

# Brazil in the *1990s:* an economy *in transition*

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The 1990s have been termed “the reform decade” in Brazil, because of the significant number of changes which took place in various aspects of that country’s economic and administrative policy. This article aims to systematically set forth the main features of those changes and analyse them in the light of the literature on reforms. It represents an attempt to sum up various studies made on the case of Brazil as part of a regional-level study coordinated by ECLAC. The article finds that in various aspects the results have been in line with those proposed by the literature in question, but not everything has turned out as planned or desired. It considers that this disparity of results can be explained by factors ranging from the way the reform process was designed, in some cases, to the different perceptions by the economic agents of the market signals associated with those changes.

# I

## Introduction

Analysis of the Brazilian economy during the 1990s represents much more than something which coincides with the calendar. This period, which is an extremely fertile area of study, displays a number of aspects which will continue to be analysed for a long time to come.

The international scene at the beginning of the decade was marked by an increasingly intensive flow of capital and technological changes, although the difficulties associated with an unstable domestic macroeconomic environment did not allow the Brazilian economy to participate to the full in these new movements. Furthermore, the economic policy-makers were constantly being reminded of the success of the emerging economies in other regions, and the path for attaining such success seemed to be clearly marked, according to the various analysts.

At the domestic level, the growing inflation was giving rise to various anti-inflationary attempts, while a new Constitution (promulgated in 1988) added further fiscal and social problems to an already unsettled economic environment.

In the second half of the decade, the context was markedly different. The stabilization of prices achieved, accompanied by relative openness to foreign trade, has

no precedent in the economic history of the country. At the macroeconomic level, various important changes were made which facilitated access to international capital markets and led to a new growth pattern.

The purpose of the present article is to analyse these features in the light of the adjustment process which took place in the 1990s. Some aspects evolved in line with the prescriptions of the specialized literature on reforms in developing countries. Not everything turned out as planned or desired, however. We consider that the reasons for this lie in factors ranging from policy design to the economic agents' perceptions of the market signals.<sup>1</sup>

This article has five sections. The following section (section II) gives a brief overview of the literature on the reforms, and more specifically the suggestions as to the time and sequence for their application. Section III then gives a detailed account of the basic characteristics of the reforms applied in Brazil during the 1990s. Section IV analyses some results which do not fully correspond with the expectations, and an attempt is made to identify the reasons for this. Finally, section V relates some lessons that may be derived from the recent Brazilian experience.

# II

## The need for reform, and the basic recipes

In general, Latin American policy-makers were exposed to a variety of pressures during the 1970s and 1980s. The economic and social distortions and shortcomings which existed, together with external constraints made worse by the intensive movements in international commodity markets and the prevailing financial difficul-

ties, further increased the need to promote substantial reforms.

The countries of the region adopted different approaches in the course of the period studied,<sup>2</sup>

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□ The views expressed here are exclusively those of the author and do not necessarily correspond with those of ECLAC or the University of Brasilia. This text is an updated and edited version of the chapter published in Baumann (coord.), 2000.

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<sup>1</sup> This article is based on the 1988-1998 period. Even so, we consider that its findings hold good for the rest of the decade, because although the economic contraction and changes in relative prices in 1999 and the recovery in activity in the year 2000 changed some aspects, most of the basic tendencies analysed here continue to hold good.

<sup>2</sup> As may be seen, for example, from the processes of greater openness

although in general the design of the reforms was highly influenced by the orthodox reading of the results of the successful experiences of the emerging economies of Southeast Asia. According to this view, reform was an urgent task, because the sooner the adjustment process was begun, the lower the costs involved would be. In the words of a high World Bank official, “a delayed adjustment is more painful” (Stern, 1991, p. 3).

Market-oriented policy reforms were recommended, on the basis of four main arguments (Rodrik, 1993a, p. 7): a) economic liberalization reduces the static inefficiencies generated by faulty distribution and waste of resources; b) it stimulates the learning process; c) outward-oriented economies manage to cope with adverse external shocks better, and d) market-based economic systems are less prone to rent-seeking activities which lead to waste of resources.

Thus, a reform programme should include fiscal discipline and measures to guarantee free trade, as well as reducing existing market price distortions to the minimum. Economies in the process of restructuring should receive financial assistance during the transitional period, as a way of reducing the costs associated with the reforms at the microeconomic level: the adjustment includes reforms of both policies and institutions, because it is believed that such changes can improve resource allocation, increase economic efficiency, expand the growth potential and heighten resistance to future shocks (Thomas, Chibber and De Melo, eds., 1991, p. 12).

The finance agencies and various academics agreed that the measures which it was indispensable to take at the start of the process<sup>3</sup> included those now known as the Washington Consensus: fiscal discipline; reorientation of public expenditure priorities towards the areas of health, education and infrastructure; fiscal reform (broadening of the tax base and reduction of marginal tax rates); establishment of competitive exchange rates; guarantees for property; deregulation; trade liberalization; privatization; elimination of barriers to foreign investment, and financial liberalization.

This ideal roadmap for a system free of distortions sheds little light on how to cope with some crucial aspects, however (Conley and Maloney, 1995), such as: how to minimize the costs of the adjustment; how to cope with the implications of different rates of adjustment between sectors; the right macro-policy to apply during the reforms (specifically, how to manage

the exchange rate), and how to minimize the consequences for social welfare of leaving one sector controlled while others are freed of State intervention.

In an ideal world, anyone who had to reform –for example– trade policies would not need to bother with these intermediate stages, as the optimum policy would be an immediate leap to free trade, unless there were specific market distortions (Mussa, 1986).

In practice, however, proper design of the reform process is essential, and not only for the benefit of academic appraisals or in order to ensure political support for the reforms. Credibility is an essential aspect which must be taken into account (Calvo, 1989). Lack of confidence in the durability of a reform brings in distortions which can end up by destroying it: the reform process can be reversed simply because people believe it is only going to have a short life.<sup>4</sup>

The need to recommend a particular path to follow in the reform process has given rise to a literature focussing on the proper moment and sequence of the reforms which also emphasizes the importance of eliminating all uncertainty about the government’s intentions.

The major part of the debate has been on whether trade liberalization should precede or follow liberalization of the capital account.<sup>5</sup> Experience has shown that a macroeconomic imbalance at the beginning of a period of reforms can affect the final results. There is therefore an additional and more specific debate on the sequence that should be followed in an initial economic environment of high inflation, with special attention to synchronization between the price stabilization process and the reforms proper.<sup>6</sup>

Another aspect connected with the analysis of the reforms<sup>7</sup> is the relation between reform of the domestic

in Argentina, Chile and Uruguay in the late 1970s and early 1980s, as compared with the later trade reforms in Bolivia, Brazil and Mexico.

<sup>3</sup> According to Williamson (1990).

<sup>4</sup> A simple example is that of a trade reform which is only perceived as being temporary. The economic agents may perceive that imported goods will only temporarily be cheaper: in those circumstances, they will assume bigger debts than they normally would, simply by bringing forward their consumption. If they can obtain finance (in the belief that they will have higher permanent incomes) through an open capital account, present consumption will increase (Conley and Maloney, 1995). The current account imbalance resulting from such actions can lead to the restoration of trade barriers and consequent reversal of the original trend.

<sup>5</sup> The literature does not express any clear conclusions on the point in time at which the reforms should also include other markets, such as the labour market (an inevitable step if trade openness continues).

<sup>6</sup> This was a matter of great interest for Brazil in the early 1990s.

<sup>7</sup> Strongly influenced by the Chilean experience in the early 1980s.

financial sector and liberalization of the balance of payments capital account. Especially in countries with high rates of inflation, the fiscal deficit and interventions in the financial market often result in artificially low domestic interest rates. When opening of the capital account takes place in a context in which domestic interest rates are being kept below their equilibrium level, the result will be the draining-away of resources. If the fiscal deficit is under control, however, the reformed domestic financial market will operate at equilibrium interest rates.

There would thus appear to be little to discuss regarding the sequence between reform of the domestic financial market and liberalization of capital movements: the barriers to international capital movements should not be eased before the domestic financial sector is liberalized.<sup>8</sup>

A number of authors have also argued that liberalization of the capital account should only take place after trade and other distortions have been eliminated (McKinnon, 1982). By giving rise to inflows of capital, the easing of controls on capital leads to an increase in the level of aggregate expenditure, both on tradeables and on non-tradeables, which will in turn promote a real revaluation of the currency, hindering or even frustrating foreign trade liberalization.<sup>9</sup>

Although the opening of the capital account usually leads to a real revaluation of the currency, it is known both theoretically and empirically (Choksi and Papageorgiou, eds., 1986),<sup>10</sup> in respect of a number of cases of trade policy reform, that successful trade liberalization generally requires real devaluation of the currency.

Thus, in principle trade reform should be adopted before eliminating controls on foreign capital flows. This conclusion gives rise to two other dilemmas, however.

Firstly, it is not clear from this debate whether a gradual reform is preferable to one that takes place more abruptly. As Edwards (1990) explains, a gradual approach can have characteristics which either increase

or compromise the credibility of the reforms, depending on the real conditions in each country: if it reduces unemployment or makes possible fiscal balance, a gradual reform will tend to generate greater credibility, but at the same time, a slower reform process could allow the groups affected by the new policies to organize themselves in order to act against them.

Another aspect is the relation between the reforms and price stability. Economic theory offers few guidelines in this area. Even so, experience suggests (Corbo and Fischer, 1992) that in economies with acute macroeconomic problems reforms should only be begun after suitable reduction of the imbalances in question: instability limits the benefits of reforms aimed at improving resource allocation through changes in relative prices.

With regard to trade liberalization –the first stage in the proposed reform scheme– there are three arguments in favour of delaying it until inflation is under control (Rodrik, 1993b). First, the already mentioned variability of relative prices, which affects the way the advantages of the greater efficiency are passed on. Second, trade liberalization could affect fiscal income if the reduction or elimination of duties on trade exceeds the fiscal income deriving from the increase in trade activity. Third, liberalization requires a compensatory devaluation of the exchange rate in order to protect the current account, and this would affect domestic price stabilization, through the cheaper imports favoured by a revalued currency.

The exchange rate argument calls for some detailed considerations. From the theoretical point of view, this is the aspect which imposes the most serious restrictions on trade liberalization.<sup>11</sup> As far as this article is concerned, this matter is directly related with proper understanding of the Brazilian experience since 1994.

The debate on the application of reforms in a context of stabilization policies has been concentrated on whether the reforms can effectively facilitate the process of reducing inflation, since trade liberalization should make possible price stabilization by forcing convergence between the rates of variation of the domestic and external prices of tradeable goods. Whereas trade liberalization requires compensatory exchange rate devaluation (because of wage rigidities), however, price stabilization requires, on the contrary, avoidance of such devaluation, so that the exchange

<sup>8</sup> Edwards and Edwards (1987) and Edwards (1990). As we shall see below, the question of regulation of the liberalized financial sector is also of fundamental importance.

<sup>9</sup> Another way of presenting this argument is based on the rate of adjustment of the goods and financial markets: since the former is slower to adjust than the latter, a homogeneous reform will require the liberalization of the goods markets before the financial markets.

<sup>10</sup> It is considered that real devaluation of the currency is a necessary condition for successful trade liberalization.

<sup>11</sup> See the analysis in Rodrik (1993b).

rate can be used either as a means of attaining a real goal (in which case it forms part of the process of fixing prices and wages) or as a nominal anchor for domestic price levels (in which case it leads this process).

Furthermore, when accompanied by financial liberalization,<sup>12</sup> real exchange rate revaluation tends to compromise the credibility of the liberalization process, or else, once the initial excess of capital inflows is over, the expectations of real devaluation may lead to higher real interest rates, precisely at a time when the productive sector is going through the difficult period of adjustment following the easing of trade restrictions (Edwards and Edwards, 1987).

However, this dilemma over the exchange rate may be illusory, if over-valuation of the exchange rate is viewed as the price that must be paid for ensuring the credibility of the process. If, on the one hand, inflation has a strong inertial component linked to indexing or the accommodation of key nominal variables<sup>13</sup> to delayed variations in price levels, then on the other hand, in order to be credible a policy must not only fight inflation but must also eliminate the nominal rigidities which make it necessary to use devaluation to ensure competitiveness.

From this point of view, exchange rate overvaluation may be considered as an appropriate approach, although not devoid of risks. For a public which has already witnessed the failure of many anti-inflation plans due to the lack of political will, an ambitious package which attacks all the sources of inflation may be taken to indicate the presence of a government with clear decisions and well-defined policies, so that a reversal of policy in the event of temporary problems will be less likely. Thus (Rodrik, 1993b), the use of the exchange rate as a nominal anchor may not necessarily conflict with trade liberalization, since if that anchor works, nominal wage rigidity will finally disappear and sustainable competitiveness will be more likely.

The last two observations regarding the reforms are connected with the fact that: a) open market policies generate their own group of interested parties (Rodrik, 1992) –as new opportunities for gain appear, the business community benefitted by the post-inflation situation will tend to fight against any attempt to reverse that state of affairs; and b) a reformed system does not necessarily mean the elimination of rent-seeking activities –as long as governments are responsible for applying policies, individuals will always try to obtain benefits for themselves (Rodrik, 1993a).

### III

## The reforms and the economy in the 1990s

The 1990s are considered as the “reform decade” in Brazil. Although some initial actions were taken in the late 1980s –such as foreign trade liberalization and the first privatization operations, for example– the most significant stages only began to be fulfilled from 1990 on.

This decade represented a turning-point in the country’s economic history. After having been for the previous four decades a closed economy with a strong presence of the State as a producer of goods and

services, and after a long period of high inflation with indexing, at the end of the 1990s Brazil became an economy with a marked degree of openness to merchandise trade and capital<sup>14</sup> and a simultaneous reduction in the function of the State as a direct producer.

In addition, the economy attained an unprecedented degree of price stability which has already lasted for over six years: the consumer price index rose to a record level of 2,489% in 1993 but

<sup>12</sup> The elimination of inflation-related gains as a result of a successful stabilization process could lead the financial sector to seek other sources of finance.

<sup>13</sup> Wages, the monetary aggregates and the exchange rate.

<sup>14</sup> According to estimates by Mesquita (1999), the imported component of industrial production rose from 4.3% in 1989 to 20.3% in 1998.

gradually went down to single-digit values by 1996, standing at 5.3% in the year 2000.<sup>15</sup>

In order to understand the reforms and their effects, it is necessary to take into account the extremely significant impact of a price stabilization process like that which took place in this period: a) it generated a “wealth effect” which affected both consumers and producers; b) the stable macroeconomic situation created a political environment favourable to the reforms; c) it inspired confidence among Brazilian and foreign investors, and d) at the same time it eliminated the substantial gains obtained by the government and the banking sector from inflation, with important consequences for monetary and fiscal policy as well as for the design of the new regulations for the financial sector as a whole.

The specialized literature on policy reforms usually takes a taxonomic approach in which various levels of measures are identified. According to this view, Brazil has almost completed its first-generation reforms, which began with trade openness and the privatization of State enterprises in the late 1980s and has been further intensified since the early 1990s. The country has also taken a number of steps towards second-generation reforms such as those in social security, public administration and fiscal policy.

There were also other policy changes in the same period which had important consequences for the economy. Social programmes were thoroughly redesigned in order to incorporate the new universal rights guaranteed by the 1988 Constitution and to overcome fiscal difficulties and spread the burden of providing services among the federal government, the states and the municipalities.

On the social level, as well as in other areas such as science and technology, there was growing (although still insufficient) private sector participation in the financing of various activities. The recent fiscal results and the forecasts for coming years suggest that this is a feature which could be further accentuated in the future.

This does not mean that the reforms have necessarily been in the right direction, that they have been properly applied, and much less that they are now complete. There can be no doubt, however, that they have substantially changed the production environment in recent years.

<sup>15</sup> As we shall see below, in spite of the marked exchange rate devaluation in 1999, the consumer price index only rose by 8.4% in that year.

It might be wondered why such a concentration of reforms took place in this particular period of time. The answer has to do with the increasing perception of the domestic economic actors –government authorities, employers and analysts from the academic field– that changes were very necessary. The conjuncture of the final stages of the multilateral trade negotiations, the renewed access of other Latin American countries to finance, and the fiscal policies applied in other economies<sup>16</sup> acted as a stimulus for the reformers.

The reforms –especially privatization and the redesign of social security– called for major changes in the Constitution. Political will and power were therefore needed, and these could only be attained on the basis of consensus among the economic agents.

Figure 1 shows the sequence in which the main reforms took place. The process began with the reform of trade policy and, early in the 1990s, some sporadic tentative moves towards the privatization of public assets, followed by the opening of the balance of payments capital account. The second generation of reforms only began in the second half of the decade, with reforms in public administration and social security, accompanied by a series of changes in various social programmes covering education, health and the reduction of poverty.

## 1. Trade reform

Trade reform began in 1987, with the first change in the nominal tariff structure in 30 years and a progressive reduction in tariff rates which gained pace from 1990 on.<sup>17</sup> The simple (unweighted) tariff rates were as follows:

1988-1990:	33.4%
1991-1993:	17.8%
1994-1996:	12.9%
1997-1998:	13.9%

There were two points at which the tariff reduction process speeded up: in 1990, and again in late 1994. In both cases one of the main arguments for carrying out the process was the need to provoke a competitiveness shock among Brazilian producers, breaking up

<sup>16</sup> The tax and interest rate differentials were an important stimulus for arbitrage-related international financial movements.

<sup>17</sup> A full examination of the changes in trade policy in the 1990s should also take into account the fact that, for the first time in its history, Brazil formed part of a regional integration process, which brought in some important additional considerations.



FIGURE 1

Brazil: A decade of reforms<sup>a</sup>

	1988 or earlier	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Trade reform	*	*	*	*	*	*	*	*	*			*	*
Opening up to external financial capital					*			*	*				*
Privatization	*		*				*	*		*		*	*
Regulation of financial sector								*	*	*	*	*	*
Reform of social security									*	*	*	*	*
Administrative reform											*	*	
Reform of social programmes:													
Education								*	*	*	*	*	*
Health								*	*	*	*	*	*

Source: Prepared by the author.

<sup>a</sup> The asterisks indicate the approximate date of the main measures designed to regulate each of the reform processes rather than the date of the greatest intensity of change. It is important to bear this in mind, for example, in the case of the privatization process, which was much more intense in 1998, in terms of the real value of the transactions carried out, than in any previous period.

monopoly situations and using trade policy as a complement to the price stabilization process.<sup>18</sup> The 1990 trade reform was broadened to include the elimination of non-tariff barriers and various export incentives, as well as a significant reform of the institutional structure responsible for foreign trade policy. The 1994 reform led to partial advance application<sup>19</sup> of the MERCOSUR common external tariff, which would otherwise only have come into effect in January 1995.

Consequently, analysis of the impact of trade reforms on the balance of payments is not direct, because: a) due to the special features of the very large domestic market which had been closed for so many years, some time passed before imports reached a significant level; b) the growth of exports was the result of two simultaneous processes: multilateral tariff reduction and the regional preferences in force in MERCOSUR; c) the price stabilization after 1994 caused a “wealth effect” which affected domestic demand for imported goods, and d) exchange rate policy kept the currency markedly overvalued up to 1999, and this affected foreign trade.

<sup>18</sup> There is still some criticism of the way these changes were carried out. For a detailed description of the 1994-1996 tariff reforms, see Baumann, Rivero and Zavattiero (1997).

<sup>19</sup> In September 1994.

Taking account of these preliminary observations, it may simply be noted that the trade surpluses which averaged US\$ 13 billion between 1992 and 1994 turned into trade deficits of US\$ 6 billion in the 1995-1998 period.<sup>20</sup> The import coefficient<sup>21</sup> rose from 5.5% in 1990-1993 to 7.2% in 1995-1997 (see figure 2). The imported goods in greatest demand were raw materials and intermediate products, capital goods and motor vehicles. The importance of this import structure for the domestic investment cycle and some production sectors will be analysed later on in this article.

The trade reforms were substantial and really served to: i) increase the imported component in domestic production,<sup>22</sup> which ii) raised the productivity of labour<sup>23</sup> and iii) increased the consumer surplus (total imports of consumer goods

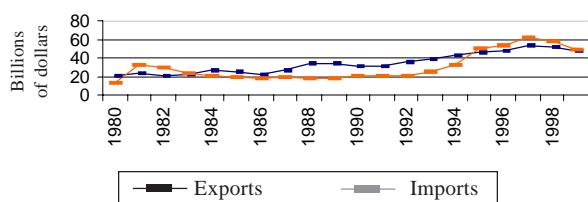
<sup>20</sup> In spite of the sustained expansion of exports, which registered an average annual growth rate of 6% between 1994 and 1998, and the improvement of almost 20% in the terms of trade between 1991 and 1995.

<sup>21</sup> Total imports/GDP (percentage).

<sup>22</sup> Data from the IBGE show that in 1990 only 11% of gross fixed capital formation in machinery and equipment corresponded to imported goods, but by 1997 this percentage had risen to 41% (Saínez and Calcagno, 1999).

<sup>23</sup> Bonelli (1998) estimates that labour productivity in the manufacturing sector rose at the rate of 8.7% between 1991 and 1997, compared with an average rate of 0.3% between 1981 and 1989 and a rate of 5.6% in the early 1970s.

FIGURE 2  
Brazil: Trade balance, 1980-1999



Source: Central Bank of Brazil.

increased from US\$ 2.6 billion in 1990 to US\$ 11 billion in 1998), but their impact on exports was offset by overvaluation of the exchange rate<sup>24</sup> and the increase in wages<sup>25</sup> (especially in industry).

## 2. Opening-up to financial capital

There was also concern in the early 1990s to establish conditions which would enable the Brazilian economy to take advantage of the growing facilities for access to international capital markets which existed at that time.

Ever since the 1950s, Brazil has stood out among the developing countries because of the large share of foreign capital in its production structure.<sup>26</sup> Up to the end of the 1970s, it was one of the countries which received most foreign investment. The situation changed during the crisis of the 1980s, and quite a widespread perception grew up that the economy was

<sup>24</sup> Exchange policy during the 1990s was quite varied. Starting with a situation where the market was allowed to determine the equilibrium exchange rate (as a new means for breaking a long-standing and generalized indexing process), the government found it necessary to adopt a system of currency bands, which underwent some modifications in the course of time. In January 1999, external pressures which had built up as a result of the accumulated overvaluation led to a new free-floating system.

<sup>25</sup> A bilateral dollar-real index, deflated by the wholesale price indexes prevailing in mid-1994, would show that the real was overvalued from July 1994 to March 1996, with a peak of 17 points in February 1995. Bonelli and Fonseca (1998a) give some details in this respect: while the competitiveness of labour increased by 62% between 1990 and 1996, the average wage in dollars rose by 84%, so that the gains in terms of productivity were more than offset by the increase in labour costs. In other words, the reduction in competitiveness was not due solely or even mainly to overvaluation of the exchange rate: wages in industry, deflated by the wholesale price index, increased by 76% over the period, compared with a 5% revaluation of the real vis-a-vis the dollar.

<sup>26</sup> It is calculated (Chudnovsky and López, 1997) that, in 1995, 92% of total sales in the motor industry, 59% in the pharmaceutical industry, 56% of sales of domestic appliances and 44% of the sales of the beverages and tobacco industry in Brazil were linked with foreign companies.

missing out on the opportunities created by financial globalization, which were more plentiful in that decade than in any other period.<sup>27</sup>

This led to the adoption, beginning in 1991, of various specific policy measures aimed at creating favourable conditions for attracting portfolio investments. As a result, flows of such investments, which amounted to less than US\$ 800 million up to 1992, already rose to nearly US\$ 7 billion in 1993. The systematic deficits registered on the balance of payments capital account between 1985 and 1991<sup>28</sup> turned into a surplus of US\$ 25 billion in 1992.

It may be noted that this was a period of somewhat limited economic activity: the GDP growth rates in 1991 and 1992 were 1% and -0.3%, respectively, rising to 4.5% in 1993. The inflow of resources was therefore mainly due to the changes made in domestic legislation<sup>29</sup> and the relatively low levels of the equity capital of Brazilian companies after several years of inflation and low growth rates.

The recovery of domestic economic activity,<sup>30</sup> together with the opportunities created by the privatization process, subsequently caused foreign direct investment to exceed the flows of portfolio investments, FDI flows (in billions of dollars) being approximately 0.9 in the 1990-1993 period, 2.2 in 1994 and 3.3 in 1995, but then rising to unprecedented levels of 9.6 in 1996, 17 in 1997, 26 in 1998, and 30 in 1999.

## 3. Privatization

The new favourable conditions offered to foreign investors, together with a favourable international environment, gave rise to the first expectations of major foreign participation in the privatization of State enterprises. In reality, this was one of the main obstacles encountered by the programme in its initial stages, although the actual results would have shown that such fears were exaggerated, since the share of foreign investors in the national privatization programme<sup>31</sup> represented less than 1% of total income.

<sup>27</sup> Brazil's share in total world foreign direct investment was as follows: 1970-1975, 5.1%; 1976-1980, 6.3%; 1981-1985, 4.4%; 1986-1990, 1.2%; 1991-1995, 1.3%, and 1996, 2.7%, according to United Nations Conference on Trade and Development (UNCTAD) (various issues).

<sup>28</sup> Due to amortization payments on the external debt.

<sup>29</sup> And also to international liquidity.

<sup>30</sup> After a rate of -0.3% in 1992, GDP growth averaged 4.5% in the following four years.

<sup>31</sup> According to Pinheiro and Giambiagi (1998).



The privatization efforts began in the early 1980s,<sup>32</sup> but it was only in the mid-1990s that the process really got under way. In the period from 1991 to 2000, the total income from the privatization programme amounted to US\$ 58 billion (in respect of enterprises belonging to the federal government), plus US\$ 33 billion in respect of enterprises owned by the federal states. All this came to a total of US\$ 74 billion for sales of assets, plus US\$ 18 billion in respect of debt transfers (see table 1).

Between 1991 and 1994, only quite a small number of enterprises were privatized, for a total income of US\$ 8.6 billion. It was in this phase that the privatization of the industrial sector was completed, however, with the sale of all the most important State enterprises: those in the iron and steel, petrochemicals and fertilizers sectors accounted for over 90% of the State's industrial activities. A curious aspect of this stage was that a third of the total income corresponded to federal bonds.<sup>33</sup>

The total amount of resources involved—more than US\$ 92 billion over a period of 8 years<sup>34</sup>—makes this one of the biggest privatization processes in the world, and it will certainly have a powerful impact on the production sector. The process had a dual rationale: the enterprises were sold in order to improve general efficiency, but in a number of cases there were strong fiscal motives.<sup>35</sup>

#### 4. Fiscal accounts

The successful plan to combat inflation and privatize State enterprises did not have the positive effects on the fiscal accounts obtained in other countries, however. On the one hand, fiscal income was indexed before the stabilization process.<sup>36</sup> Moreover, some items

<sup>32</sup> In 1979 the government set up a special ministry for the control of State enterprises, charged with limiting the number of enterprises belonging to the State. It was only in 1981 that the first special commission on privatization was set up (Pinheiro and Giambiagi (1998)).

<sup>33</sup> For a detailed account of the whole process of privatization in Brazil, see Pinheiro (1996).

<sup>34</sup> With a significant number of enterprises still for sale in the energy and telecommunications sectors.

<sup>35</sup> For example, in the case of the states privatization was important because of its stronger fiscal impact: whereas the enterprises belonging to the central government obtained a fiscal surplus equal to 0.1% of GDP on average during the 1995-1998 period, those belonging to the states had a deficit of 0.5% of GDP over the same period. See Pinheiro and Giambiagi, 1998.

<sup>36</sup> The "Olivera-Tanzi effect" associated with the end of inflationary processes was only small: in the years with high rates of infla-

TABLE 1

#### Brazil: Privatization programme, 1991-2000 (Millions of dollars)

Sector	Number of enterprises	Assets sold	Debt transferred	Total
Iron and steel	8	5 562	2 625	8 187
Petrochemicals	27	2 698	1 003	3 701
Electricity	3	3 907	1 670	5 577
Railways	6	1 697	—	1 697
Mining	2	3 305	3 559	6 864
Telecommunications	21	26 978	2 125	29 103
Others	14	2 583	344	2 927
Federal enterprises	81	46 730	11 326	58 056
Enterprises belonging to the states	26	26 866	6 750	33 616
<i>Total</i>	<i>107</i>	<i>73 596<sup>a</sup></i>	<i>18 076</i>	<i>91 672<sup>a</sup></i>

Source: Pinheiro and Giambiagi (1998) and Banco Nacional de Desenvolvimento Econômico e Social (n/d).

<sup>a</sup> Including sales of minority holdings.

of expenditure increased after stabilization, such as public sector wages<sup>37</sup> and expenditure on social security, reform of the health sector, and adjustment of the financial sector.

As a result, there was a deterioration in the fiscal results from a surplus of 1.4% of GDP in 1994 to a deficit of approximately 8% of GDP in 1998. The nominal interest rates needed to finance this deficit<sup>38</sup> were kept at very high levels,<sup>39</sup> often exceeding 3% per month, while monthly inflation rates were around 0.3% (and were even negative in some months in 1997 and 1998).

#### 5. Financial restructuring

The elimination of transfers to the banking sector (generated by inflation)<sup>40</sup> after price stabilization

tion this effect was in reality positive, since the indexed income associated with arrears of payment generated fresh gains for the government.

<sup>37</sup> It is calculated that the public sector wage policy applied in 1995 (whereby wage adjustments were on the basis of past inflation) increased the wage bill by 15% to 20%. Furthermore, the significant increase in the minimum wage in that year also affected social security expenditure.

<sup>38</sup> And to neutralize the monetary impact on the flow of external resources.

<sup>39</sup> And rose even higher in response to the external shocks in 1995, 1997 and 1998.

<sup>40</sup> These transfers were generated by the decline in the real value of deposits. It is calculated that they amounted to 4% of GDP in 1990-1993, but disappeared as from 1995.

caused the monetary authorities to create new mechanisms for avoiding systematic crises in the financial sector. The rapid drop in inflation rates gave rise to a bigger demand for money, so that in 1998 the broadest monetary concept (M4) was double that of 1994 in real terms, while credit to the private sector increased fourfold in those four years.

However, this expansion of credit includes both normal finance and a significant number of resources used to restructure the banking sector. The elimination of the gains generated by inflation, together with the big rise in interest rates (see figure 3) as from March 1995,<sup>41</sup> gave rise to enormous difficulties for a number of private and public banks, so that restructuring of the banking sector was a very necessary measure.<sup>42</sup>

The monetary authorities were obliged to intervene a number of institutions and had to create various instruments for dealing with the problems encountered. The most important of the mechanisms used were credit programmes to finance institutions in difficulties, at both the federal and state levels, together with the redesign of the sector as a whole through mergers or the sale of private and public banks with liquidity problems.<sup>43</sup> This led to the elimination of most of the institutions owned by the state governments. As a result of this process, the banking system managed to cope with the 1997-1998 external shocks with a total loan/assets coefficient of 35% and a capital/reserves ratio of 13%.<sup>44</sup>

## 6. Financing social expenditure

The macroeconomic adjustment also had effects in the area of social expenditure. In the early 1990s, social policies were usually financed through monetary transfers. The enormous number of potential clients was at variance, however, with a system which depended to a large extent on contributions<sup>45</sup> and had a large number of administrative bodies and service networks, together with strong concentration of resources (two-thirds) in

<sup>41</sup> Average nominal monthly rates for inter-bank transactions rose from 3.2% in February to 4.4% in March 1995.

<sup>42</sup> The proportion of operations where recovery of the funds was doubtful rose from less than 9% of the total number of loans to nearly 14% by the end of 1995 (Baumann and Mussi, 1999).

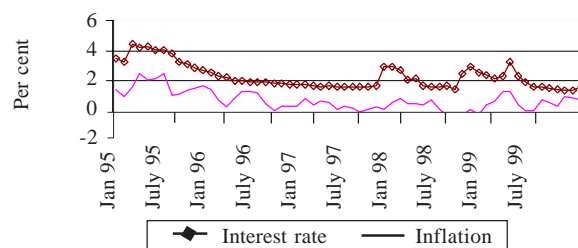
<sup>43</sup> Between July 1994 and December 1997, 42 banks out of a total of 271 were affected by such problems.

<sup>44</sup> That is to say, higher than the 8% ratio recommended by the Basle Committee.

<sup>45</sup> Fixed percentages of wages and profits, together with other semi-fiscal sources of income.

FIGURE 3

### Brazil: Nominal monthly interest rates and inflation, 1995-1999



Source: Central Bank of Brazil.

the federal government, which led to faulty targeting of social programmes. Furthermore, the considerable number of social funds and the fact that they were linked to specific expenditure items meant that resources for social expenditure were highly sensitive to the economic cycle (Draibe, 2000).

The 1988 Constitution reduced the links between contributions and the financing of the system,<sup>46</sup> made access to social services a universal right, and established minimum levels of social benefits. The most radical change was in the area of health, with the creation of the single health system, covering both health and social security services.

The paradoxical feature of all this is that in the early 1990s there was feverish legislative activity to regulate the new constitutional provisions, yet at the same time there was a drastic reduction in social expenditure<sup>47</sup> and in the institutional facilities for providing social services. In the middle of the decade a new social development strategy was adopted which took into account the universal right of access to basic social services and included employment and income programmes to generate new opportunities, with priority for universal programmes.<sup>48</sup>

Since 1994, in spite of the fiscal difficulties facing the states and municipalities, both have been taking on

<sup>46</sup> Although financing continued to be heavily dependent (58% in 1996) on such contributions.

<sup>47</sup> Government social expenditure went down from 11.4% of GDP in 1990 to 9.7% in 1992 (a period of recession). Each of the areas was affected differently: whereas federal expenditure in 1993 on health, nutrition and drinking water supply and sanitation was only 50-60% of its 1989 level, expenditure on social security doubled over the same period (Draibe, 2000).

<sup>48</sup> Social expenditure as a proportion of GDP increased by approximately 4% between 1990-1991 and 1996-1997, reaching almost 20%. In the same period, the share of social expenditure in total public expenditure remained practically unchanged (59%) (ECLAC, 1999).

more and more responsibility for the financing of social programmes, thus reducing the amount of resources provided by the central government.<sup>49</sup>

According to Draibe (2000), in 1995 the federal government was still responsible for the major part of expenditure, in 8 out of a total of 14 social programmes. In 1995, the joint social expenditure of the federal, state and municipal governments was equivalent to 21% of GDP, and 85% of that amount was devoted to education, health, social assistance and benefits of public officials.

Price stabilization and political will were the factors which made possible better targeting and greater selectivity of programmes, new expenditure procedures, and more clearly defined technical criteria for the allocation of resources. Social programmes concentrate on two lines of action: investment in human resources and social assistance, and programmes for combating poverty.

### 7. Reform of the pension system

The need to reform the social security sector became evident in the late 1980s, due to a number of factors: up to then, the system had been incorporating members faster than the rate of increase of the number of beneficiaries, and even at a faster rate than the growth of the labour force, but there was a significant change in the demographic pattern of the population, and the 1988 Constitution brought rural workers into the system.<sup>50</sup> The number of new pensioners between 1991 and 1995 was almost two million, while the average pension almost doubled in value over that period and a third of the rural population of pensionable age received pensions (Dias and Amaral, 2000).

Furthermore, there is the fact that the life expectancy of the population has been increasing in recent decades. As the system allowed members to retire

on the basis of their number of years of service, in 1995 two-thirds of the new pensioners were only 54 years old, with a remaining life expectancy of over 22 years. In 1998, social security expenditure absorbed almost 10% of GDP,<sup>51</sup> and there were almost 19 million real beneficiaries. In that year, the social security deficit amounted to some 3% of GDP, due mainly (75%) to the benefits paid to public employees.

The reform of the social security system therefore involved the establishment of a maximum value for pensions as well as a minimum age for retirement. Moreover, military personnel were obliged to begin to pay contributions.

### 8. Investment and productivity

As was to be expected, price stabilization and trade openness promoted economic activity and investment, both through increased domestic demand for consumer goods and through easier access to cheaper capital goods.<sup>52</sup>

In the early 1990s (especially between 1990 and 1992), most manufacturing enterprises went through a process of rationalization of their production, as one of the ways of facing up to the competition from imported products. With the disappearance of inflation, the returns on investment became relatively high, because of the lower cost of equipment and parts, the fact that most enterprises had already gone through a rationalization process, and progress made in overcoming the technological backwardness of the sector thanks to the new equipment installed. All this helped to increase factor productivity in industry, although it also made the sector more capital-intensive.<sup>53</sup>

Investment in the industrial sector was concentrated mainly on modernization, with only a limited increase in production capacity in some specific sectors.<sup>54</sup> Classifying sectors by capital formation reveals a different picture from that observed in previous investment cycles, such as the 1970s. Table 2 shows the basic information in this respect.

<sup>49</sup> This has been possible thanks to the bigger transfers of resources from the federal government to the states and municipalities and the improvement in the latter's fiscal income: in 1980 the states received 25% and the municipalities 9.6% of total income, but in 1991 the corresponding shares were 27% and 16% (Draibe, 2000).

<sup>50</sup> The amount of the retirement pension is calculated on the basis of the last 36 months of contributions to the system, up to a maximum of approximately US\$ 1,000. Public employees, however, can retire with a pension equivalent to their last salary. Rural workers are guaranteed retirement pensions, but do not make contributions. It is considered that the transfer of resources resulting from the inclusion of rural workers in the social security system has helped considerably in reducing the percentage of families under the poverty line from 41% in 1990 to 20% in 1996, according to ECLAC estimates (ECLAC, 1999).

<sup>51</sup> Taking account of both public and private pension schemes.

<sup>52</sup> This effect was further amplified by the overvaluation of the exchange rate during most of the second half of the decade.

<sup>53</sup> According to estimates by Bonelli and Fonseca (1998b), the annual increase in total factor productivity rose from an average of 1% in the 1980s to 2.1% in the 1990-1997 period. According to Neri and Camargo (1999), industrial production increased by 10% between 1991 and 1995, while employment in the industrial sector went down by 22% over the same period, resulting in a 40% increase in labour productivity.

TABLE 2

**Brazil: Gross fixed capital formation, 1970-1997**  
(As a percentage of GDP, at constant 1980 prices)

	1970-1980	1981-1989	1990-1994	1995-1997
Manufacturing	4.5	3.2	2.0	3.3
Mining	0.2	0.2	0.1	0.1
Petroleum	0.9	1.0	0.4	0.4
Infrastructure	5.4	3.7	2.3	2.2
Electricity	2.1	1.6	0.9	0.6
Telecommunications	0.8	0.4	0.5	0.7
Transport	2.1	1.5	0.8	0.8
Drinking water supply and sanitation	0.5	0.2	0.2	0.1
Others	12.5	9.7	10.1	11.1
Total gross fixed capital formation	23.5	17.8	14.9	17.1

Source: Bielschowsky (coord.), 1998.

The sectors which had led the way in investment in the 1970s –industry, mining and petroleum– had a smaller share of gross capital formation in the 1990s. Investment in infrastructure (electric power, telecommunications, transport and drinking water supply and sanitation) went down in the 1990-1994 period to between a half and a third of the values registered in the 1970s. If the first and second halves of the 1990s are compared, it will be noted that there was a decline in absolute terms in investment in electric power, a more or less stable pattern in the transport and drinking water supply and sanitation sectors, and a marked increase in telecommunications.

In the industrial sector, consumer goods registered the fastest increase (the most dynamic segments were those of consumer durables, led by the transnational corporations), thanks to the marked “wealth effect” resulting from price stabilization.<sup>55</sup> In the case of intermediate and capital goods, the results were unfavourable.

The three new elements affecting investments in the second half of the 1990s were the incentives offered by states and municipalities,<sup>56</sup> the environment which existed after privatization, and the imported component in investment and production processes. Another

<sup>54</sup> In some sectors, such as the motor industry, there was indeed more completely new investment, encouraged by the fiscal incentives provided. In most sectors, however, investment projects were aimed above all at modernization.

<sup>55</sup> The only exception was that of textiles.

<sup>56</sup> These were of decisive importance in the unprecedented geographical relocation of factories within the country in recent years.

important feature of investment from the mid-1990s on is the fact that much of it is associated with the exploitation of the country’s comparative (static) advantages in natural resources.<sup>57</sup>

This raises the question of how far the industrial growth model in recent years has been based on the resource endowment, and hence how far it depends on the international commodity market.<sup>58</sup> A specialization pattern centered on production segments with sluggish demand raises doubts about its long-term sustainability and its vulnerability to fluctuations in outside markets. An important aspect is therefore the real capability of the economy to support an alternative model favouring more technology-intensive products.

## 9. Production development policies

Up to the late 1980s, Brazil’s science and technology policy was concentrated on the construction of infrastructure for research and development, along two

<sup>57</sup> According to Bielschowsky (coord., 1998), total fixed investment in the manufacturing sector, at constant 1980 prices, averaged 3.3% of GDP between 1995 and 1997. The group of “dynamic” sectors, made up of manufacturers of steel products, transport equipment, processed foodstuffs, electrical and electronic equipment, pharmaceutical products, plastics and textiles, invested an average of approximately 2.1% of GDP, while the manufacturers of chemical products, machinery, non-metallic products, pulp and paper, and rubber products invested only 0.77% of GDP during the same period.

<sup>58</sup> In contrast, for example, with the strategies adopted by other emerging economies and indeed by Brazil itself in previous decades, such as incentives for (producers and) exporters to enter new and more dynamic markets.

main lines: a) provision of resources to finance research and development projects by enterprises (these were very seriously affected by the 1980s crisis), and b) provision of fiscal incentives.

During the 1990s, the institutional structure connected with innovation and research underwent various changes, due above all to the reduction of the role of the federal government:<sup>59</sup> in 1990, it had been responsible for 73% of investment in research and development of new products (R&D), but by 1997 its share had gone down to 64%.

Part of this reduction was offset by a more active role on the part of the private sector. Thus, the share of enterprises in research and development spending went up from 15% to 20% between 1990 and 1997, corresponding to an average of 0.7% of total sales. Furthermore, the considerable number of ISO 9000 certificates granted to Brazilian firms<sup>60</sup> and the increase in private expenditure on technology and capital goods reflect the concern to modernize factories.<sup>61</sup> However, local enterprises as a whole have not developed their own capacity for innovation in order to penetrate new markets.

Analysis of the potential supply of research and development is of fundamental importance for any country, and even more so for an economy where two-thirds of exports consist of industrial goods. In the recent experience of Brazil, however, there are three effects which appear to have contributed to the low percentage of R & D expenditure as a proportion of total sales: the negative impact of the fiscal adjustment, which meant fewer public resources for the financing of activities in this field; reforms in legislation which facilitated the importation of technology<sup>62</sup> (as part of the opening-up of the economy); and the composition

of exports,<sup>63</sup> which displays a growing share of products making intensive use of natural resources.

In general, the sluggish performance of Brazilian exports during the 1990s would appear to be connected with the specialization pattern: in spite of the greater share of industrial products, the export account is mainly characterized by the export of commodities making intensive use of natural resources and products making intensive use of energy or labour.<sup>64</sup>

An economic environment more open to trade also had implications for the multiplier effects of foreign trade. For example, Tigre, Cassiolato and others (2000) note that for sectors such as ceramics and steel – in whose production Brazil has a comparative (static) advantage – trade openness did not represent a challenge for local producers,<sup>65</sup> and in fact was crucial for the development of a network of local suppliers. In the case of other sectors – such as motor vehicles and telecommunications – which depend less on the availability of resources, exposure to competitive imported products, linked with easier access to capital goods and inputs produced abroad, meant a new challenge which in fact led to them breaking their links with local suppliers, thus affecting the possibility of encouraging research in the development of products or processes.

## 10. Employment

These factors – price stabilization, strong domestic demand and investment in specific sectors – had different consequences for the labour market. Up to the beginning of 1995, total employment grew as the net result of the growth in the number of workers in commerce and the services sector and in the informal sector, which more than made up for the decline in the level of employment in industry and agriculture.

The share of industrial employment in total employment went down from 25% to 16% between 1990 and 1997.<sup>66</sup> Practically the whole of this change in the sectoral structure of employment is due to the

<sup>59</sup> Total expenditure on science and technology amounts to approximately 1.5% of GDP (Tigre, Cassiolato and others, 1999).

<sup>60</sup> Some 2,500 certificates up to 1997 (Tigre, Cassiolato and others, 1999).

<sup>61</sup> Although positive, these results are poor compared with other countries. R & D as a proportion of sales comes to almost 2% in the Organization for Economic Cooperation and Development (OECD) countries, and even other emerging countries show a greater commitment to technology: in South Korea the share of the private sector in research and development amounts to 80%.

<sup>62</sup> In 1991, and again in 1993, specific regulations were adopted which facilitated technology transfer contracts between the head offices of foreign firms and their subsidiaries in Brazil (see Tigre, Cassiolato and others (2000) for a description of the main changes made in the legislation).

<sup>63</sup> The elimination of some export incentives has led to a more “passive” share in the international division of labour.

<sup>64</sup> Wood pulp, paper, orange juice, soybean products, semi-processed mineral products, etc.

<sup>65</sup> In fact, the ceramics sector represents a success-story in terms of restructuring, which resulted in an increase in the number of patents taken out, greater investment in R & D, and various other positive effects.

<sup>66</sup> There was also a decline in employment in agriculture, which will be analysed later.



migration of workers from the manufacturing sector to commerce and the services sector,<sup>67</sup> largely because of the new technologies and the (low) cost of labour.<sup>68</sup> Table 3 shows the urban occupational structure, by sectors.

It can be seen from table 3 that the reduction in employment in the manufacturing sector was offset by an increase in the absorption of labour in the housing, commerce and services sectors.<sup>69</sup>

Employment in the industrial sector has been declining since 1995 in spite of the increase in production,<sup>70</sup> whereas employment in commerce and the services sector grew up to late 1996 but subsequently stagnated. In other words, at the beginning of the price stabilization process the increase in the number of workers in the services sector more than made up for the decline in the number of workers in industry, but this phenomenon only lasted up to 1997. As a result, at the end of the decade there was increased and growing open unemployment: according to the Brazilian Geographical and Statistical Institute (IBGE), open unemployment rose from 4.3% in 1990 to 7.6% in 1998 (see figure 4).

In general, there was a clear productivity shock in both the industrial and services sectors of the Brazilian economy, but it was more severe in the case of the former.<sup>71</sup> The references already made earlier to the increases in productivity reflected in the labour/output ratios are confirmed by other indicators, such as the evolution of the initial wage of newly-hired workers<sup>72</sup>

<sup>67</sup> This migration was also facilitated by another structural characteristic of the Brazilian labour market: an average of between 2.5% and 3% of all workers in industry change their jobs every month, while approximately 40% of the workers in industry only occupy the same job for less than two months, because of the legislation governing severance payments (see Amadeo and Gonzaga, 1997, and Amadeo and Neri, 1997, for more details).

<sup>68</sup> The increase in the cost of labour in the industrial sector between 1994 and 1997 (55%) was greater than in the case of the services sector (15%) (Camargo, 1998).

<sup>69</sup> The figures on the agricultural sector in table 3 appear to reflect a significant increase in the number of own-account workers: the share of rural wage-earners went down from 44% of the total number of persons employed in the sector in 1990 to 34% in 1996, while the proportion of own-account workers increased from 53% to 64% over the same period (ECLAC, 1999).

<sup>70</sup> There has been an incipient recovery, however, since late 1999.

<sup>71</sup> In the future this could lead to growing wage disparities between these two sectors (Camargo, Neri and Reis, 2000).

<sup>72</sup> Considered as an indicator of the marginal productivity of the labour force, this suggests that between 1995 and 1997 the increases in productivity were 45% in the industrial sector and 33% in the services sector (Camargo, Neri and Reis, 2000).

TABLE 3

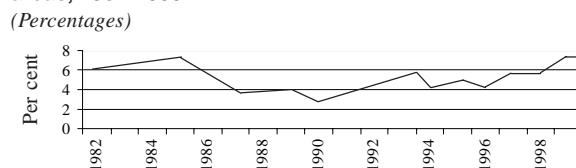
**Brazil: Urban occupational structure, by sectors, 1990-1996**  
(Percentages)

	1990	1996
Agriculture and mining	6.8	8.7
Manufacturing	25.2	16.0
Housing	1.0	7.5
Transport and communications	4.8	4.6
Commerce and services	62.2	63.2
<i>Total</i>	<i>100.0</i>	<i>100.0</i>

Source: ECLAC, 1999.

FIGURE 4

**Brazil: Open unemployment rate in metropolitan areas, 1982-1999**  
(Percentages)



Source: Brazilian Geographical and Statistical Institute (IBGE).

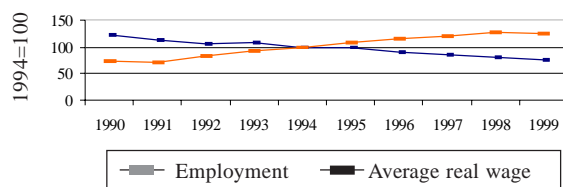
and the number of years of formal schooling of industrial workers.<sup>73</sup>

The real income of urban workers did not go down during the whole period, because: a) the stabilization and trade openness processes tended rather to favour the prices of non-tradeable goods; b) as long as these favourable factors lasted, the real incomes of workers in the services sector increased; c) when: i) employment in the industrial and services sectors began to flag; ii) open unemployment began to increase, and iii) relative prices ceased to favour the products of those sectors, so that the real income of workers in the services sector began to go down steadily. In the industrial sector, however, while employment went down the real income of the workers continued to increase up to 1998, thus raising the real cost of labour in that sector (see figure 5).<sup>74</sup>

<sup>73</sup> The percentage of workers with less than four years' schooling went down from 38% in 1989 to 31% in 1996, while the percentage of workers with more than eight years' schooling rose from 42% to 49% of the labour force (Camargo, Neri and Reis, 2000).

<sup>74</sup> There was an increase of 30% between 1994 and 1997 (Camargo, Neri and Reis, 2000).

FIGURE 5  
**Brazil: Employment and average real wages  
 in the manufacturing sector, 1990-1999**



Source: Brazilian Geographical and Statistical Institute (IBGE).

The adjustment of the labour market to an open economic environment with stable prices thus involved the transfer of workers from the tradeable goods sector to the non-tradeable sector. This is consistent with the foregoing considerations on the growing capital-intensity of the production process following trade openness.

### 11. The agricultural sector

In the previous sections we have been dealing with the urban sectors. Up to the mid-1980s, the agricultural sector went through a period of constant government intervention which was of fundamental importance for the growth process, since it made possible the supply of food at low prices. Since that time, however, agriculture has lost its main compensation mechanism - official programmes providing heavily subsidized credit - as part of the fiscal adjustment process.

In the new (post-1990) environment, in which the agricultural sector is exposed to international competition and the loss of official credit, the main factor behind the growth of production was the strong systematic increase in productivity: the loss of easy credit made producers try to reduce their average costs through increases in productivity based on a moderate reduction in the area cultivated and a marked cut in the number of employees.

In the case of the main products, productivity in the 1996-1998 period was substantially higher than in 1990-1992.<sup>75</sup> All the productivity indicators for the agricultural sector registered systematic increases between 1987 and 1998, the annual rise in these indicators being close to 1.8%.<sup>76</sup>

<sup>75</sup> The increases in productivity were 26% in the case of cotton, 29% in soya beans, 27% in coffee, 30% in millet, and 21% in beans (Dias and Amaral, 2000).

<sup>76</sup> The growth rate in the stock-raising subsector was similar: close to 1.9% per year (Dias and Amaral, 2000).

This recovery in productivity was favoured by: a) the poor transport infrastructure, which led to more intensive use of the land, especially in areas close to urban centres; the growing use of new technologies developed in the country;<sup>77</sup> c) the growing professionalism of the labour force, due among other factors to migration from the southern states to the western and northern regions of the country, and d) trade openness, which reduced the cost of inputs (Dias and Amaral, 2000).

One of the most important elements in the sustained growth of agricultural production was the improvement of the terms of trade of the sector. Between 1987 and 1994 (the peak year), the terms of trade of agriculture increased by 46%, while the profitability of the sector increased by 59% between 1987 and 1998, reflecting a rise of 22% in productivity and 31% in the terms of trade of the agricultural sector (Dias and Amaral, 2000). This advantage in respect of productivity and the terms of trade enabled producers using new technologies to find substitutes for traditional rural credit.

The general picture emerging from these figures is that the agricultural sector managed to adjust through higher productivity, together with an increase in the capital/product ratio and greater selectivity of producers. Together, these factors placed a still greater burden on the urban labour market.

### 12. Reforms still pending

The above indicators suggest that Brazil is on the way to completing the set of so-called "first generation" reforms. The further continuation of this process will involve the adoption of more measures, such as the reform of social security policies. Experience has already shown that in its present form this system is bound to register considerable deficits in the years to come. If the system is to keep in balance over time, it will be necessary to take various additional measures.

It has already been shown that the labour market is subject to a number of restrictions imposed by the legislation which, in some aspects, goes back to the 1930s. Trade union representation, its financing and the incentives to move between different activities are all part of the same group of issues which must be tackled in the short term.

Other reforms that will be needed have to do with the functioning of the system of justice, which is slow and costly, and the system of political representation

<sup>77</sup> Mainly developed by the Brazilian Agricultural Research Corporation (EMBRAPA) of the Ministry of Agriculture.

and decision-making itself, through the creation (for which there are no precedents in past history) of mechanisms that will allow citizens to feel that they

are truly represented and actively participating. For this purpose, profound changes need to be made in the political and party structure and in electoral legislation.

## IV

### What is it that didn't work?

#### Do we really know why?

Brazil has quite a lot of experience in making reforms. Retrospectively, these reforms followed a well-defined sequence, were varied, and mostly coincided with a stabilization programme. Various indicators show that not all of them achieved the expected results, however.

Firstly, the two episodes of intensification of the import tariff reduction process, in 1990 and 1994, were basically part of price stabilization programmes. The lowering of tariffs was therefore neither an instantaneous process nor one that followed a linear course over time. On the contrary, various sectors had to face a series of increases and reductions in tariff rates over relatively short periods of time.<sup>78</sup> These ambiguous signals placed an extra burden on investors and consumers of imported goods.

One of the most frequent criticisms of the stabilization policy adopted in 1994 is that, when analysed five years after its application, it is noted that it continued to be basically just a stabilization programme. There was a lack of a medium- and long-term strategy, and economic policy continued to be subordinated to that main objective, which naturally had its costs.

The exchange rate was kept below the equilibrium levels on the grounds that: i) the economic "fundamentals" had been changed through price stabilization (so that the parity criterion must be reconsidered, on new bases; ii) exchange rate devaluation would have caused pressures on costs (thus adversely affecting the stabilization process), and iii)

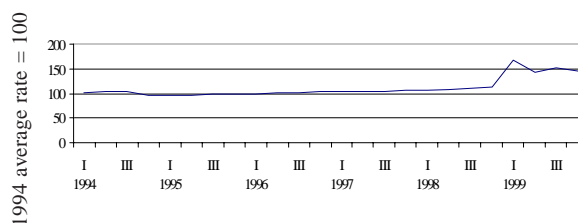
the more stable macroeconomic environment would ensure that the economy was attractive to foreign investors. As may be seen from figure 6, there was a decline in competitiveness (measured in parity terms on the basis of the wholesale price index) up to mid-1996.

The overvaluation of the exchange rate was reduced when the government began to emphasize the need to modify the exchange rate in the light of domestic inflation (from 1997 on), but external pressures made necessary a bigger change in 1999.

It was expected that the positive effects of the trade reforms on competitiveness would stimulate exports. It is not yet clear to what extent the easier access to imported goods stimulated export growth, but at all events the high domestic interest rates affected the production of export goods, while the wage increases associated with the overvaluation of the exchange rate had a negative impact on the foreign trade agents. At the same time, there was an explosive increase in the demand for imports, and this gave rise to big trade deficits.

The literature consulted for section II would seem to suggest that this procedure may have been part of the government's strategy designed to win credibility

FIGURE 6  
Brazil: Real exchange rate, 1994-1999



Source: Central Bank of Brazil.

<sup>78</sup> Baumann, Rivero and Zavattiero (1997) showed that in the case of various products there were as many as eight changes in nominal tariff rates within a period of 26 months: from July 1994 to September 1996. In some cases, the nominal tariff rates fluctuated between 0% and 19% (and between 19% and 73% in some other products), and these changes took place repeatedly in both directions, i.e., there was a series of rises and falls.

for its reform programme, but it is not clear how much time was required by the credibility argument: basically, exchange policy was kept substantially unchanged for four and a half years.

In the monetary field, the domestic debt was financed during the first half of the 1990s through fixed-interest bonds. As from the adoption of the Plano Real, however, the price stabilization associated with the inflow of external capital caused the authorities to modify their finance structure, above all in favour of flexible interest rate bonds (70%) and dollar-indexed bonds (21%). The continuity of monetary policy and the restrictions on the exchange rate were of fundamental importance for maintaining price stability, although the maintenance of high interest rates called for by this combination of policies helped to increase public indebtedness, without the government being able to make the necessary policy changes.

This does not mean that efforts were not made to increase revenue collection: fiscal income increased from 25% of GDP in 1993 to 30% in 1998, and the “primary” fiscal results<sup>79</sup> were positive throughout the second half of the decade. The problem lay in the area of expenditure,<sup>80</sup> especially as a result of the variation in domestic interest rates: in 1998 interest payments on the domestic public debt were equivalent to 44% of total fiscal income.

The overvalued exchange rate stimulated the demand for foreign exchange by importers. The changes in legislation, price stabilization and renewed access to international capital markets generated substantial inflows of foreign capital, first in the form of loans and portfolio investments and subsequently as foreign direct investment.

The result was a vicious circle of inflows of foreign currency which were monetized and had to be neutralized through higher interest rates. The latter, in turn, placed pressure on the fiscal accounts, giving rise to the expansion of indebtedness, the need for new loans, and hence also for still higher interest rates. Table 4 shows the various components of the fiscal deficit.

There are two aspects which are worthy of note in table 4. First, interest payments on the domestic and external debts explain most of the deficit in the late 1990s. Second, the monetization at the beginning of the stabilization process was replaced by the sale of

<sup>79</sup> I.e., excluding monetary correction and interest payments.

<sup>80</sup> At the end of the decade another debate arose about the type of revenue collected, which was based more and more on levies (fixed percentages of wages and profits) than on taxes.

TABLE 4

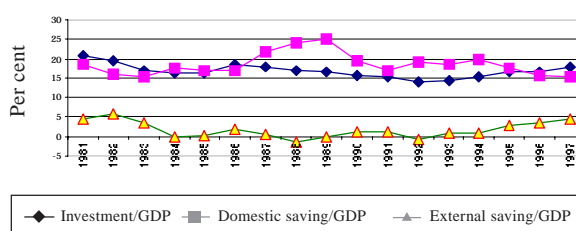
**Brazil: Main components of the fiscal deficit**  
(As percentages of GDP)

	1994	1998
“Operational” fiscal deficit	-1.4	7.5
Uses		
“Primary” deficit	-5.3	-0.0
Interest on domestic debt	3.2	7.2
Interest on external debt	0.7	0.3
Sources		
Domestic finance	-2.6	4.5
External finance	-3.0	2.2
Monetary expansion	4.3	0.8

Source: Central Bank of Brazil, 1999.

FIGURE 7

**Brazil: Investment and saving, 1981-1997**  
(As a percentage of GDP)



Source: Brazilian Geographical and Statistical Institute (IBGE).

domestic and foreign bonds as a source of public finance.

The dependence on external saving proved to be a two-edged weapon. It helped to finance the public debt, but on the other hand the increase in the rate of external saving after 1994 (from 0.9% to 4.4% of GDP in 1998 (see figure 7)) mainly went to finance consumption. The investment rate rose from 15% to 18%<sup>81</sup> over these four years,<sup>82</sup> although these investments were above all in modernization projects and not in the expansion of production capacity.<sup>83</sup> Between 1993 and 1996, private consumption accounted for 72% of the increase

<sup>81</sup> At constant 1980 prices.

<sup>82</sup> Mainly by the private sector, for public investment on machinery and equipment went down from 0.7% in 1994 to only 0.4% in 1998, while the corresponding rates for investment in construction were 2.9% and 1.8%, according to the IBGE.

<sup>83</sup> The dependence on external finance also raised the total external debt by 47% over the same period: from US\$ 151 billion in 1994 to US\$ 222 billion in 1998.

in aggregate demand, whereas capital formation only accounted for 22% (Saínz and Calcagno, 1999).

The privatization programme helped to cope with this situation of incomplete fiscal adjustment through the sale of public enterprises and the reduction of the fiscal burden caused by inefficient State enterprises. Whatever the consequences for production efficiency may have been, there are two collateral effects which are worthy of note.

Some enterprises were sold even before the regulation of the corresponding sector was completed, and this may have affected competition on the domestic market. Furthermore, the privatization of a number of important enterprises was initially the result of financial arbitrage operations, with the participation of agents not directly involved in production activities and –until recently– with only limited participation by foreign investors. Consequently, the efficiency gains may not have been as significant as had originally been planned, or else more time was needed for the changes in ownership to improve competitiveness.

Although one of the objectives of the privatization programme appears to have been the maximization of income, and in spite of the impressive amounts of resources involved, the public debt continued to be heavy, above all because of the public sector wage bill (9% of GDP in 1997), the social security deficit (9.4% of GDP) and the high real interest payments (3.4% of GDP) (Cysne, 2000).

The privatization of public enterprises, together with the changes in regulations and the elimination of the public monopoly in various sectors, improved private-capital activity, but this only occurred in the production sector, since private-capital contributions to social expenditure continued to be quite rare. Although private enterprises and NGOs have long taken part in the provision of public services, most of these services continue to be basically a public-sector activity.

The level of social expenditure in Brazil is comparable with that of most other middle-income countries –approximately 19% of GDP, although unjustly distributed– and the reforms have not so far been successful in substantially changing the origin and composition of the income which serves to finance it: in spite of the changes made in the Constitution, social expenditure continues to depend on funds from social contributions (58% in 1996).<sup>84</sup>

<sup>84</sup> The resources continue to be concentrated in specific areas: the federal government devotes two-thirds of its resources to social security and payments to public employees; the states devote most

Furthermore, the aggregate social indicators suggest that there is still much to be done in this field. Price stability and public transfers generated substantial positive effects. The real income of employed persons increased by 30% between 1993 and 1997, due mainly to: a) a marked increase in transfers to families of all income levels and b) changes in relative prices which reduced the prices of staple products. Consequently, between 1990 and 1996 the proportion of households below the poverty line went down from 41% to 29%,<sup>85</sup> which undoubtedly represents a positive development.

With regard to income equality, however, the estimates of Neri and Camargo (2000), who use data from the national household surveys (PNAD),<sup>86</sup> confirm the very marked concentration of income in Brazil, since they reflect only a very slight change in the indicators of inequality between 1990 and 1997.<sup>87</sup> This result is obtained regardless of whether the Theil index (0.748 in 1990 and 0.715 in 1997, for all sources of income) or the Gini coefficient (0.607 in 1990 and 0.595 in 1997, for all sources of income) are used.<sup>88</sup>

Neri and Camargo (2000) also show that detailed calculations based on the primary data of the national household surveys require some qualification of the results. These slight declines in the general inequality indicators do not reflect an improvement in income distribution: the share of the richest strata of the population in total income continues to be very high, and the individuals in those income brackets made their gains through a variety of effects, such as those associated with the higher pay of more highly skilled workers or particular types of activity, financial gains obtained from higher interest rates, etc. Various tests indicate that the apparent improvement suggested by these indicators is due above all to the “wealth effect” deriving from the reduction in the cost of the consumer

of their expenditure to education, payments to public employees and health, while the municipalities devote three-quarters of their expenditure to education, housing, health and drinking water supply and sanitation.

<sup>85</sup> The reductions were from 36% to 25% in urban areas and from 64% to 46% in rural areas (ECLAC, 1999).

<sup>86</sup> Pesquisa Nacional de Domicílios (PNAD).

<sup>87</sup> Indeed, the coefficients are almost unchanged if the margin of error of this type of indicators is taken into account.

<sup>88</sup> Alternative methodologies using a different unit for analysis –like that of ECLAC, 1999– also indicate a high degree of concentration, with relatively little change during the 1990s: in 1990 the Gini coefficients were 0.528 for urban areas and 0.456 for rural areas, only a little lower than the 1997 coefficients of 0.538 and 0.460, respectively.



shopping basket and the lower volatility of workers' income after price stabilization. There was practically no significant structural change in the income distribution profile in this period.

At all events, the considerable number of households which rose above the poverty line had a considerable impact on domestic aggregate demand. Consequently, imports shot up and aggregate investment rates rose, largely to satisfy domestic demand.

In most industries there was a significant expansion in investment in 1995-1997, as compared with 1990-1994. Except in the telecommunications sector, however, the level of this investment was lower than in the 1970s and 1980s. In the 1990s there was clearly a new investment model which was perhaps more efficient from the microeconomic point of view, but not from the standpoints of production capacity and economic growth.<sup>89</sup>

Outside the industrial field, levels of investment were varied. In the mining sector, investment was quite scarce because of the relatively limited knowledge of the available resources and the poor market prospects for those minerals whose reserves were known; the same was true in the petroleum sector.

Production and distribution bottlenecks are so widespread that they have come to be known as the "Brazilian cost", to denote general inefficiency costs due to specific cases of inadequacy. Investment in infrastructure, too, is a mixture of successes and failures: modernization of the ports has been under way since their privatization, but there is relatively little investment in railways and equipment, and there continues to be a lack of integration of the railway system with other means of transport.<sup>90</sup>

The most outstanding performance is that of the telecommunications sector, where there is a significant amount of investment connected with privatization. The electric power sector has turned in only a mediocre performance, however, and this is leading to an insufficient supply of electricity and even to the risk of power cuts.

<sup>89</sup> Furthermore, investment was stronger in those sectors which maintained to some extent their protection against foreign competition, which had higher levels of productivity (consumer durables, for example), and where there was a greater presence of transnational corporations.

<sup>90</sup> Private investment is beginning to improve conditions on various highways, but only a limited number of Brazilian expressways are candidates for privatization, in view of the private sector's expectations as regards profitability.

Thus, from the point of view of industrial policy the reforms were only partially successful in terms of improving the infrastructure. As already shown, output growth could recover for a time, but there are increasing doubts about the resulting structure and the long-term prospects with regard to the economy's place in the international division of labour.<sup>91</sup>

Generally speaking, enterprises have tried to adjust to competition from imported goods through defensive specialization strategies which have often adversely affected local production of components and products with the highest content of technology. The adjustment process of the industrial sector has increased the competitiveness of sectors producing on a large scale with intensive use of labour. At the same time, the easier importation of capital goods has stimulated the modernization of technologically sluggish sectors.

In the period from 1991 to 1993, various measures helped to facilitate the importation of technology, but the use of foreign technology has not usually been accompanied by a corresponding domestic technological effort, other than the adaptation of those technologies to local conditions.<sup>92</sup> Only a few enterprises maintain research and development activities, and the external technological links of Brazilian enterprises are quite limited, not only with other enterprises but also with universities and research institutes. The establishment of technical relations among enterprises is made more difficult by the fact that the industrial sector is excessively heterogeneous.

The spread of production processes which are more capital-intensive and involve more imported components has also helped to increase a structural component of open unemployment: even if the economy begins to produce more once again, the reduction in open unemployment will be slower than on previous occasions. Thus, the average length of time

<sup>91</sup> There is also concern about the real participation of producers in export activity: out of a total of over a million registered enterprises, only 14,000 systematically operate on the external market.

<sup>92</sup> The balance of payments data show an increase in the importation of technology during the 1990s and a significant change in its composition: the share of "specialized technical services" in total imports went down from 67% in 1990 to 32% in 1996, while at the same time there was a pronounced increase in payments for "use of patents" and "supply of industrial technology" (in the case of non-patented technologies). This reflects an increase in the importation and transfer of foreign technology, without a corresponding increase in investment in research and development by local firms (see Tigre, Cassiolato and others, 2000).

a worker remains unemployed rose from 3.5 months in 1991 to 6 months in 1998 (Camargo, Neri and Reis, 2000). This situation is further aggravated by the labour legislation.<sup>93</sup> An average of 3% of the workers in the industrial sector change jobs every month, which reduces the incentives to provide training and heightens the difficulties already mentioned regarding local technological efforts.

The effects of the adjustment were also perceived in rural areas. The reduction in credit, trade liberalization and an overvalued exchange rate caused significant changes in the relative prices of agricultural products.

The agricultural sector adjusted by experimenting with different forms of domestic capitalization, mostly associated with a notable increase in productivity and

reductions in costs and assets. As a result, there was a high level of unemployment.<sup>94</sup>

The increase in the demand for food which occurred after the stabilization process<sup>95</sup> was covered by the domestic supply of food, which was stimulated by the significant reduction in the cost of imported inputs. This fact, together with the marked reduction in official credit, discriminated against small producers, who use more traditional technologies. The elimination of producers with below-average levels of productivity also helped to increase the rate of open unemployment.

The problems resulting from this situation and the dissatisfaction with the results obtained are due to the fact that the reforms were incomplete, wrongly implemented, or sent wrong signals to the economic agents.

## V

### Lessons from the Brazilian experience

The reforms applied in Brazil since the late 1980s are quite enlightening in various aspects. First, they have at least two features which have not been taken into account in the literature on reforms: a) they were applied in parallel with a regional integration process (MERCOSUR) which involved significant commitments, at least in terms of external trade policies, and b) Brazil has a federal structure, and this has major implications for the results of many reforms such as those in the social security system and the financial sector.

As suggested in figure 1 (see section III above), the sequence of the reforms seems to have corresponded to the recommendations made in the literature: trade reform preceded all the others. There were nevertheless two clearly identifiable stages –up to mid-1994, and after that time– with the turning-point being represented by the adoption of an energetic price stabilization programme.

In other words, the trade reform process began at a time when the economy was still suffering from

serious macroeconomic imbalances –so that it was not possible to maximize the benefits transmitted through relative prices– and then speeded up in parallel with the price stabilization programme.

Simultaneous trade openness and deflation is more fully covered in the literature on reforms.

The indicators show that in reality the trade openness process aided stabilization and increased the surpluses of both producers and consumers, through access to imported goods. The simultaneous presence of exchange rate overvaluation, which was needed for the purpose of stabilization, affected both the trade balance and the relative prices of tradeable and non-tradeable goods. As a result, there was a trade deficit, and the movement of factors towards the production of non-tradeable goods was stimulated.<sup>96</sup>

<sup>93</sup> When the economy is growing and there is low unemployment, there is an implicit incentive for workers to provoke their own dismissal, as in this case they receive a month's wages, plus 40% of a fund (FGTS) built up by the enterprise they work in, at the rate of one month's wages per year of service in the enterprise (Amadeo and Gonzaga, 1997).

<sup>94</sup> It is calculated that the number of workers in the agricultural sector went down by 23% (5.5 million jobs) between 1985 and 1996, but the sector's output increased by 30% over the same period.

<sup>95</sup> The purchasing power of urban workers has increased in relation to the cost of food and clothing by over 60% since 1990, as the increase in the wages of unskilled workers exceeded the increase in food prices.

<sup>96</sup> This was very similar to what an absorption-type balance of payments model would have predicted: a shift of the production frontier, in which relative prices favour the production of non-tradeable goods.

It is generally accepted that during stabilization programmes the maintenance of an overvalued exchange rate is a cost that has to be paid, if it forms part of the government's strategy designed to show its firm commitment to the reform process. The social cost of the alternative -losing credibility with regard to the reforms- could turn out to be infinitely greater. The question raised by the Brazilian experience, however, is why this policy lasted so long: much longer than would be considered necessary to generate credibility.

This therefore gave rise to growing concern about long-term growth. The signals sent to the economic agents were mainly aimed at promoting stabilization. Not much was done in terms of creating suitable conditions for the recovery of growth, except for the increases in efficiency expected from privatization and trade openness. Consequently, there was an increase in investment as a whole, and it was more efficient in microeconomic terms, but the amount invested has not been large enough from the point of view of the long-term growth strategy (there was only a limited increase in production capacity), and it does not hold out much hope as regards export performance.

It was also noted earlier that the literature on reforms states that the financial sector should be reformed before controls on foreign capital are eliminated. Here, too, the Brazilian experience was rather special. Incentives for foreign investment were adopted in 1990-1991, but the real financial sector reform only took place in 1995, after it was seen that adjustments needed to be made because of the loss of the profits previously derived from inflation, which had been channeled to the banking sector. This reform did not bring about a reduction in interest rates, as might have been expected. Instead, there was a vicious circle of capital flows linked with the fiscal deficit, this led to even higher rates which in turn attracted fresh inflows of capital, and this process was repeated successively.

According to the models analysed in section II, whenever lack of confidence in the permanence of the reforms is linked with access to external finance, the private sector ends up contracting debts to finance the expected consumption. The Brazilian experience is different, however. This same effect -increasing external indebtedness primarily in order to finance domestic consumption- took place in a context of relatively low levels of investment, but strong domestic demand, although there were few doubts about the government's intentions (as the series of political victories won by it shows).

The basic recommendations regarding structural adjustment likewise indicate that public expenditure

should be concentrated on health, education and infrastructure, leaving all the other activities in the hands of private enterprise.

This is probably the aspect in which the federal structure of Brazilian society is most clearly seen as a determinant of the results. Sections III and IV showed that various characteristics altered the structure of public finance. The evidence also shows that: a) private sector commitment to the financing of these areas is slow and limited, and b) there are structural restrictions which condition the extent to which it is possible to transfer federal government expenditure to the states and municipalities. If it is desired to insist on these reforms, this will call for a new design of the fiscal structure.

This latter aspect, together with the signs of rigidities in the labour market due to the legislation, and the increasingly evident cost of the manner of operation of the judiciary and legislature, mean that there is no room for partial reforms. If the aim is to maintain the reform process, then once that process has been initiated it must be constantly deepened and widened.

In short, there are at least seven lessons which can be learned from the experience of Brazil in the 1990s.

1. There are clear advantages in ending inflation, but the results obtained will depend on the way the stabilization process is kept up.

Brazil did not adopt either i) a repressive scheme like that adopted in Chile in the 1980s or that followed in Argentina (with Bonex and reductions in nominal wages) or ii) a negotiated process like those adopted in Mexico and Israel. Instead, since the mid-1990s Brazil has combined: a) a nominal exchange rate anchor; b) high positive real interest rates; c) repression of real wages in the public sector, and d) quantitative adjustments in the labour market, with the result that this set of measures has created obstacles to competitiveness and medium- and long-term growth.

2. As economic theory predicts, trade openness increased both producer and consumer surpluses, but the way the openness process was carried out seems to have imposed excessively high costs on some sectors.

3. Fiscal adjustment is essential if it is desired to avoid excessively high interest rates and resume action in the public sector. Such adjustment must be planned, however, so that it does not adversely affect production efficiency or impose excessive social costs: private financing of social expenditure is neither immediate nor sure.

4. Restructuring of the financial sector is of fundamental importance in a world of intensive capital movements: in this respect, the Brazilian process was less costly in terms of GDP than similar processes in other countries, and it seems to have been of crucial importance for avoiding the multiplier effects of recent external crises.

5. Although it is important, price stabilization should not be made the sole objective of economic policy. Experience has shown that it takes some time for expectations of inflation to disappear.<sup>97</sup> It is just as important, however, to transmit the right signals to the economic agents about the recovery of production in order to ensure that suitable conditions for the reforms are sustainable over time.

6. Once begun, the reform process will determine its own continuity, progressing in each stage if there is a firm intention to avoid a relapse. Consequently, economic contexts of low inflation and open economic relations with the rest of the world demand fiscal consistency and changes in labour legislation, as well as in administrative and institutional procedures.

7. Relying on external saving to resume an investment cycle is a risky approach, since the decisions of foreign investors are based not only on what happens with regard to the internal variables but also on events in other parts of the world.

The reforms made in Brazil in the 1990s were so intensive and numerous that it may still be premature to try to evaluate them in full. Various policy changes - such as the privatization of public enterprises and reform of the social security system- are only likely to be reflected in dynamic advantages after a certain length of time. However, ten years have passed since the first significant changes, and there can be no doubt that some lessons can already be derived from them which will help us to understand adjustment processes in developing countries.

The experience of Brazil is an example of a case where the reforms did not follow the recommended ideal sequence, and sometimes the wrong signals were sent to the economic agents, but it is also a case where the advantages already obtained could easily be lost if the changes made so far came to be reversed.

(Original: Spanish)

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<sup>97</sup> See, for example, the studies of the stabilization processes in Argentina, Chile, Mexico and Peru published by IPEA/ECLAC Office in Brazil (1997): over four years can elapse after stabilization before the economic agents lose their memories of inflation and adjust their behaviour. Indeed, the long Brazilian experience of widespread inflation could require an even longer period of adaptation.



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