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Opening, stabilization and the development prospects for Brazil

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DEPARTAMENTO DE ECONOMIA

PUC-RIO

TEXTO PARA DISCUSSÃO

N.º 367

OPENING, STABILIZATION AND THE DEVELOPMENT PROSPECTS
FOR BRAZIL[□]

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DEZEMBRO 1996

[□] Prepared for the project on the “East Asian Development and its Applicability” sponsored by the *Institute of Development Economies* (Japan)

Abstract

In this paper we describe the recent developments of the Brazilian economy emphasizing their macroeconomic, structural and distributive dimensions. An analysis of the transition from the import substitution to the current “internationalist” development strategy is presented in section 3. Section 4 provides a summary assessment of the current development strategy in Brazil.

1. Introduction

The recent developments in the Brazilian economy are marked by a successful effort to reduce and stabilize inflation amid a thorough process of liberal economic reforms. Some of the recent changes in macroeconomic and distributive variables associated with the reforms can be taken as an approximation for their long term levels (or even trends). However, the actual long run consequences of such reforms are obviously uncertain. Therefore, this paper deals with an economy which is going through a “structural transition”.

This transition has different dimensions. It has an obvious economic dimension in the sense that the reforms are seen as imperative to warrant price stability and growth in the long run. It has an institutional dimension in the sense that the relationship between the State and the private sector as well as aspects of the industrial organization are undergoing a major transformation. The economic and institutional dimensions are based upon a “liberal agenda”. After decades of an “interventionist” development strategy, policies are now geared towards a liberal state whose main responsibilities are macroeconomic stability and the provision of basic social services.

Perhaps the most important element of the reforms is the opening of the economy. Until 1990 Brazil was a very closed economy. This resulted from a deliberate strategy of import substitution and, due to the debt crisis in the 1980’s, from the pressures to produce trade surpluses. Since the early 1990’s the environment has changed. On the one hand, the international context has changed with the return of foreign credit. On the other, there is a widely shared view that the closeness of the economy and the active trade and industrial policies of the 1980’s were an hindrance to price stability and sustained growth.

In section 2 we describe the recent developments of the Brazilian economy emphasizing their macroeconomic, structural and distributive dimensions. We leave the more detailed and thorough analysis of the transition from the import substitution to the current “internationalist” development strategy to section 3. Whereas section 2 is more descriptive, section 3 is more analytical. Section 4 provides a brief assessment of the current development strategy in Brazil.

2. Macroeconomic, structural and distributive conditions

The following analysis concentrates on the recent developments of the Brazilian economy emphasizing their macroeconomic, structural and distributive dimensions in last ten years (1985-95). During this period two major changes have taken place. First, the opening of the economy since the late 1980's. Second, and perhaps more important in face of the recent history of the Brazilian economy, the launching of a successful stabilization plan in 1994. The structural changes introduced with the stabilization plan are so significant that it is inevitable to focus on the events of, and prospects based upon, the restructuring of the last few years.

2.1 Stabilization efforts

Since the early 1980's, inflation gradually became the central policy issue in Brazil. Three major stabilization efforts were attempted since then: the Cruzado plan in 1986, the Collor plan in 1990 and the Real plan in 1994. The first two plans failed. The Real plan has been very successful in bringing down inflation and the prospects in this respect are very good.

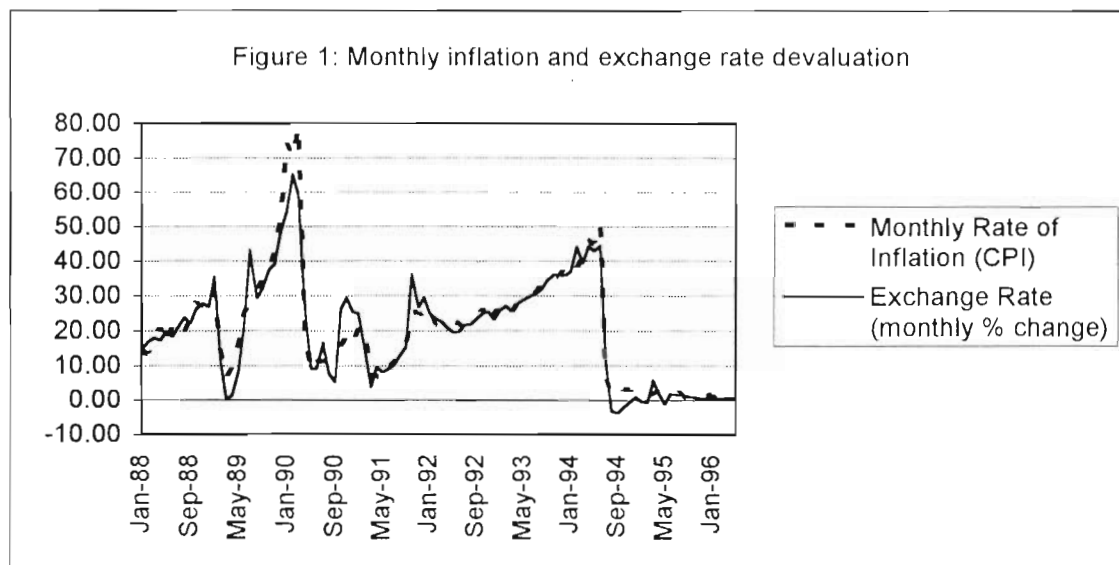
The inflationary process of the 1980's is closely associated with the oil shocks of the 1970's and the debt crisis, on the one hand, and the introduction of pervasive indexation mechanisms, on the other. Two major devaluations (in 1979 and 1983) and the spreading of wage indexation triggered the inflationary process in the early 1980's.

At the same time, tariff and non-tariff barriers were being raised to reduce imports in face of the debt crisis. The high levels of protection against foreign competition gave firms the opportunity to mark-up costs. Democratization gave the unions the political leverage and the bargaining power to index wages. To close the inflationary circle, the government targeted the real exchange rate in order to maintain the trade surpluses. A fully indexed economy gradually developed.

The rate of inflation in an indexed economy is very sensitive to demand and supply shocks. The increase in indexation schemes itself is a source of the acceleration of inflation. Another characteristic of indexed economies is that monetary and fiscal contractionary policies are inefficient to reduce inflation, implying enormous output losses.

Given the nature of the inflationary process in Brazil it is easy to understand why reducing the degree of indexation was a central part of the stabilization efforts. The Cruzado (1986) and Collor (1990) plans attempted to reduce indexation by imposing price and wage freezes. With fixed prices and strict control on imports, the increase in excess demand which follows the reduction in inflation could not be accommodated. As a result, black markets developed and the price freeze could not be sustained.

Figure 1 shows the rapid acceleration of monthly inflation in 1989, reaching almost 80%, followed by a short period of low inflation and finally the gradual acceleration between 1991 and 1994.



The Real plan of 1994 had at least two major differences in comparison with previous plans. First, a very successful process of “de-indexation” based on the establishment of a transitory unit of account fully indexed to inflation. A few months after the introduction of the new unit of account -- which kept a stable parity with the US dollar-- prices in dollars became relatively stable. At a certain point a new currency with a fixed parity to the former unit of account was introduced, and the indexation element of the inflationary process virtually disappeared.

The second difference in relation to previous plans was that the economy was considerably more open and the government was prepared to let the currency appreciate. As a consequence, imports played the role of the adjustment variable between aggregate demand and domestic aggregate

supply and the nominal exchange rate established a ceiling for prices, at least in the tradable sector.

The opening of the economy and the appreciation of the Real are two central elements in what is so far seen as a very successful stabilization effort. Trade liberalization helped the stabilization and, at the same time, it is seen by the government as a key element in the new development strategy, as we shall notice in section 3. The enormous impact on the balance of payments is the subject of the following section.

2.2 External constraints

As noted above, the debt crisis of the 1980's imposed a severe external constraint on the Brazilian economy. The drastic reduction of foreign credit and the increase in interest services on the external debt required the creation of trade surpluses. The exchange rate became pegged to the rate of inflation (as seen in Figure 1) and imports were gradually reduced with the increase of tariff and non-tariff barriers.

Table 1: Balance of Payments Figures (US\$ billions)

	Trade account	Current account	Reserves
1990	10.8	- 3.8	10
1991	10.6	- 1.4	9.4
1992	15.2	6.1	23.8
1993	13.1	- 0.6	32.2
1994	10.5	- 1.6	38.8
1995	- 3.2	- 17.8	51.8

Source: Central Bank

Since 1985 the trade surplus varied between US\$ 8 billion (1986) and US\$ 19 billion (1988). On average, between 1985 and 1994, it surpassed the mark of US\$ 10 billion. As seen on Table 1, the trade surpluses were roughly enough to balance the current account until 1994.

Since 1992 the Central Bank started promoting the inflow of portfolio capitals by increasing the interest premium on Brazilian Treasury bonds. The policy aimed the increase in reserves and, as seen in Table 1, was quite successful. The high level of reserves was very important for supporting the domestic currency against speculative attacks in the aftermath of the Mexican crisis in 1994.

Trade liberalization starts in the late 1980's and early 1990's but its most dramatic effects show up after 1994 with the expansion of domestic demand and the appreciation of the Real. Figure 2 shows two episodes of currency appreciation. The first, in 1989-90, is associated with the rapid acceleration of inflation and, to a certain extent, can be seen as "involuntary". The second episode, in 1994-5, however was used as an instrument of the stabilization strategy. The government deliberately let the nominal exchange rate appreciate in order to increase the competitive pressure on the prices of tradable. As seen on the Figure, compared with the period 1991-93, the real exchange rate as measured by the ratio of the nominal exchange rate to the CPI fell around 35%.

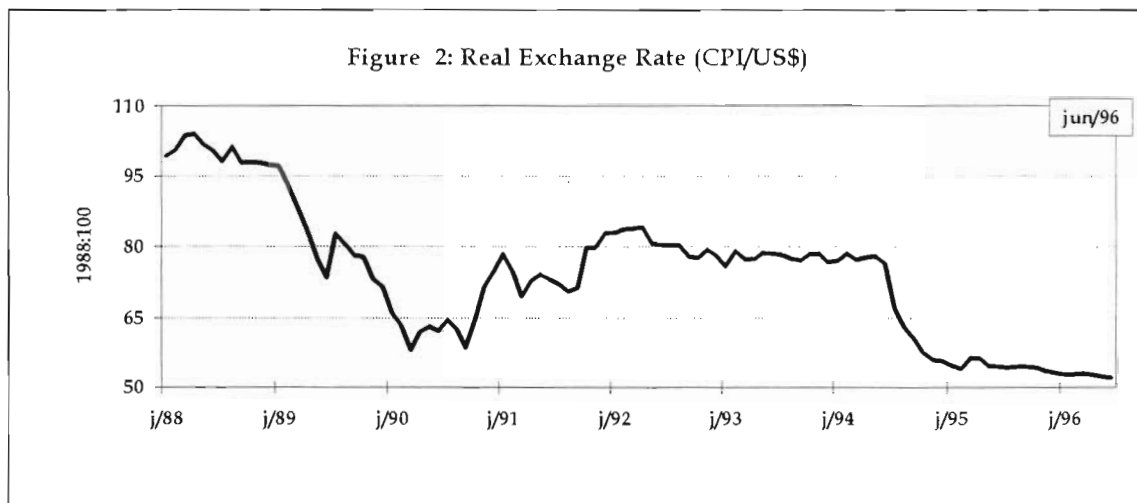
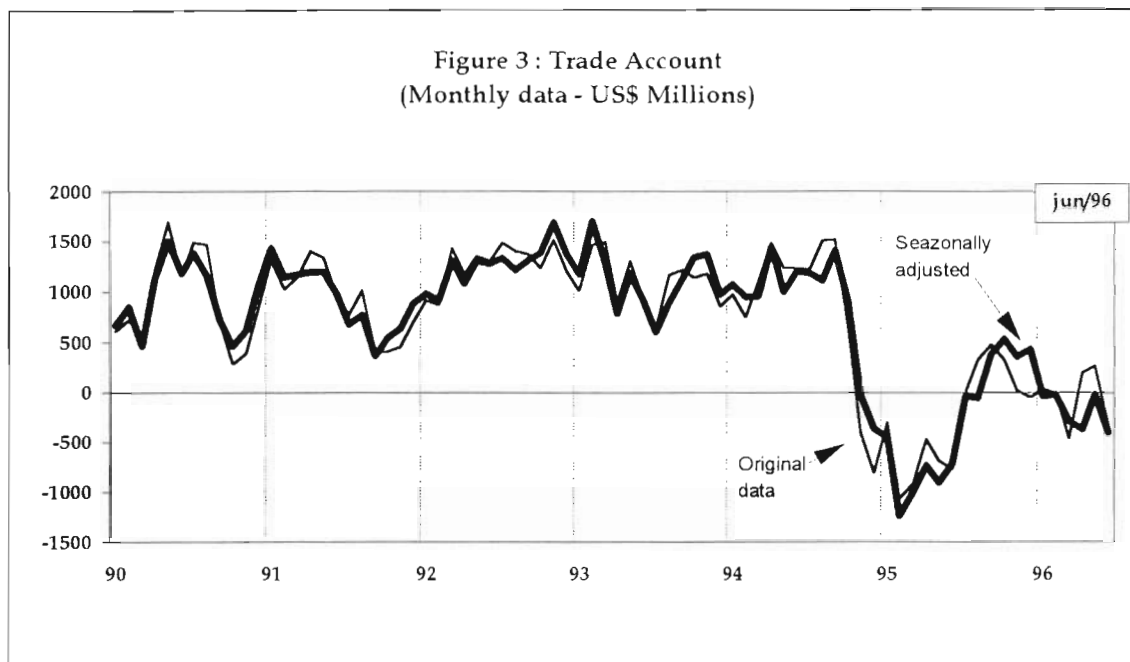


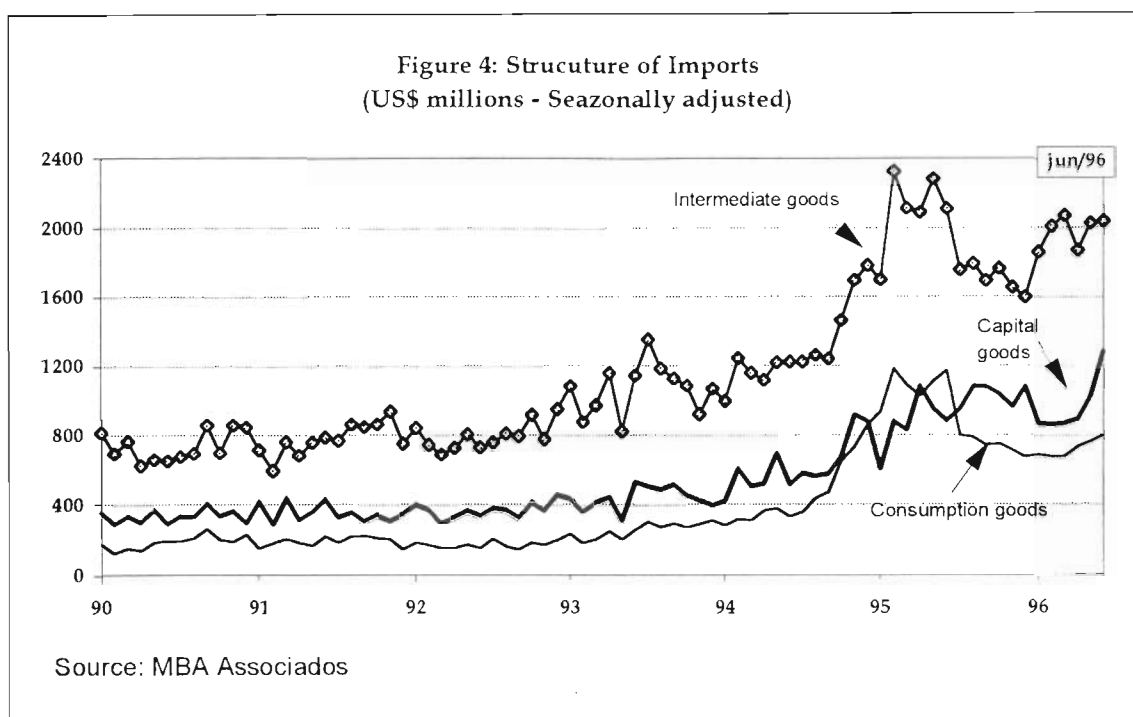
Figure 3 shows the evolution of the trade account between 1990 and 1996. Until mid-1994 the average monthly trade surplus was around US\$ 1.1 billion. The surpluses turned into deficits in late 1994. The government's strategy was to allow the deficits to continue but with the Mexican crisis this was no longer feasible --at least in the short run. Since March 1995 the exchange rate has been following a crawling peg on the industrial wholesale price index, some tariffs were raised and contractionary credit policies to reduce aggregate demand were adopted. As a result, the trade deficits turned into small surpluses. However, the long run strategy of the government seems to be the maintenance of annual trade deficits of the order of 1% of GDP (something of the order of US\$ 6 to 8 billion).



As seen on Table 1, the disappearance of the trade surpluses implied a significant change on the current account which went from a near balance to a deficit of around US\$ 18 billion in 1995, corresponding to approximately 3% of GDP.

As a result of trade liberalization and the appreciation of the Real, imports have increased significantly. As seen on Figure 4, imports of intermediary and capital goods increased roughly 150% between 1992-3 and 1995-6 and imports of consumption goods increased 300%. In the period 1993-95 GDP grew around 15% which gives an idea of the increase in the import coefficient.

However, the Brazilian economy was (and still is) very closed which means that even with such a disparity between the increase in imports and GDP, the ratio of imports to GDP went from around 3.5% in 1990 to 7.5% in 1995. The sum of imports and exports over GDP went from 10% to 15% over the same period.



It is important to note that the increase in imports of intermediate and capital goods implies that the degree of integration through production (and not only through consumption) of the Brazilian economy to the global economy is becoming very significant. This issue is further examined in detail in section 3.

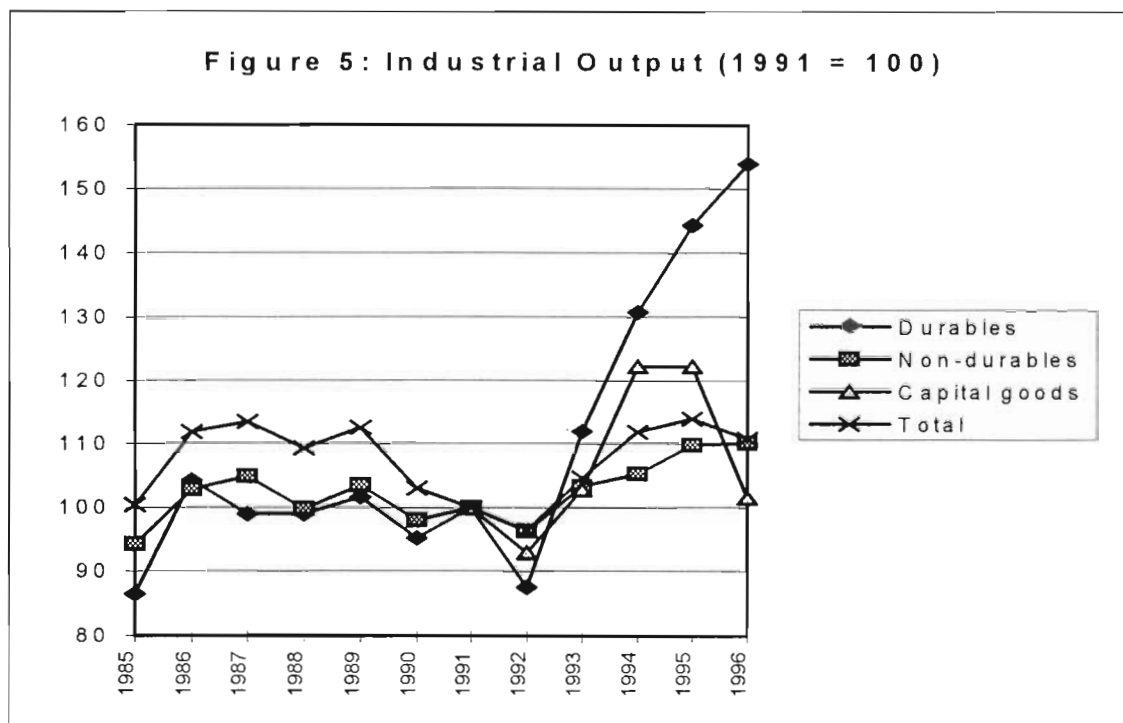
2.3 Output, employment and productivity in industry

From the point of view of economic growth, the 1980's in Brazil are seen as the "lost decade". On average, GDP grew 2.9% per annum and per capita GDP remained roughly constant. Between 1990 and 1995, annual GDP grew around 1.5%. This is a mediocre performance compared with the 1970's when GDP grew on average 8.5% annually. The last decade have seen a significant deterioration in performance compared with the previous decade.

Figure 5 shows the evolution of industrial output between 1985 and 1996 (Jan-May of 1996).¹ A few points deserve attention. First, total output in 1995-6 has the same level of 1986-89, that is, the level of activity in industry did not increase in ten years but has shown a recovery in the last few years. Second, the production of non-durable consumption goods

¹ There might be some problems with these figures since they refer to a sample of large firms in 1985. Since then a process of decentralization of production due to subcontracting has taken place which implies that the level of output might underestimate the actual figures.

increased around 10% in ten years whereas the production of durable increased 50% in the last five years implying a significant change in the structure of demand for consumption goods. Finally, the production of capital goods increased in 1994-5 but then fell in 1996 probably as a result of the increase in the imports of capital goods.



Whereas industrial output grew around 10% between 1991 and 1995, as shown in Figure 6, industrial employment fell 22% over the same period. As a consequence, labor productivity increased 40% (shown in Figure 7). Notice that labor productivity remained roughly constant between 1985 and 1990 with the bulk of the increase taking place in the subsequent period. The increase in labor productivity in recent years results from the adoption of technical innovations (associated with changes in the “social” organization of production and adoption of labor saving equipment) and the increase in subcontracting.²

There is a widespread view among Brazilian economists and businessmen that the increase in productivity is a response to the competitive pressures arising from the opening of the economy. This view lends considerable support to trade liberalization (and liberal reforms in general) as part of a long run development strategy.

² Since the data refers to total output (and not value added) of a sample of large firms in 1985, subcontracting of smaller firms since then reduces the number of workers captured by the survey but not the corresponding reduction in value added. Hence the increase in “productivity”.

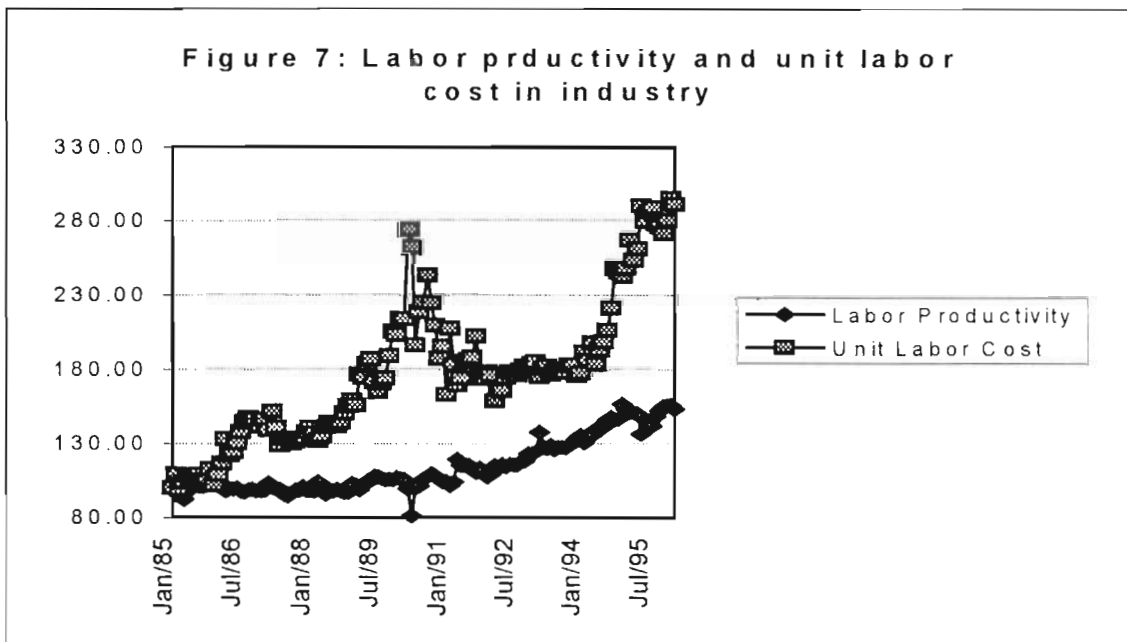
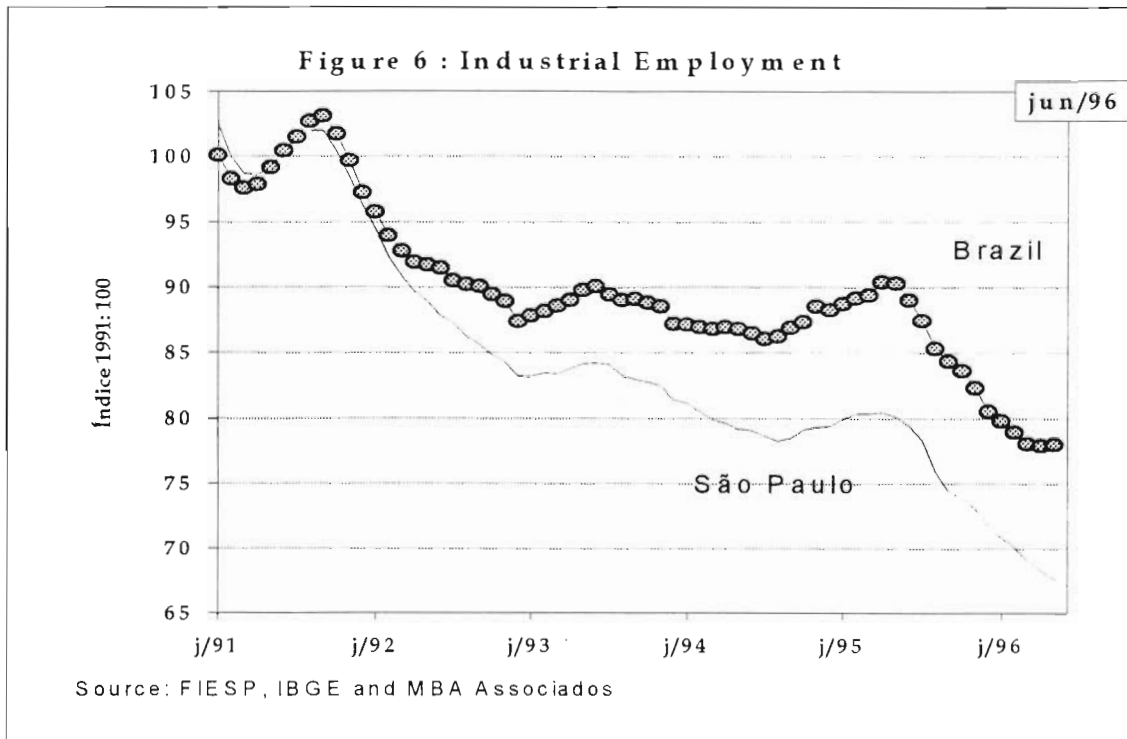


Figure 7 also shows the evolution of the unit labor cost in US dollars. It is interesting to note that even with a significant increase in productivity, the cost of labor per unit of output has increased 55% between 1988-89 and 1995-6. The increase results from the dramatic increase in the wage:exchange rate ratio after the introduction of the Real plan. Of course the increase in the unit labor cost has damaging consequences for the

competitiveness and profitability of firms in the manufacturing sector and could, in principle, affect long run growth prospects.

Table 2: The recent evolution of the real wage and the product wage in the industrial sector

	Real wage	Product wage
1993.1	100.00	100.00
1993.2	100.81	95.46
1993.3	101.92	95.80
1993.4	103.09	97.32
1994.1	106.71	101.19
1994.2	112.95	108.60
1994.3	107.94	99.19
1994.4	113.73	111.69
1995.1	116.18	114.77
1995.2	118.01	117.66
1995.3	122.24	125.86
1995.4	121.58	128.94
1996.1	130.64	142.35
1996.2	129.48	141.54

Source: FIBGE

In Brazil, both the real wage and the product wage in industry has increased considerably after the launching of the stabilization program, as seen on Table 2. Whereas the real wage in industry increased around 30% since early 1993, the product wage increased around 40%. This is a consequence of the shift in relative prices between tradable and non-tradable goods in favor of the latter as shown in Table 3 below and the indexation of wages to the consumer price index. The increase in the an increase in the share of wages in income and is a rough indication that there has been a reduction in profit margins.³

2.4 Employment, real wages and wage differentials

As noted already, the last few years differ dramatically from the previous ten years. The driving forces behind the changes are the opening of the economy and the reduction and stabilization of inflation. Unlike in other Latin American countries, where the cycle of other reforms (such as the privatization of state enterprises) have already been exhausted, in Brazil they are not yet as significant as trade liberalization.

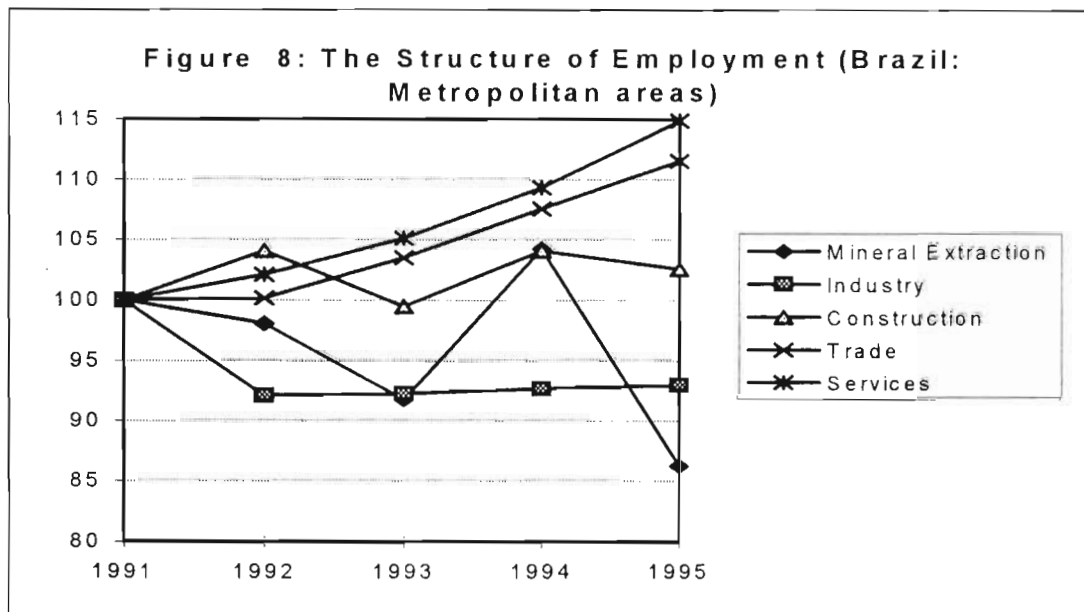
³ We say that it is only a “rough indication” since changes in the composition of inputs, the increase in the product wage might not necessarily imply a reduction in the profit margin. An increase in the share of cheaper imported inputs and a reduction in the share of labor, for example, can be associated with an increase in the product wage with no change in the profit margin.

Both trade liberalization cum exchange rate appreciation and stabilization have significant effects on the structure of employment and wages in the economy. Figure 8 shows the structure of employment for the six major metropolitan areas in Brazil. Compared with 1991, there has been a reduction in the share of industrial employment and an increase in the shares of trade and services. These changes are consistent with the movement in relative prices in favor of the non-tradable sectors as seen on Table 3.

Table 3: The evolution of relative prices between non-tradable and tradable goods (1993.1 = 100)

	Non-tradable/tradable
1993.1	100.00
1993.2	94.52
1993.3	93.86
1993.4	94.42
1994.1	94.49
1994.2	95.98
1994.3	92.07
1994.4	98.12
1995.1	98.35
1995.2	99.55
1995.3	103.22
1995.4	105.48
1996.1	107.30
1996.2	109.21

Source: FIBGE



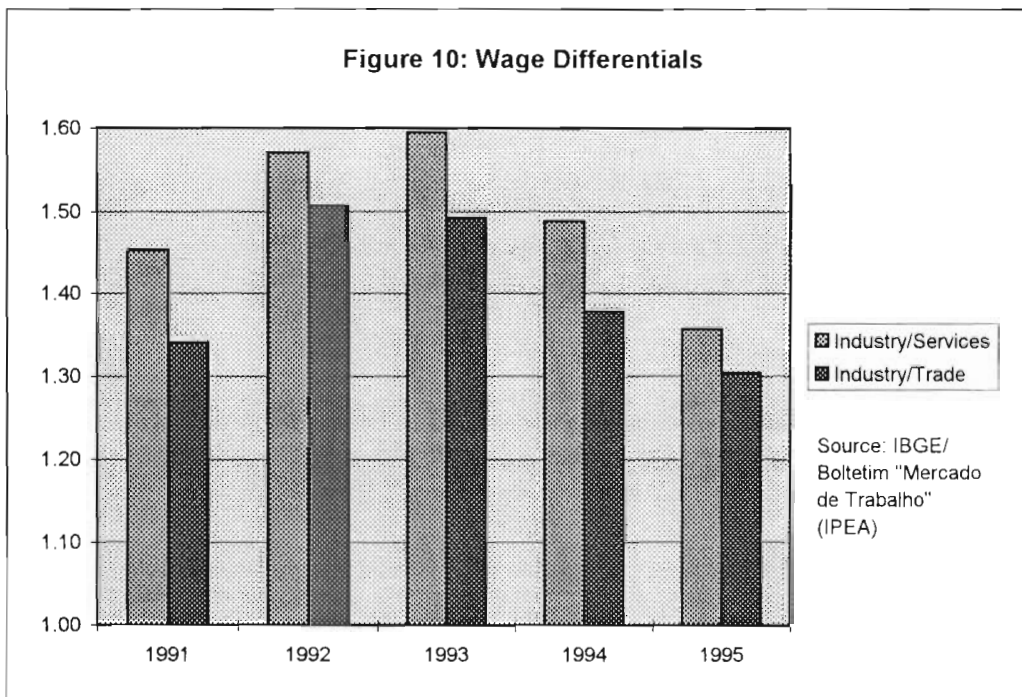
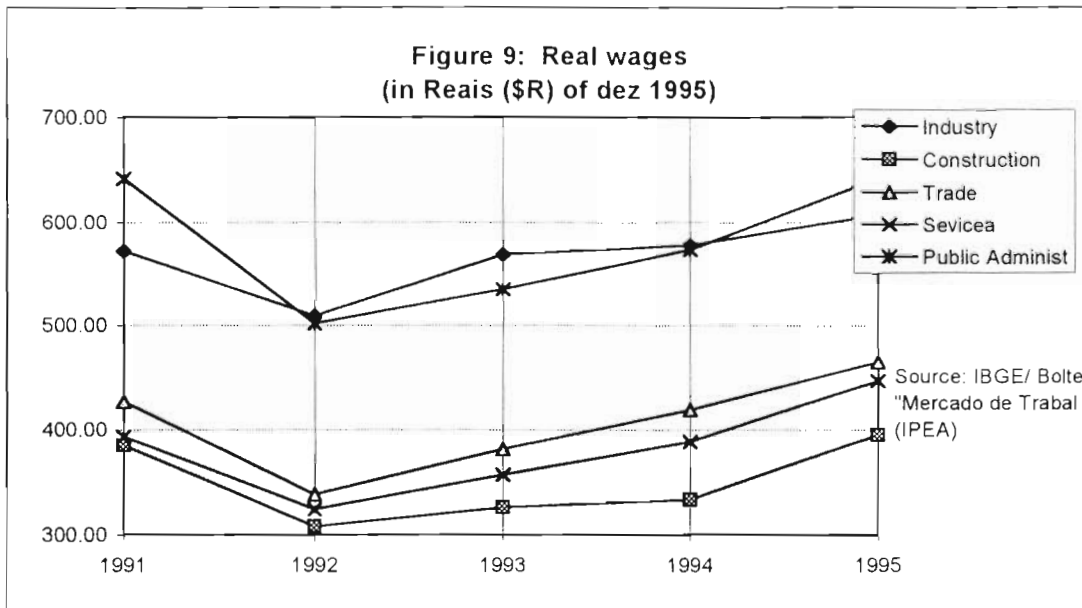


Figure 9 shows that after the recession of 1990-92, real wages started growing in all sectors. Real wages are higher in the public and industrial sectors, averaging US\$ 640 per month in the former and US\$ 600 in the latter in 1995.⁴ These figures imply an increase of approximately 25% between 1992 and 1995. Real wages also grew in the other three sectors. As expected, real wages grew faster in the non-tradable sectors. Indeed, as

⁴ . The figures on the vertical axis roughly correspond to US dollar values.

seen in Figure 10, where wage differentials between industry and services and industry and trade are depicted, there was a shrinking of wage differentials over the last three years, with positive distributive effects. However, as shown in the following section, these improvements in income distribution must be seen against a background of decades of unequal distribution of income.

2.5 Income Distribution, the “quality of workers” and the prospects of productivity growth

Brazil is not a poor country. In the ranking of countries found in statistics published by international agencies, Brazil appears among middle-income countries with a per capita income of approximately US\$ 4,000. However, the distribution of income is very unequal.

Table 4 shows that, in comparison with a sample of other Latin American countries and the developed countries, Brazil has by far the worse income distribution. Table 5, in turn, shows that there has been a tendency for the worsening of income distribution in the last four decades. According to Barros & Mendonça (1994), approximately 30% of wage differentials (and by extension, income distribution) in Brazil are explained by inequality in educational attainment.⁵

⁵ Barros, R. and Mendonça, R. 1994. “Geração e reprodução da desigualdade de renda no Brasil”, IPEA, Rio de Janeiro.

Table 4: The ratio of the average income of the richer 10% of the population to the average income of the poorer 40%

<i>Latin American countries</i>	<i>Ratio</i>	<i>Developed countries</i>	<i>Ratio</i>
Brazil	5.8	Australia	1.6
Colômbia	2.8	Canada	1.3
Costa Rica	3.3	Finland	1.2
Jamaica	2.2	Netherlands	1.2
Peru	2.8	Italy	1.3
Venezuela	2.4	New Zealand	1.8
		Spain	1.3
		Sweden	1
		USA	1.6
		Denmark	1.3

Source: Barros and Mendonça (1994) based on the Human Development Report (1991)

Table 5: Brazil: Gini coefficient and the ratio of the average income of the richer 10% of the population to the average income of the poorer 10%

<i>Year</i>	<i>Gini</i>	<i>10+/10-</i>
1960	0.50	34
1970	0.56	40
1980	0.59	47
1990	0.63	78

Source: Barros and Mendonça (1994)

Education also plays an important role in determining the prospects of productivity growth, and hence economic growth, in Brazil. It is very surprising how well Brazil has done in terms of economic growth having invested so little in education. Barros, Camargo and Mendonça (1994) show that whereas the “quality of jobs” is higher in Brazil than in other Latin American countries and not so low compared to the industrialized countries, the “quality of the workers” is lower than in any other Latin American countries and much lower than in the industrialized countries.⁶ Indeed, they see the low level of educational achievement as the main determinant of poverty in Brazil.

⁶ Barros, R., Camargo, J. M. and Mendonça, R. 1994. “Pobreza no Brasil: quatro questões básicas”, Mimeo, IPEA. In the paper, the quality of jobs depends very much on the capital:labor ratio whereas the quality of workers depends essentially on educational achievement.

In a comparison of educational attainment in Latin American countries, the Brazilian performance is among the worse. Amadeo et al⁷ compare the levels of several educational outcomes for Brazil with the average level of these outcomes for seven Latin American countries with the highest per capita income. Secondly, they estimate, among all Latin American countries, a series of relationships between educational outcomes and per capita GDP. Based on each of these estimated relationships they compare the actual value of each educational outcome for Brazil with the value predicted by each of the relationships given the Brazilian level of GDP per capita. The figures are shown in Table 6.

Table 6: Educational outcomes in Brazil and the comparison group *

<i>Outcome</i>	<i>Brazil</i>	<i>Latin American countries</i>	<i>Brazil according to regression</i>
<i>Adult population</i>			
>> Illiteracy rate (15+)	18.9	8.6	8.6
>> Years of schooling	3.9	6.8	6.6
<i>Population in School age</i>			
>> % in school (6-11)	74.3	88.7	91.4
>> % repeaters in			
>>> Primary level	20.0	6.1	11.7
>>> First grade	29.0	18.2	19.5

(*) Comparison group: Argentina, Mexico, Chile, Colombia, Costa Rica, Venezuela and Uruguay.

As seen on Table 6, the illiteracy rate for the population 15 years or more was close to 20% in 1990. This figure is close to 10 percentage points above the average level of the other high-income countries and the level predicted by the regression. The average number of years of schooling for the population 25 years or more is close to four which is approximately three schooling years below the average level and the level predicted by the regression.

⁷ Amadeo, E. et al 1993. "Human resources in the adjustment process". Discussion Paper n 317, IPEA, Rio de Janeiro.

In the school-age population, the attendance rate in Brazil is less than 75% for the population between 6 and 11 years old which is 15 percentage points less than the average and 17 points below the regression. Repetition rates are also very high in Brazil: in the primary level repetition reaches 20% whereas on average in the seven high-income countries it is 6.1%.

These figures show quite clearly that educational attainment and therefore the quality of workers in Brazil is a basic problem for the prospects of productivity growth. If the quality of workers is taken as an indicator of the capacity to assimilate new technologies and increase labor productivity, it seems quite clear that Brazil is in a position of comparative disadvantage with respect to other Latin American countries and other developed and developing areas.

3. The evolution of the development strategy in Brazil

In this section we discuss the evolution of the development strategy in Brazil. We start with a brief description of the “import substitution” strategy followed by a presentation of the current “internationalist” strategy. Finally we look at the structural changes arising from the change in strategy.

3.1 The import substitution strategy

As seen on **Table 7**, in Brazil, between the 1930 and 1980, industrial output grew at an average annual rate of 7.5% whereas total GDP grew at a rate of 5.7%. Over this period, except for the 1960's, the rate of growth of industrial output averaged 9%. This is an impressive performance. However, in the 1980's, the average rate of growth fell to negative 0.2%. As elaborated below, the meager performance of the 1980's led to a major review of the development strategy in Brazil.

Beginning in the late 1940's and early 50's, Brazil followed the so-called “import substitution strategy”, which meant a gradual process of industrialization based on the protection of the domestic market and subsidies to investments in the industrial sector. The process started with the expansion of the traditional industries (textile, foodstuff, beverages, tobacco) while capital goods, equipment and intermediary goods were imported. In a second phase (from the late 1950's to the early 1970's), transport equipment and basic industrial inputs started being produced domestically. Finally, in the 1970's and 1980's, chemical, electrical and capital goods sectors started being protected and subsidized.

Table 7: GDP, agriculture and industrial output (Average annual % growth), 1900-1990

Period	GDP	Agriculture output	Industrial output
1900-1910	4.2	3.0	5.5
1910-1920	4.2	3.8	6.2
1920-1930	4.5	3.9	3.8
1930-1940	4.4	2.4	7.5
1940-1950	5.9	3.1	9.0
1950-1960	7.4	4.4	9.1
1960-1970	6.2	4.4	6.9
1970-1980	8.6	4.7	9.0
1980-1990	1.6	2.4	- 2.0

Source: Bonelli, R. (1996) *Ensaio sobre Política Econômica e Industrialização no Brasil*, SENAI/CNI, Rio de Janeiro; p. 71.

Table 8 shows the structure of industrial output by sector. The share of the traditional sectors in total output falls from roughly 90% in 1920 to 39% in 1990. By contrast, the share of “dynamic-A” sectors (metallurgy, paper, rubber, plastic, and basic chemicals) increases from 9% to 43%, whereas the “dynamic-B” sectors (mechanical and transport equipment, and electrical materials) increased from 1.3% to 18%. Hence, there is a clear up-grading of the goods produced domestically, with an increase the share of goods intensive in natural resources and semi-skilled labor.

Table 8: The structure of industrial output (% of total output)

Goods	1920	1940	1950	1960	1970	1980	1990
Traditional	89.6	79.7	74.0	56.2	48.1	35.1	39.1
Dynamic A	9.1	16.1	21.0	30.2	33.3	44.0	43.1
Dynamic B	1.3	4.2	5.0	13.6	18.6	20.9	17.8
Total	100	100	100	100	100	100	100

Source: Bonelli, R. (1996) *Ensaio sobre Política Econômica e Industrialização no Brasil*, SENAI/CNI, Rio de Janeiro; p. 74.

Besides tariff and non-tariff protection against foreign competition, until the late 1980's, industrial and technological policies provided subsidized credit and fiscal incentives to firms in the industrial sector. Moreover, state

enterprises operating in the energy and telecommunications sectors provided services at subsidized prices to the private sector.

Finally, the exchange rate policy was designed to warrant the maintenance of the profitability of firms in the tradable sectors. Specially in periods of high inflation, the indexation of the exchange rate to the rate of inflation (as can be seen on **Figure 1**) played an important role in this respect.

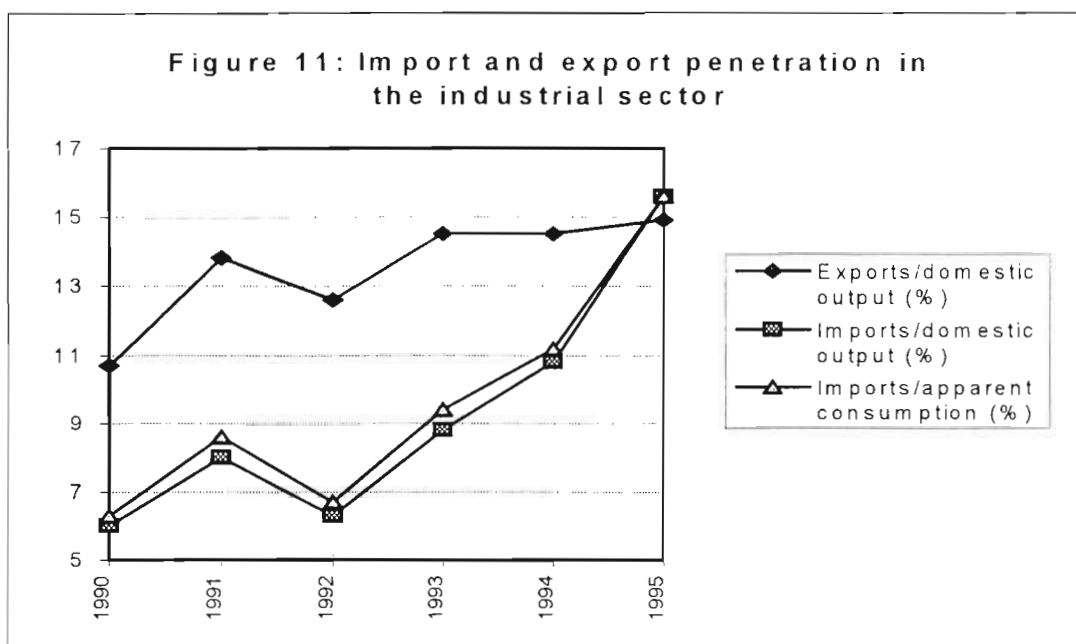
As a consequence of these policies the Brazilian industry by the late 1980's was essentially an "integrated industry" in the sense that it produced a great variety of goods and depended very little on imports.

The surge of international interest rates and the Mexican moratorium in the early 1980's led to a drastic reduction in foreign credits to Latin America. The external debt crisis of the 1980's implied a drastic reduction in the capacity to import of the Brazilian economy. As a response, the degree of protection of the industrial sector was greatly increased.

It is important to separate the strategic protection of the industrial sector (based on the import substitution approach) from the increase in protection to cope with the growing stringency of the external constraints. The former was part of a development strategy whereas the second was part of an immediate response to the debt crisis. At a certain point it became impossible to disentangle the two sources of protection and their long term consequences for the economy. The combination of the two led to a very high level of protection basically de-linking the Brazilian economy from the world economy.

3.2 "Internationalism" as a development strategy

Based on the view that the level of protection of the industrial sector had gone too far, in the late 1980's a gradual program of opening of the economy was launched. The basic idea was to reduce the average level of protection as well as the dispersion of protection across sectors.



In 1994, as part of the stabilization effort, the opening process was deepened and the real exchange rate appreciated providing an enormous stimulus to imports. As seen on **Figure 11**, whereas the coefficient of imports increases continuously (particularly after 1993), the coefficient of exports (exports as a proportion of domestic output) remained almost stagnant.

The predominant view amongst Brazilian economists and policy makers is that the opening of the economy will bring greater welfare, productive efficiency and economic growth. Perhaps the clearest expression of this view has been put forward by Franco (1996) who argues that the import substitution strategy led to the stagnation of productivity and the deterioration of welfare standards.⁸ He makes a clear defense of the opening of the economy, sees its integration of the Brazilian economy to the global market as the basis for a new development strategy and implicitly repudiates the adoption of industrial policies.

According to this view, from the point of view of any single country, the objective of international trade is to import goods and services. The increase in imports has many positive effects as argued in the following paragraphs.

First, the reduction in tariffs --and the appreciation of the domestic currency for that matter-- reduces the prices of imported goods (and

⁸ Franco, G. 1996. "A inserção externa e o desenvolvimento". Mimeo.

through the effect of competition, the prices of domestic substitutes) and increases the array of goods to which domestic consumers have access. Hence, the immediate effect on welfare comes from the gains that consumers enjoy.

Second, the increase in competition induces technological innovations, greater productivity and cost reduction. There was a significant increase in labor productivity in the last few years which in part resulted from greater competitive pressures. Among Brazilian economists, there is a strong belief that the increase in the productivity and competitiveness of domestic firms will eventually lead to an increase in exports.

Third, the opening of the economy promotes the integration of the Brazilian economy to the world economy. The “productive integration” of Brazilian firms to the global economy is seen as an important step towards their technological up-grading. Not only do firms directly involved in international trade and FDI benefit from greater integration, but indirectly through so-called spill-over effects, other firms also gain. The imports of capital goods increased from 20% of domestic production in 1990 to 60% in 1995. The increase in imports of capital goods is seen as a strong evidence of the process of productive integration.

Multinationals play an important part in the integration process. Franco (1996, p. 6) argues that the increase in FDI and in the share of multinationals in domestic output will tend to increase exports. The argument is based on evidences (**Table 9**) that the propensity to export of foreign firms in Brazil has been much greater than that of national firms.

Table 9: Propensities to import and export of national and multinational firms in Brazil

	<i>National firms</i> 1987-89	<i>National firms</i> 1992	<i>Foreign firms</i> 1987-89	<i>Foreign firms</i> 1992	<i>Total</i> 1987-89	<i>Total</i> 1992
Sales *	11.3	9.8	18.9	18.1	29.3	27.9
Exports *	2.1	2.4	4.6	5.1	6.7	7.5
Imports *	0.5	0.4	1.4	1.5	1.9	1.9
Exports/sales	14.8	19.6	23.6	24.9	18.4	21.8
Imports/sales	4.1	4.4	7.4	8.5	5.4	6.1

Source: Franco (1996) based on Bielschowski, R. 1994. “Two studies on transnational corporations in the Brazilian manufacturing sector: the 1980’s and the early 1990’s”, Santiago, CEPAL.

[] In billions of constant US dollars of 1992. Sample of 63 national firms and 41 foreign firms.*

Based on the benefits of the increase in imports and the greater integration of the Brazilian economy to the global economy, it is expected that, as a result of the impacts of greater competition and productive integration, Brazilian firms will become more competitive thus increasing the export coefficient in the future. The basic strategy is to foster imports in order to increase the competitive advantage of firms and hence increase exports. The expectation is that once exports start matching the increase in imports, the external constraints to economic growth will soften. Hence, the opening of the economy has two positive effects on capital accumulation: one is to increase efficiency and labor productivity and the other is to relax the limits imposed by external constraints on economic growth.

3.3. Opening, the trade balance and competitive advantage

The opening of the economy, the appreciation of the exchange rate and the increase in aggregate demand which followed the drastic reduction of inflation in 1994 led to an increase in the import coefficient as seen on **Figure 11** above. The export coefficient, however, remained stagnant basically due to the appreciation of the exchange rate. If, on the one hand, there has been a significant increase in labor productivity, on the other hand, wages in dollars have also grown considerably. Indeed, the wage/exchange rate ratio has grown almost 100% since 1994 --much faster than labor productivity-- and, as a result, the unit labor cost in the industrial sector has grown 60%, implying a significant reduction in the profitability and competitiveness of firms.

The optimistic view is that, as a result of the increase in imports and the greater integration of the Brazilian economy to the world economy, exports will eventually start increasing. Or at least, if the export coefficient does not increase significantly, the import coefficient will tend to stabilize.

The experiences of Mexico and Argentina, which also went through exchange rate-based stabilization programs, show however that there is a tendency towards an increasing gap between imports and exports. **Table 10** shows that in both countries, the *total* trade deficit increased over time and the deficit of the *manufacturing sector* grew even more in the years following the stabilization. It is interesting to notice that the trade deficits of the manufacturing sectors tend to become greater than the total deficits

over the years implying that there is a shift in the composition of imports (in favor of manufacturing goods) and exports (in favor of non-manufacturing goods).

Table 10: The evolution of the trade balance in Mexico and Argentina (in billions of US dollars)

<i>Argentina</i>	1989	1990	1991	1992	1993	1994
<i>Total exports</i>	9.6	12.4	12	12.2	13.1	15.7
<i>Total imports</i>	4.2	4.1	8.3	14.8	16.8	21.5
<i>Balance</i>	5.4	8.3	3.7	- 2.6	- 3.7	- 5.8
<i>Manufacture exports</i>	3.4	3.6	3.4	3.2	4.2	5.3
<i>Manufacture imports</i>	3.1	3.1	6.8	12.8	14.7	18.9
<i>Balance</i>	0.3	0.5	- 3.4	- 9.6	- 10.5	- 13.6
	1989	1990	1991	1992	1993	1994
<i>Total exports</i>	35.3	41	42.9	46.3	52.1	60.8
<i>Total imports</i>	33.8	40.3	49.7	62.1	66.6	81.5
<i>Balance</i>	1.5	0.7	- 6.8	- 15.8	- 14.5	- 20.7
<i>Manufacture exports</i>	10.3	25.3	29.2	32.8	36.7	47
<i>Manufacture imports</i>	15.5	22.1	30.4	51.8	55.3	60.4
<i>Balance</i>	- 5.2	3.2	- 1.2	- 19	- 18.6	- 13.4

Source: World Trade Organization

Table 11: The trade balance of the manufacturing sector in Brazil (in billions of US dollars)

<i>Type of good</i>	<i>1990</i>	<i>1995</i>
<i>Non-durable consumption goods</i>	2.8	2.4
<i>Durable consumption goods</i>	0.4	- 0.5
<i>Elaborated intermediary goods</i>	5.7	3.1
<i>Non-elaborated intermediary goods</i>	1.4	2.7
<i>Capital goods</i>	- 2.3	- 7.4
<i>Transport equipment</i>	1.8	- 1.8
<i>Total</i>	9.9	- 1.5

Source: Banco Nacional de Desenvolvimento Econômico e Social, Brazil.

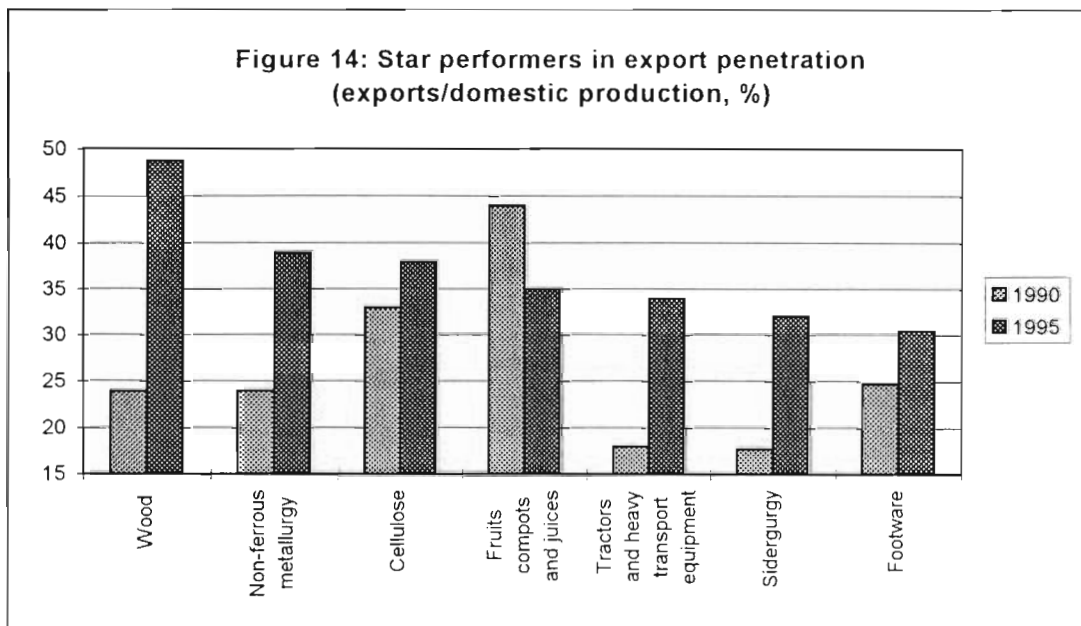
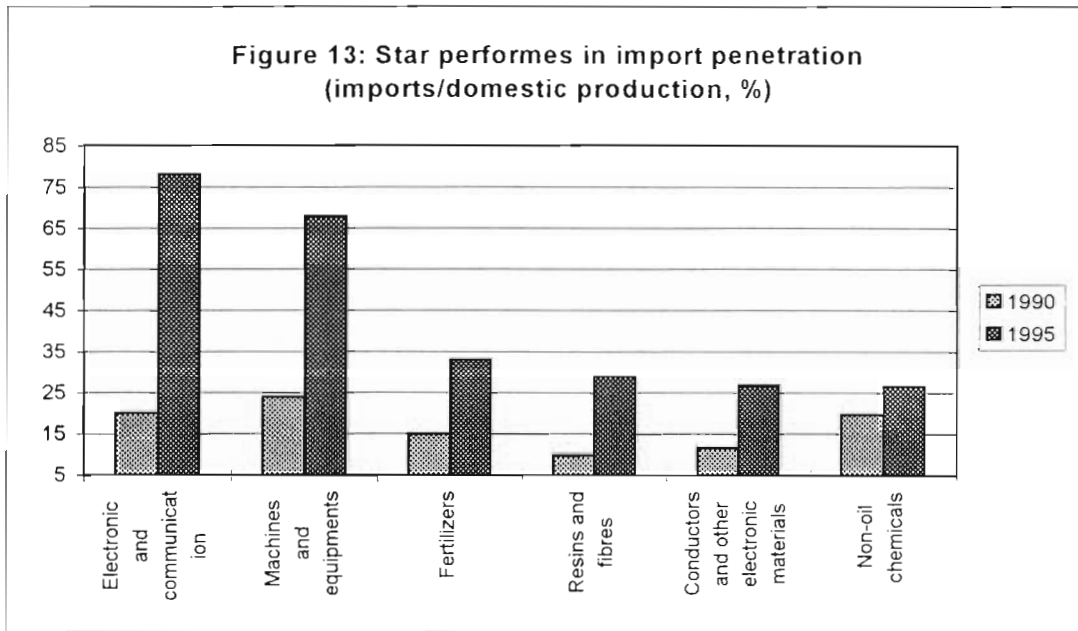
Of course cross country comparisons of this nature may be very misleading. Compared to Argentina, the exchange rate in Brazil is much more flexible implying that if a devaluation is required, the Central Bank

has the means to implement it. Compared to Mexico, the increase in the current account deficit in Brazil is considerably smaller, implying that the size of the macroeconomic imbalance seems to be much smaller as well. Even taking these differences into account, however, it seems inevitable to consider that an increasing gap between imports and exports in Brazil is not an implausible scenario.

Turning to the case of Brazil in the last few years, the total trade account went from an average surplus of approximately US\$ 13 billion in the early 1990's to a deficit around US\$ 3.5 billion in 1995 and 1996. Meanwhile, the trade account of the manufacturing sector (as shown on **Table 10**), goes from a surplus of US\$ 10 billions in 1990 to a deficit of US\$ 1.5 billion in 1995. **Table 10** also shows that the most important changes took place in the capital goods sector (from a deficit of US\$ 2.3 billion to a deficit of US\$ 7.4 billion), transport equipment and elaborated intermediary goods.

Import coefficients grew in all the manufacturing sectors but there are some in which the increase is considerably greater than the average. As seen on **Figure 12**, the import coefficient (imports over domestic production) in the capital goods sector went from 20% in 1990 to almost 60% in 1995. The share of imports on domestic consumption grew from around 17% in 1990 to slightly more than 40% in 1995. As shown in **Figure 13**, in the electrical and communications equipment, the import coefficient went from 20% in 1990 to almost 80% in 1995 whereas in the machinery sector it went from 23% to almost 70%.





There was also an increase in the export coefficient (exports over domestic production) in almost all sectors. The star performers in this respect, as shown in **Figure 14**, are products made of wood (an increase in the export coefficient from 25% in 1990 to almost 50% in 1995), metallurgy (from 25% to almost 40%), cellulose (from 33% to 38%), transport equipment (from 18% to 34%) and sidergurgy (from 18% to 32%)

There seems to be a change in the sectoral composition of imports and exports. There is a reduction in the comparative advantage of sectors intensive in technology such as machinery and electrical and communications equipment and an increase in the comparative advantage of sectors intensive in natural resources such as wood, cellulose, metallurgy and siderurgy. To a certain extent this is quite a reasonable change given that Brazil has abundant natural resources. On the other hand, from a long term perspective and assuming that the growth of world market will continue biased towards technologically advanced sectors, the change in the pattern of trade might raise some worries.

4. Concluding remarks on the current Brazilian development strategy

The opening of the economy has two basic effects on the Brazilian productive system. On the one hand, there is a process of increasing integration of the Brazilian economy to the global economy. In this respect, there is a greater *linkage* of firms operating in Brazil to the “international productive network”. On the other hand, due to the increase in sectoral specialization (changes in sectoral comparative advantages as discussed in the previous section), there is a reduction in *domestic linkages* or, put in other words, there is a process of de-integration of the “domestic productive network”.

It seems that the long term performance of the Brazilian economy --as measured by the rate of capital accumulation-- depends on the pros and cons of the two trends mentioned in the previous paragraph. It seems clear that the strategy being followed in Brazil sees greater relative advantages in increasing the international linkages. Technological catching-up through spill-over effects brought about by the greater penetration of transnational corporations and greater specialization in production tend to increase productivity, foster growth and increase per capita income.

The integration of the Brazilian economy to the global economy, and the increasing *linkage* of firms operating in Brazil to the international productive network, is seen as a major element in providing Brazilian firms with technological innovations and greater trade and investment opportunities. In this respect, opening itself becomes the development strategy.

With the opening of the economy coupled with the appreciation of the currency, firms in Brazil have a price incentive to look for international outsourcing. As a consequence, in sectors such as electronic and

automobile parts and capital goods, for example, there has been a dramatic shift in the market share of Brazilian based and foreign suppliers in favor of the latter. Hence the reduction in *domestic linkages* and the process of de-integration of the domestic productive network.

Of course, an alternative view is that there are gains associated with domestic linkages and that the disappearance of such linkages might have damaging effects for capital accumulation. As a first approximation, the gains are the same as those associated with Hirshuman's forward and backward linkages. That is, the creation of sectors --or "cells" in the input-output matrix-- leads to an increase in the demand for goods and services of sectors which maintain a productive linkage to the newly created ones. For symmetric reasons, the destruction of sectors reduces the demands for the goods and services produced by the linked sectors.

The effects of forward and backward linkages through changes in inter-sectoral demand can be seen as "static" as opposed to "dynamic" effects associated with inter-sectoral spill-over effects, external economies of scale and the creation of positive externalities in general. The recognition of the positive impacts of domestic integration would necessarily lead to a different approach to development policy. Based on this view, encouraging domestic networking and providing incentives for the vertical or horizontal integration of firms would become the natural policy objectives.

The above discussion is also relevant for a comparison with the experience of the Southeast Asian countries, and Japan and South Korea in particular. There are studies showing that domestic networking is an essential element in the development strategy of these two countries.⁹ Accordingly, domestic networking is important because of the positive effects on productivity growth and competitiveness of long-term partnership between firms.

The development strategy being implemented in Brazil since the late 1980's is very different from that on which the "success stories" of Japan and Korea are based. The dominant view in Brazil is that the advantages of entering the international network are greater than the disadvantages of the de-linking of the domestic productive system. Indeed, the latter are not really acknowledged in the debates.

⁹ See for example, Smitka: *Competitive Ties*, Columbia University Press; Aoki, M. 1988. *Information, incentives and bargaining in the Japanese economy*, Cambridge University Press; and Yanagihara, T. 1996. "The economic system approach as an alternative paradigm", mimeo, IDE.

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