .

$$S_G = T - (G - I_G).$$

Thus, we have that public deficit, E , is equal to public savings minus public investments.

$$E = G - T = I_G - S_G.$$

During the 1970s real public savings were strongly positive in Brazil. In 1987, given the level of interests paid by the state and the reduction of the gross tax burden, it was near zero.⁶

Public savings are supposed to finance public investments. When public savings are around zero (as is the case with a highly indebted country where a fiscal crisis developed), the public deficit may be equal to the public investment that has to be done—that cannot be reduced. In this case we may speak of structural public deficit. The real cause of the deficit is the interest burden originated in the external and internal debt, but, as long as public savings are approximately zero, the unpleasant relation between public deficit and public investment becomes evident.

Minimum public investments in Brazil are relatively high (around 5 percent of GDP), given the fact that the state, directly or through state-owned enterprises, is responsible for most of the investments in electricity, oil, communications, transportation, and steel production.

Given the circumstances (1) that the state had to reduce public savings to approximately zero due mostly (but not exclusively) to interest it has to pay (around 6 percent of GDP), and (2) that it must invest at least 5 percent of GDP, any public deficit becomes at that level “structural,” that is, very rigid downwards.

5. Debt crisis and fiscal crisis

The previous discussion demonstrates in several ways how the debt crisis developed into a fiscal crisis. The increase of the public external debt in the 1970s was a consequence of a growth strategy (the Second National

⁶ There are no figures about total public savings in Brazil. The figures published according to the methodology adopted by the national accounts are limited to the public sector *stricto sensu*, excluding state-owned enterprises. According to these figures, public savings were approximately 6 percent in the mid 1970s and turned almost 2 percent negative in 1987. If we add savings (profits plus depreciation) of state-owned enterprises, the declining tendency will be the same, and public savings will probably be around zero.

Plan of Development—II PND) based on public deficit. The internal adjustment, between 1981 and 1983, was accompanied by the nationalization of the private external debt. In Brazil, as in practically all highly indebted countries, the adjustment was also an opportunity for private business enterprises to pay their debts in local currency and pass over to the public sector the responsibility for the external debt.⁷

The 1981–83 adjustment process adopted reduced (in an unsound manner) but did not eliminate the public deficit. Internally its major consequence was to accelerate the reduction of public savings as it stimulated the nationalization of the external debt. Any reduction of the public deficit was obtained by reducing investment rather than reducing current expenditures. The limited reduction in current government expenditures between 1981 and 1983—mainly achieved by reducing the labor force in the public sector—was compensated for by the increase of the interest bill, which took place first due to the increase of public external debt, and second due to the public internal debt.

As the internal public debt increased as a result of the impossibility of obtaining additional external funds, the rate of interest on the internal debt—and the public deficit—increased or tended to increase.⁸ The public deficit, which was reduced in an unhealthy form (curtailment of public investment and wage and salary reductions instead of firing personnel, deregulation, and privatization) during the adjustment process, started growing again in 1985, as the level of real wages and salaries in the public sector recovered their previous level.

This paper does not discuss solutions for the external debt crisis and the fiscal crisis that is being described. The fiscal crisis is clearly an outcome of the debt crisis. Everyday the fiscal crisis is aggravated, while the debt crisis remains the same, given the practical absence of new external loans. It is clear, however, that in order to overcome this crisis, a reduction of the external debt to around 50 percent of its present value and a radical fiscal adjustment will be necessary. The public deficit in

⁷ The nationalization of the external debt was possible since the government had local currency to help business firms pay their debts. It did not dispose of international currency. Business enterprises paid their external debts in cruzeiros, usually before real devaluations of the local money, depositing the cruzeiros in the Central Bank.

⁸ The interest rate did not necessarily increase due to the tradeoff with maturities. In 1986 the creation of the LBCs (Letras de Banco Central) with very short maturity (practically one day) was a recognition that, with very large rates of inflation, it was impossible to have long-term financing for the Brazilian state, but it was also a form of controlling speculation and reducing the interest rate to near zero in open market operations.

Brazil today is structural, but this does not mean that it is impossible to eliminate it. The unilateral reduction of external debt will legitimate internally the fiscal adjustment, while the elimination of the public deficit will legitimate externally the unilateral measures that are necessary to reduce the external debt in the context of the Brady Plan (see Bresser Pereira, 1988d and 1989b).

6. The perverse macroeconomics of adjustment and inflation

As long as too high external debt precludes additional external finance, the only way to finance this debt is to increase perversely internal indebtedness and/or printing of money.

The resulting perverse macroeconomics of adjustment, when the public sector is externally and internally highly indebted, leads to inflation. The external debt acquired in the 1970s was a basic cause of the fiscal crisis in the 1980s; in turn, both the external debt and the fiscal crisis were the roots of the acceleration of inflation rates during the late 1980s.

As inflation accelerates, economic agents become more and more inflation conscious. The factors maintaining inflation—the formal and informal indexation of the economy—assume a growing importance and give rise to an autonomous or inertial type of inflation. In turn, high and accelerating levels of inflation lead to a larger public deficit, reduction of the investment rate, and reduction of the efficiency of accumulated capital.⁹

During the 1970s the annual rate of inflation in Brazil averaged 40 percent. The acceleration of inflation to 100 percent, which took place in 1979 and remained at this level up to the end of 1982, coincides with the appearance of the debt crisis. This crisis begins in 1979, with the second oil shock, the increase in nominal and real interest rates, and the recession in the United States. The major supply shocks in this period were a maxidevaluation of the cruzeiro in 1979, the increase in the internal interest rates, a new wage policy, and the increase in some public prices in order to correct relative prices ("corrective inflation").

In 1983 inflation accelerated again to 200 percent and stayed at this new level to the end of 1985. The major accelerating factor was again maxidevaluation of the cruzeiro, directly related to the debt crisis. Agricultural prices also had some part in the general price increase.

⁹ For a general presentation of this theory, including a survey of the main initial contributions to it, see Bresser Pereira and Nakano (1987), and for a reevaluation of it, Bresser Pereira (1989a).

The deep recessions of 1981 and 1983 were unable to control inflation. In 1981 inflation kept to its previous level of 100 percent; in 1983, it doubled to 200 percent. The first recession led a group of economists in São Paulo (at Getúlio Vargas Foundation) and in Rio de Janeiro (at PUC—Catholic University) to formulate the theory of inertial inflation. The second recession led them to propose a general price freeze that we called the “heroic solution to control inflation” (Bresser Pereira and Nakano, 1984), and which came to be called “heterodox shock” (Lopes, 1984). The Cruzado Plan in February 1986 was the result of this theoretical proposal. Its subsequent failure has to do with its populist administration and not with its original conception.

This plan, as the Bresser Plan (June 1987) and the Summer Plan (January 1989), was unable to eliminate inflation. As an emergency plan adopted to cope with the acute crises of the Cruzado, the Bresser Plan did not have this objective (see Bresser Pereira, 1988a), but the other two were clearly aimed at reducing inflation to a rate similar to the one prevailing in the OECD countries. The literature about the causes of the failure of the Cruzado Plan is growing every day. During a certain time it became popular to say that the Cruzado Plan failed because it was unable to combine heterodox with orthodox measures. Starting from this assumption, the Summer Plan tried to adopt an orthodox monetary policy by putting the real rate of interest at a very high level, but failed as well. Actually the Cruzado and the Summer plans ended with an acute economic and financial crisis, which can be explained by its populist implementation in the first case and by its orthodox conception in the second.

7. The immobilization of the state for structural reforms

The fiscal crisis and its more terrible outcome—autonomous or inertial inflation—have as a consequence the immobilization of the state’s long-term economic policy. And nothing is more important for less developed countries than an overall strategy of economic development.

A deep economic crisis, such as the crisis of the 1980s in Brazil, is a clear signal that the old strategy of economic development is exhausted. The fiscal crisis is an indication that the model of state in Brazil is also exhausted. In other words, if crises are always signals of illness and an opportunity for change, it is clear today in Brazil that the form of state intervention that was crucial for the extraordinary pace of Brazilian industrialization between the 1930s and the 1970s must now suffer a complete overhaul.

This crisis is also a signal that, more than the model of state, the model of society in Brazil is exhausted. Brazilian society is characterized by a high degree of income inequality. While the country was developing fast, income inequality was not a major problem since almost all incomes were rising in real terms. But the moment that development stopped, it became a major source of continuous and aggravating social conflict—a conflict that has its basis in the public deficit and the acceleration of inflation.

The translation of the need for change in the development strategy or in the form of state intervention to practical terms was baptized, particularly by World Bank economists, as “structural reforms,” and has a clearly liberalizing pitch. They are based on trade liberalization, deregulation, and privatization. This is not the time to discuss these proposals.¹⁰ There is no doubt, however, that the general orientation of these proposals is correct, as they correspond, in the cyclical and ever-changing pattern of state intervention, to a moment when state intervention expanded too much, provoked distortions, and must now be reduced and changed.¹¹

The three basic strategies of the Brazilian state for promoting industrialization were (1) trade protection, (2) subsidies for the private enterprises, and (3) state direct investments in public services and basic input industry (electricity, oil, steel, communications, railroads). The change, now, is necessarily toward (1) elimination of subsidies to fight public deficit, (2) trade liberalization in order to stimulate international competitiveness, and (3) privatization that will help to solve the financial crisis of the state.¹² Given the fact that Brazil is a large country, trade liberalization will be necessarily limited in comparison with smaller countries, but there is no doubt that a substantial degree of liberalization will be an essential feature of any future industrial policy. State-owned enterprises had a decisive role in the first phase of industrialization, but now, when efficiency is crucial and the state urgently needs financial resources to balance its accounts, privatization is a natural solution.

An increasing consensus is being reached in Brazil regarding the need for these structural reforms. But they do not materialize. Why? It is possible to enumerate several reasons—resistance of industrialists and

¹⁰ For a critique see, for instance, Jeffrey Sachs (1987).

¹¹ For the theory of the cyclical and ever-changing pattern of state intervention, see Bresser Pereira (1988b).

¹² It is relevant to note that one of the outstanding Brazilian economists who helped to formulate the industrialization strategy via protection and direct state investment, Ignacio Rangel, is speaking for privatization of public services in order to promote needed investments in this area since he wrote the “Postfacio” of the third edition of *A Inflacao Brasileira* (1978).

old nationalists afraid of losing subsidies (tax renunciations) and administrative and tariff protection, resistance of bureaucrats and of the traditional left who insist on defending state-owned enterprises—but the fundamental reason why little or nothing has been achieved in this area is the immobilization of government due to the crisis.

The government tries to establish a long-term industrial and development strategy, makes agreements with world banks toward structural reforms, but the results are clearly unsatisfactory. Reforms are not completed and put to work, because one of the basic characteristics of an economic crisis and particularly of a fiscal crisis is the immobilization of economic policy. A fiscal crisis means that the state has no funds to finance a new economic policy; the policymakers do not have either the time or tranquility to formulate and implement the new strategy. If a social crisis is added to the fiscal crisis due to excessive income concentration, the consequence is that a legitimacy crisis is permanently threatening the political system and aggravating the immobilization of the state.

High rates of inflation plus an increasing internal debt and a decreasing maturity for this debt lead economic agents to fear the financial breakdown of the state and provoke an increase in capital flight. Capital flight, once minor in Brazil, has become substantial in recent years.¹³ All these factors have, obviously, a depressing effect on the rate of investment (which is already depressed by the transference of real resources, the disappearance of external savings, and the reduction of public savings).

Finally, the new investments and the existing stock of capital suffer from a loss of efficiency, as can be seen by the increase of the capital-output ratio.¹⁴ This increase is very large if we calculate the investment ratio at current prices; it is smaller if we measure investment at constant prices. In current prices the rise of the capital-output ratio is larger

¹³ Figures about capital flight are always imprecise, but, according to estimates made in the Brazilian financial market, capital flight was about 1 billion dollars in the 1970s and mounted to around 3 billion dollars since the debt crisis became evident in 1983. In 1988 it would have doubled, and in 1989 it would be higher than 10 billion dollars. According to *World Financial Markets* (December 1988), the accumulated flight of capital assets from Brazil would be 6, 8, and 31, respectively, in 1980, 1982, and 1987. From a relatively low level it would be growing at a faster pace than, for instance, Mexico, whose respective figures were 19, 44, and 84 billion dollars. In 1980 accumulated capital flight was more than three times higher in Mexico, while in 1987 it was 2.7 times higher. In both countries the relation between capital flight and the internal crisis that followed the debt crisis is quite clear.

¹⁴ Capital-output ratio that was around 3 in the 1970s averaged 5.5 in the 1980s, if we take the investment rate in constant prices.

because prices of capital goods (imported and internally produced) have increased in relative terms. In constant prices, where the variation of relative prices is neutralized, the capital–output ratio also rises. It should not, since investments in the 1980s tended to be less capital intensive than in the 1970s, when the II PND was launched. The best explanation for this reduction of the efficiency of capital in the 1980s is probably the rate of inflation. It is usually said that the Brazilian economy is used to inflation, that indexation neutralizes most of its evils. This was not true when inflation was 40 to 50 percent a year, it is nonsense when inflation is no longer counted on an annual basis, but on a monthly basis, and when inflation is 10, 20, 30 percent a month. This type of inflation disorganizes the economy, makes economic calculation increasingly difficult, stimulates speculation, induces economic agents to spend most of their time trying to gain or, at least, not to lose with inflation. New investments are not necessarily less efficient, but the measurement of the marginal capital–output ratio shows an increase because the existing stock of capital turns idle, loses efficiency, as the economy is disorganized by inflation and an increasing number of people in the business enterprises are more concerned with inflation than with production. Actually what is increasing is the total capital–output ratio, but this ratio cannot be measured.

8. A new pattern for financing investments

It is quite clear today that, in order to overcome this economic crisis, besides the reduction of the burden of the external debt and overcoming the fiscal crisis, it is necessary to find a new pattern of accumulation of capital. In other words, a new scheme for financing investments in Brazil is needed.

A pattern of accumulation is defined by the way investments are financed.

We may define financing in terms of sources of savings:

$$I = S_p + S_G + S_x$$

where I is total investment, S_p , S_G , and S_x are private, public, and external savings, respectively.

The pattern of financing investments has suffered deep transformations in Brazil (Bresser Pereira, 1987). Before the 1970s external savings were negligible and savings were roughly divided between the private and the public sector:

$$I_{1950s \text{ and } 1960s} = 0.5S_p + 0.4S_G + 0.1S_x.$$

During the 1970s, with the increase of private savings and the huge current account deficits being financed by external indebtedness, the state remained an important actor in the process of accumulation, but public savings were reduced. Again in very rough terms we have:

$$I_{1970s} = 0.5S_p + 0.3S_G + 0.2S_x.$$

In the 1980s, external savings practically disappeared. Public savings are still slightly positive mainly because savings of public enterprises are still positive. Anyway, the source of savings for financing investments is now almost exclusively private:

$$I_{1980s} = 0.8S_p + 0.1S_G + 0.1S_x.$$

The present pattern for financing investments is clearly unsound. Neither the external nor the public sector may have such a small role in the process. And, in relation to the public sector, we have already seen that it continues to be responsible for around one-third of total investments (5 to 6 percent of GDP). Such small if not zero savings necessarily mean public deficit, fiscal crisis, and stagnation.

The required reduction of the external debt, the internal fiscal adjustment, and the structural reforms must have as one of their objectives to change this pattern of financing investments. This will be the challenge of the 1990s. The 1980s were a lost decade for Brazil. However, as long as we now understand much better than in the beginning of the decade the logic of debt, deficit, inflation, and stagnation in Brazil, as long as we have been able to criticize populism and neoliberal orthodoxy, there is hope that this vicious circle will be broken.

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