

THE MINERVA PROGRAM

Theory and Operation of a Modern National Economy
George Washington University

INTERNATIONAL TRADE - PERSPECTIVES ON BRAZIL

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I. Brief Summary of Brazilian International Trade

The Brazilian economy started in the early 90s a gradual trade liberalization process, which basically depends on a deregulation policy directed to creating a more rational, transparent and stable protection structure and to stimulating technological modernization of the Brazilian productive structure.

The gradual reform in the protection structure led to a substantial and generalized reduction of tariff levels. The average rate was reduced from 32.2% in 1990 to 14.0% in July 1993.

Although Brazil is liberalizing its economy, this process started in many other countries some years ago and these countries are in advanced stages today. The technological gap between Brazil and these countries has widened significantly in recent years.

II. Performance of Brazilian Exports - 1984/1994

A. Export Policy and Main Items in Exports

- Export Policy

Brazil has undergone profound changes in recent years.

Internally Brazil is dealing with its latest stabilization program launched in 1994 directed at lowering inflation and improving the environment to continue the next broad set of reforms.

Simultaneously, Brazil is addressing its efforts toward Mercosul integration and a freer trade market. Although Brazil has been pursuing regionalism as the main goal in the short-run, it has not abandoned its position on multilateralism.

In order to improve its competitiveness in the International Market and also expand exports, there are some instruments available to reduce the incidence of tax on export goods and also some mechanisms to reduce duties on inputs used to produce exportable goods. The most important of them is reducing the incidence of indirect charges on exports, such as IPI on the value added taxed on industrialized goods and ICMS used on the movement of goods and services in manufactured goods, also exemption from COFINS and PIS/PASEP on manufactured goods.

- Performance of Brazilian Exports: Main Products, Market Share and Destination Countries

In 1994, Brazil was the 18th largest world exporter, being responsible for 1.3% of the bulk of sales. Imports

represented only 1% of the world total, ranking Brazil 17th. The imports/exports represented only a small amount of world trade.

Many export industries in Brazil are facing obstacles due to the vulnerability of their goods. On the one hand there is an acute competition with countries with low per capita income and relevant natural resources. Those countries have adopted aggressive export policies, which have allowed them a significant growth in the world market in labor intensive goods in the last few years.

On the other hand, countries that have invested seriously in education, research and development have been gaining a significant advantage. These countries are producing and increasing their share of exports with high technological content such as electronics, cars and computers.

Table 1 shows the variation in the market shares of Brazil (participation of the world industry's imports in relation to total world imports) from 1980 to 1990. The participation of Brazilian exports regressed in some goods, such as foodstuffs and beverages, textiles, cloth and footwear, machinery and equipments. Brazil became more competitive in metallurgy, construction material, chemical products, wood, paper and cellulose.

Table 1

Variation of Brazil's market share 1979-80/89-90 (%)

| | World | West | Nafta | Rest of | Pacific | Others | Opep | East |
|---------------------------------------|-------|--------|-------|---------|---------|---------|-------|--------|
| | | Europe | | America | | Asiatic | | Europe |
| food and beverage | -1.02 | 1.78 | -3.81 | 0.84 | 0.44 | -3.01 | -0.5 | -1.97 |
| textile clothing shoes | -0.20 | -1.20 | -0.12 | -3.66 | -0.67 | 0.14 | -0.57 | -0.96 |
| construct | 0.29 | 2.71 | 0.72 | 2.22 | 0.36 | 0.40 | 0.89 | -0.91 |
| metallurgy | 1.36 | 3.41 | 2.16 | 9.12 | 3.98 | 4.43 | 2.55 | 0.32 |
| wood, paper | 0.11 | 1.42 | 0.79 | 0.09 | -1.16 | 0.63 | 2.05 | 0.02 |
| transport | 0.06 | 0.19 | 0.73 | 1.89 | -0.05 | 0.22 | -0.10 | 0.03 |
| chemicals | 0.25 | 1.21 | 0.30 | 2.93 | 0.32 | 0.69 | 0.29 | -0.08 |
| energy | 0.15 | 0.01 | 1.20 | 0.05 | 0.03 | 0.02 | 0.16 | 0.00 |
| other industries | -0.17 | -0.22 | -0.29 | -2.40 | 0.29 | 0.55 | 0.29 | -0.41 |
| machinery equipment | -0.12 | 0.17 | -0.52 | 0.27 | -0.41 | 0.08 | 0.13 | 0.00 |
| total | 0.03 | 0.49 | 0.08 | 1.41 | 0.68 | 0.29 | 0.36 | -0.73 |
| total (exclusive petroleum) | -0.08 | -0.21 | -0.47 | 1.04 | 0.49 | 0.30 | 0.37 | -0.80 |

source: Chelem

In table 2, one can see the expansion in the commercial trade from 1984 to 1994. Exports grew 51% from 1985 and 43% from 1984 (exports were less in 85 than in 84). Imports increased 85% from 1984 to 1993.

The Brazilian performance in 1992 and 1993 showed an upturn in relation to 1990 and 1991, when the exports dropped from US\$ 34,4 billion to US\$ 31,4 billion in 1990 and US\$ 31,6

billion in 1991.

In 1994, 25.4% of the exports were in basic products and 73.1% in manufactured goods, of which 15.8% were semi-manufactured, 57.3% manufactured, and 1.5% special operations.

The expansion of basic commodity exports, from 1980 to 1992 was just 4%, while manufactured goods grew 136% and semi-manufactured 142%.

Manufactured exports have been considered to be more advantageous than primary commodities, which have shown great volatility in prices. Also the world exports of manufactured goods rose much faster than primary commodities. The exports for manufactured goods today account for nearly three-quarters of world merchandise trade.

The high technology industries show particular vitality and potential for future expansion, especially sectors such as biotechnology, autos and computers.

International trends in inputs (new materials, new metal alloys, special chemicals, special papers) and consumer goods (higher quality and performance standards, development of new products and models) point to a need to speed up technical progress in these areas.

Table 3 shows the main trading partners in 1989 and 1993. The USA and EU take the major proportion of Brazilian exports. Exports to Japan are mainly primary products, whereas the other major industrial countries take more manufactured goods.

Table 2 **Total exports/imports 1984-1994** (US\$ million)

| Period | Exports | Imports | balance |
|--------|---------|---------|---------|
| 1984 | 27,005 | 13,907 | 13,098 |
| 1985 | 25,639 | 13,167 | 12,471 |
| 1986 | 22,348 | 16,053 | 6,294 |
| 1987 | 26,223 | 15,049 | 11,174 |
| 1988 | 33,789 | 14,603 | 19,186 |
| 1989 | 34,382 | 18,257 | 16,125 |
| 1990 | 31,413 | 20,661 | 10,752 |
| 1991 | 31,620 | 21,041 | 10,579 |
| 1992 | 35,862 | 20,554 | 15,308 |
| 1993 | 38,704 | 25,695 | 13,009 |
| *1994 | 43,558 | 33,168 | 10,390 |

source: Psyches

* source 1994: Central Bank

Table 4 shows the main products of the Brazilian exports from 1990 to 1993. Exports are quite well diversified. In 1993, one third of total earnings, came from primary products, of which soya was the most important.

Table 3

Main trading partners (%)

(US\$ million)

| exports to | 1989 | | 1993 | |
|----------------------|--------|------------|--------|------------|
| | US\$m | % of total | US\$m | % of total |
| USA | 8,370 | 24.3 | 8,028 | 20.7 |
| Argentina | 722 | 2.1 | 3,661 | 9.4 |
| Japan | 2,446 | 7.1 | 2,313 | 6.0 |
| EC | 10,509 | 30.6 | 10,008 | 25.8 |
| Of which: | | | | |
| Netherlands | 2,722 | 7.9 | 2,488 | 6.4 |
| Germany ^a | 1,714 | 5.0 | 1,824 | 4.7 |
| UK | 1,060 | 3.1 | 1,140 | 2.9 |
| Eastern Europe | 1,095 | 3.2 | 522 | 1.3 |

Source: Banco Central, *Programa Economico*^a includes former East Germany from July 1990

Table 4

Brazilian Exports - Main Products

(US\$million)

| Products | 1990 | 1991 | 1992 | 1993 |
|-----------------------------------|-------|-------|-------|-------|
| Soybeans | 2,854 | 2,031 | 2,696 | 3,074 |
| Metallic ore | 2,656 | 2,870 | 2,534 | 2,466 |
| Coffee | 1,253 | 1,479 | 1,112 | 1,282 |
| Orange Juice | 1,468 | 900 | 1,046 | 826 |
| Meat | 625 | 892 | 1,224 | 1,333 |
| Metallurgical products | 5,239 | 5,880 | 6,038 | 6,082 |
| Transport equipment & parts | 3,094 | 3,028 | 4,198 | 4,226 |
| Chemical products | 2,033 | 2,073 | 2,356 | 2,587 |
| Machines & mechanical instruments | 1,691 | 1,786 | 2,085 | 2,530 |
| Footwear & leather products | 1,218 | 1,284 | 1,526 | 2,002 |
| Paper & cellulose | 1,213 | 1,242 | 1,450 | 1,516 |
| Textile products | 1,087 | 1,188 | 1,420 | 1,364 |
| Electrical & electronic equipment | 1,023 | 1,015 | 1,159 | 1,320 |
| Oil derivatives | 974 | 722 | 758 | 766 |

Source: Banco Central

B. The Current International Competitiveness of Brazilian Goods

- Incentives to Exports: Role of Subsidies - Subsidy Policy and its effects on competitiveness

In the 70s and 80s, export subsidies were used as an instrument intended to protect domestic industry and to help create industrial capital. They were also used in industrial sectors considered to be strategic.

The companies got considerable benefit from protection and subsidies without being pressured to improve their efficiency, productivity and competitiveness.

These policies proved to be inefficient. Industries didn't feel stimulated to invest in technological development. During 1980-1990 there was a stagnation of industrial output, which increased only 3.6%.

- Challenges and Potential Opportunities for Brazilian Goods

The main challenges for the competitiveness of Brazilian goods are:

- Brazil costs - fiscal system which imposes over taxation on the industrial sector. Ports and financing costs, the excess and severity of labor costs, deterioration in the telecommunications and infrastructure of transport system, precariousness of education and health systems, high funding costs, and finally high transaction costs associated with an excessive and burdensome regulation of economic activity.

- the increasing preferences for the members of a bloc leads to discrimination toward nonmembers. The rule of selective protectionism of bloc members against outsiders is conducted through the practice of managed trade in order to avoid further retaliation. In these aspects, Brazil has Mexico as its major competitor in the US market. Mexico, as a participant of the NAFTA bloc, gets much more advantages.

- the tariffs for footwear and textile have been 2.5 times the average tariff level for all industrial products. The US and EU (European Union) also restrict imports through non trade barriers.

- Foreign markets requires consistently high quality and reliability in its import products.

- The Asiatic tigers are gradually taking market share from Brazil due to their high performance and strong aggressive export policy.

Some barriers will tend to decline in the next few years. The World Trade Organization (WTO), which started its operation on January 1st, 1995, will improve the openness and compliance of the international trade relation among its 120 countries.

The Non-Trade Barrier (N.T.B.) will be transformed into tariffs in six years by the developed countries and 10 years by developing countries. These changes will help to move to more transparency and clearer rules.

The tariffs for the industrialized goods will be reduced to 38% in the developed countries over the next five years. Steel and paper, which represent important sectors for Brazilian exports, will have their

tariffs lowered to 0% in the developed countries.

The subsidies will suffer a progressive reduction in the agriculture goods in the industrialized countries. The EU will reduce export subsidies over six years by 21% in volume and 36% in value from a 1986-90 base period.

The M.F.A. (Multi-Fiber Agreement), which has allowed import quotas by the industrialized countries for textiles and clothing since 1974, will be eliminated in 10 years.

The sugar for the US, agriculture for Europe, Canada and the US, and orange juice for Europe, Japan and the US will face less of a barrier, which will lead to a favorable impact for agriculture exports from Brazil.

Metal and paper, which represent a significant portion of Brazilian exports, have undergone large reductions.

All these improvements, of course, will be offered to other countries too. Brazil will have to face the Tigers as well as China and many other countries that have already started promoting their exports and are in an advantageous position.

The countries that gain better positions in the international market are going to be those that run faster toward a freer economic policy, quickly establishing a pro-competition sector, developing national technological competence, and implementing an aggressive export policy in order to expand their participation in the world market.

- Regional Blocs and Brazilian Exports

Brazil is a global trader not just in relation to its imports, but also in relation to its exports. The main Brazilian partner in 1993 was the European bloc, which took 27% (US\$10,4 billion) of the exports. The most important groups in the European bloc was the EU which took about 96% of the amount (US\$ 9,9 billion). The main export products were agribusiness (43%) and minerals (11%).

The next larger partner was the North American bloc with 24% (US\$9,3 billion) of the exports. The United States was the largest importer with almost 85% of this amount (US\$7,9 billion). The main exports were machinery and equipments (19%), transport material (11%), metals (12%) and food stuff(19%).

The third partner was South America with 21% of total exports (US\$ 8,2 billion), Mercosul with almost 66% of the amount (US\$ 5,4 billion). The export profile shows transport material (25%), machinery and equipments (18%) and metals(15%).

Then ASEAN bloc (Association of Southeast Asian Nations) comes next with 15% (US\$5,8 billion) of the total amount exported. All the other countries accounted for 13% of Brazil's exports (US\$ 5,5 billion).

The evolution of the participation of these blocs in Brazil's exports is the following:

- for the North American bloc, the participation dropped from 31% in 1984 to 24% in 1993.

- the participation of EU increased from 26% in 1984 to 33% in 1990, and dropped to 27% in 1993.

- the ASEAN bloc grew from 10% in 1984 to 17% in 1991, and decreased to 15% in 1993.

- South America had an increase from 8% in 1985 to 18% in 1992, and 21% in 1993; Mercosul went from 4% in 1985 to 11% in 1992 and 14% in 1993.

Brazilian exports expanded from US\$ 20.1 billion in 1980 to US\$ 38.7 billion in 1993, an increase of 93% while the world exports grew 95%. But from 1991 to 1992 the increase was 13%, and from 1992 to 1993 was 8%, while the world exports increased just 4%.

Indeed the Brazilian performance in 1992 and 1993 had an upturn movement in relation to 1990 and 1991, when the exports fell in relation to 1989.

- Challenges for Brazil in the International Market: How to compete with countries with more skilled labor and lower labor cost

Unfortunately Brazil has had many internal problems, such as high inflation and a large debt which discouraged foreign investments in the country due to its unstable economy. Currently Brazil has to face much more competitiveness from abroad.

The main goal today is to consolidate the macroeconomic stabilization policies, thus creating confidence among private enterprises and, thereby, promoting a high rate of savings and investment.

Macroeconomic stabilization implies lowering the Brazil cost, maintaining low inflation rate, continuing the institutional reforms and, thus, making the Brazilian economy attractive to foreign investment. Since the country can plan its economy in a long term, it can drive its efforts toward investments in education, research and development.

Brazil first has to gain the time lost because its protective policies have not stimulated the modernization of its industries. There is a great urgency to adopt a proper strategy of export and industrial growth, promoting dynamism in the industries, and enhancing export sectors while promoting a policy of openness that allows access to and acquisition of new technologies.

Mercosul integration, the first step toward a freer trade market, brings industries into a higher position of efficiency and competitiveness in order to compete at international level.

III. Performance of Brazilian Imports - 1984/1994

A. Main Items in Imports

- Performance of Brazilian Imports: Main Products and Source Countries

Brazilian imports reached US\$ 25.7 billion in 1993, a nominal increase of 71% in relation to 1983. The economy in 1993 was

still very closed.

Brazil's largest trading partners in 1993 were the North American bloc and European bloc, each with 27% of the total imports (US\$ 6.9 billion). In the North American bloc, the United States was the largest exporter accounting for US\$ 6.0 billion. In the European bloc, Germany provided most of the exports, US\$ 2.3 billion. The increase in imports from 1990 to 1993 was about 30% from both blocs.

The third largest exporting bloc was South America, with 17% (US\$ 4.4 billion), next was the rest of the world, with 17.8% (US\$ 4.6 billion), in which the biggest item is petroleum. The imports from Mercosul increased about 43% from 1990 to 1993.

Table 5 **Brazilian Imports - Main Products** (US\$million)

| products | 1990 | 1991 | 1992 | 1993 |
|--------------------|---------------|---------------|---------------|---------------|
| consumer goods | 2,941 | 3,072 | 2,450 | 3,084 |
| Raw materials | 7,053 | 7,930 | 7,628 | 9,462 |
| Fuels & lubricants | 4,735 | 4,073 | 4,141 | 4,377 |
| capital goods | 5,932 | 5,966 | 6,335 | 8,788 |
| Total | 20,661 | 21,041 | 20,554 | 25,711 |

Table 5 exhibits the main Brazilian imports, and table 6 shows the main import trading partners from 1991 to 1993. Primary product imports continue to be an important component of the overall bill. Growth in capital goods imports was disappointingly weak during the 1980s and early 1990s,

reflecting low investment expenditure. However, there was a jump of almost 40% in capital goods imports in 1993, followed by a further 30% leap in the first five months of 1994.

Table 6 **Brazilian Imports - Key Source Countries**

US million FOB

| country | 1991 | | 1992 | | 1993 | |
|--------------------|--------|--------|--------|--------|--------|--------|
| | value | (%) | value | (%) | value | (%) |
| 1. United States | 4,938 | 23.47 | 4,784 | 23.28 | 5,735 | 22.31 |
| 2. Argentina | 1,615 | 7.68 | 1,721 | 8.37 | 2,604 | 10.13 |
| 3. Germany | 1,906 | 9.06 | 1,867 | 9.08 | 2,228 | 8.67 |
| 4. Japan | 1,220 | 5.80 | 1,123 | 5.46 | 1,476 | 5.74 |
| 5. Saudi Arabia | 1,283 | 6.10 | 1,496 | 7.28 | 1,463 | 5.69 |
| 6. Italy | 792 | 3.76 | 823 | 4.00 | 940 | 3.66 |
| 7. Canada | 511 | 2.43 | 469 | 2.28 | 648 | 2.52 |
| 8. France | 607 | 2.88 | 568 | 2.76 | 640 | 2.49 |
| 9. Switzerland | 501 | 2.38 | 436 | 2.12 | 551 | 2.14 |
| 10. United Kingdom | 456 | 2.17 | 390 | 1.90 | 504 | 1.96 |
| 11. Algeria | 232 | 1.10 | 299 | 1.45 | 495 | 1.93 |
| 12. Chile | 494 | 2.35 | 478 | 2.33 | 433 | 1.68 |
| 13. Uruguay | 434 | 2.06 | 339 | 1.65 | 425 | 1.65 |
| 14. Singapore | 85 | 0.40 | 99 | 0.48 | 424 | 1.65 |
| 15. Netherlands | 351 | 1.67 | 331 | 1.61 | 409 | 1.59 |
| 16. Belgium | 213 | 1.01 | 201 | 0.98 | 355 | 1.38 |
| 17. Republic Korea | 131 | 0.62 | 129 | 0.63 | 319 | 1.24 |
| 18. Mexico | 204 | 0.97 | 345 | 1.68 | 294 | 1.14 |
| 19. Iran | 918 | 4.36 | 961 | 4.68 | 292 | 1.14 |
| 20. Venezuela | 501 | 2.38 | 295 | 1.44 | 284 | 1.10 |
| Sub-Total | 17,392 | 82.66 | 17,154 | 83.46 | 20,519 | 79.81 |
| Other Countries | 3,649 | 17.34 | 3,400 | 16.54 | 5,192 | 20.19 |
| TOTAL | 21,041 | 100.00 | 20,554 | 100.00 | 25,711 | 100.00 |

Source: SRF/MF

B. Current Level of Protection and Perspectives of Freer Trade

- Protection Policy and Current Level of Protection

Although the trade liberalization policies slowed during 1993 and the first half of 1994, it did produce significant

changes in Brazil's trade regime, resulting in a more open and competitive economy.

After 1991, tariffs have been the primary instruments in Brazil for regulating imports. The maximum tariff level went down from 105% in 1990 to 33% in 1994, when the average tariff fell to 11.3%.

Tariff rates are set according to the escalation principle where in higher value-added products pay higher tariffs.

- Economic Consequences of Protectionism

Even though the Import Substitution policy followed in Brazil, succeeded in promoting industrialization, this policy was based on a highly protective structure which produced high welfare costs, and dampened investments. It failed to raise the economy to international productivity level.

This protectionist policy didn't allow the acquisition and absorption of foreign technology, and effective human resource policies were not implemented to sustain export performance.

As a consequence, many Brazilian industries have low productivity, high costs, poor product quality and weak performance. The pattern by which Brazilian industry is entering the international economy is based on the export of natural resource and cheap labor intensive goods.

- Industrial and Intellectual Property Rights

The Brazilian Government will submit the provisions in conformity with the provisions of the Uruguay round trade related aspects of the intellectual property agreement (TRIPS).

Significant trademark revisions, along with the proposed patent reforms, are included in the proposed industrial property legislation pending in the Brazilian Congress.

IV. Mercosul

A. Main Characteristics of the Agreement

- Customs Tariffs

The customs standardization between Brazil, Argentina, Uruguay and Paraguay started on January 1st, 1995. This means a customs union involving 200 million people and a market which produces over US\$ 600 billion each year.

The main goals of Mercosul integration are to create a common market in which goods and services can be freely traded among member countries, to set up a common external tariff (CET), and to allow the movement of factors of production (labor and capital).

The CET has 11 tariff levels varying from zero to 20% and applies to 85% of the listed items. The remaining items, including telecommunication, capital goods and computer equipment (1,100 items), will continue to be subject to national tariff rates until the end of the transition period.

Capital goods will have a maximum common tariff of 14% in 2001; computer equipment and telecommunication goods will have a maximum of 16% in 2006.

- Foreign Policy

The agreement provides for the supervision and implementation of the Common External Tariff, as well as to for ensure equity in trade relation with other countries.

It has been very complex and difficult to achieve the foreseen harmonization of standards and technical rules. There are great disparities in the national tariff structures among member countries and diverse private group interests in each country.

B. Affects on Brazilian International Trade

- Main Products of Imports/Exports

With the reduced tariffs put into practice among Mercosul members in 1991, trade flows in the region increased to US\$ 10,314 million in 1994.

Table 7 shows the expansion of trade between Brazil and Mercosul from 1990 to 1994. The share of Brazil's trade flows grew from 6.99% in 1991 to 12.96% by 1994. The total imports from Mercosul account for 12.97% of Brazil's total imports.

First semester of 1995, Brazil's imports from Mercosul members increased more than 120% in relation to the same period in 1994. Brazil's exports to these countries increased 14%. It's important to notice also that the overvaluation of Brazilian currency had a significant influence in a general increase in the import level.

The participation of Brazil in the global exports from Argentina represented around 8.1% in 1990, 20% in 1993 and tend to achieve 30% in 1995, this means an amount larger than that to the United States.

Most of the Brazilian exports to Mercosul are made up of manufactured goods. Almost 75% of the total Brazilian exports to Mercosul go to Argentina.

The main items exported in 1993 were:

- vehicle and transportation materials - 21.8%
- machinery, mechanical and electrical appliances - 19.1%
- chemicals - 13.5%
- metallurgical goods and tools - 9.5%
- food stuffs - 6.2%

Table 7

**Evolution of two-way trade flows between Brazil and the other
Mercosul members**

(US\$ million)

| period | Argentina 1 | Paraguay 2 | Uruguay 3 | Mercosul (123) | Total* (B) | %Share (123/B) |
|--------------|----------------|---------------|--------------|-------------------|---------------|-------------------|
| 1980 | 1,849 | 501 | 507 | 2,857 | 43,087 | 6.63 |
| 1981 | 1,467 | 641 | 551 | 2,659 | 45,384 | 5.86 |
| 1982 | 1,216 | 491 | 289 | 1,996 | 39,570 | 5.04 |
| 1983 | 1,013 | 265 | 235 | 1,513 | 37,328 | 4.05 |
| 1984 | 1,364 | 373 | 259 | 1,996 | 40,921 | 4.88 |
| 1985 | 1,017 | 377 | 280 | 1,674 | 38,793 | 4.32 |
| 1986 | 1,415 | 439 | 504 | 2,358 | 36,393 | 6.48 |
| 1987 | 1,407 | 354 | 515 | 2,276 | 41,276 | 5.51 |
| 1988 | 1,686 | 459 | 636 | 2,781 | 48,394 | 5.75 |
| 1989 | 1,961 | 682 | 931 | 3,574 | 52,646 | 6.79 |
| 1990 | 2,045 | 713 | 882 | 3,640 | 52,075 | 6.99 |
| 1991 | 3,091 | 716 | 771 | 4,578 | 52,661 | 8.69 |
| 1992 | 4,761 | 730 | 855 | 6,346 | 56,416 | 11.25 |
| 1993 | 6,294 | 1,234 | 1,204 | 8,732 | 64,494 | 13.54 |
| **1994 | 7,731 | 1,357 | 1,226 | 10,314 | 79,555 | 12.96 |
| 94/90 (%) | 278.04 | 90.32 | 39.00 | 183.35 | 52.77 | - |

source: MICT/SECEX/DTIC

* total foreign trade of Brazil

** 1994 source Aladi

The main items imported in 1993 were:

- vegetable by-products - 29.6%
- mineral products - 15.9%
- transportation materials - 14%
- textiles - 8.5%
- chemicals - 7.3%
- machinery, mechanical and electrical appliances - 6.1%
- live animals and animal by-products - 5.5%

The exports were relatively diversified. They were notable

for their concentration of technology-intensive products, such as transportation material, machinery, and mechanical and electrical appliances. They are produced on a large scale and require industrial plants that are capital intensive.

The imports were more concentrated in food-stuffs and industrial products with medium intensity of technology, such as textile and chemicals.

- Next Steps toward a full Mercosul Integration: Main Challenges

There are some efforts to accelerate the integration process, which has been facing difficulties in coordinating the interests, foreign policy strategy and economic situation of each country.

The main issues to be agreed are:

- creation of Mercosul Institutions;
- adoption of common policies, such as macroeconomic, industrial, agricultural, energy policies;
- instruments for external trade policy in order to eliminate barriers among the members and, also, to protect against unfair trade practices.

The main challenges for the full consolidation of Mercosul are the total commitment to market openness by the member countries, and the elimination of the existing barriers to

trade and investments. Members must deal with impediments in infrastructure, (transportation facilities, telecommunication systems and quality standards), and income distribution to allow a lower portion of the population to enter the market.

Mercosul is still a limited regional bloc. It represents just 1.5% of total world exports. In this sense, Mercosul has to look forward to participating in more dynamic markets in order to access high technologies and to obtain more opportunities.

- Affects on Brazilian International Trade

The Mercosul has been considered to face great potential for expansion due to its unexplored markets. The results obtained until now are very impressive. Intra-regional trade from 1990 to 1994 almost tripled. Moreover, there has been a large increase in investments within the member countries. Multinational corporations have formed partnerships with entrepreneurs or have set up subsidiaries in Mercosul countries.

The competitive environment created by this integration has led industries to seek more efficiency and productivity, encouraging specialization and better strategies, such as joint-ventures and associations, to penetrate and expand in new markets.

Mercosul offers a favorable environment for standardization and adaptation to market rules. Expanding Mercosul to a Free Trade Area of the Americas¹ could be a viable way to get access to larger and more dynamic markets.

V. Challenges for Brazilian International Trade

A. Technology Development

- Technology Research and Development

Nowadays, many countries are concerned about their level of development, and there are several reasons for that feeling.

Countries that in the past invested heavily in education, research and development have acquired and applied technology in many sectors of the economy, such as production, and they have been reaping the corresponding benefits. They achieved lower costs, better quality, and an ability to innovate in the production and development of new products, thus gaining more flexibility. So they increased their productivity and competitiveness, and gained market share in the global trade.

There are a lot of other positive implications, such as the wealth that goes to the country as production reaches

¹In June, 1991 Brazil along with its Mercosul partners, signed a framework agreement with the United States under the Americas Initiative, agreeing to start negotiations for an eventual free trade zone involving all signatory parties.

economies of scale leading to specialization, and so on. Also, high technology products have fewer competitors, what brings an advantageous position for the exporter country.

There are many ways to obtain technology, such as through direct domestic investments in universities, scientists and research institutions. Foreign direct investments (FDI) are another way to acquire technology, as are imports of high technology products, purchase of rights to proprietary technology, migration of skilled labor and the like.

Table 8 shows the expenditure in R&D in the 80s comparing Brazil to other countries. In 1989 around US\$ 2 billion were spent, with three-quarters financed by the Federal Government, 8% by the private sector and the remainder by state-owned companies, public sector financial agents, and state and municipal governments.

Brazil spent, in proportion to GDP, half of what the Asian nations spent and one-quarter that of the Group of Seven. The private sector invested much less than the public sector. In fact, less than 10% of what the public sector did, while in the Asian countries and in the Group of Seven more than 50% of the investments came from the private sector.

One way to assess the national technological capabilities of a country is to look at the number of scientists & engineers was in R&D. Data from 1985 show that Brazil had 52,863

scientists and engineers in R&D, which represented 3.9 persons per 10,000 in the population, while Chile in 1988 had 3.6 per 10,000, United States 33, West Germany 27 and Japan had 50. Singapore and Korea in 1987 had 13 scientists per 10,000 persons.

Table 8

**Research and Development Outlays by Brazil and Other Countries
(Mid-1980s)**

| Outlays on R&D | Brazil | Latin American nations | Mediterranean nations ^a | Asiatic nations ^b | Group of Seven nation ^c |
|-------------------------------------|--------|------------------------|------------------------------------|------------------------------|------------------------------------|
| As % of GDP | 0.7 | 0.6 | 0.9 | 1.3 | 2.7 |
| Per inhabitant (US\$) | 13.7 | 12.0 | 24.0 | 18.0 | 346.0 |
| By origin of funds(%) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Public sector | 92.0 | 78.8 | 46.4 | 35.6 | 43.1 |
| Private sector | 8.0 | 10.5 | 49.5 | 61.4 | 52.5 |
| Other sources | NA | 10.7 | 4.1 | 3.0 | 4.4 |
| By sector of application of funds % | 100.0 | NA | NA | NA | 100.0 |
| Industry | 45.0 | NA | NA | NA | 89.0 |
| Other sectors | 55.0 | NA | NA | NA | 11.0 |

Source: Brazil- Ministry of Science and Technology; Other countries - ECLAC

^a- includes Spain, Greece, Portugal, Turkey and Yugoslavia

^b- includes South Korea, Philippines, Hong Kong, Singapore and Thailand

^c- Group of Seven consists of U.S.A., Canada, Japan, West Germany, France, Italy and U.K.

• **Technology Transfer: High Tech Imports / Exports**

Imports of high technology products are an important indicator of technology transfer. Brazil in 1989 imported around US\$ 8 billion in high-tech products, while Mexico imported US\$ 10,5 billion. Brazil exported US\$ 8.6 billion

and Mexico US\$ 7 billion.

Brazil was the only Latin American country in 1989, to present a trade surplus in high technology products, probably because of its protectionist policies targeted at high-technology sectors.

B. Industrial Productivity

- Performance and Perspectives of Brazilian Industries

In 1985, the productivity of the Brazilian mining and manufacturing industries was 20.5% higher than in 1980, corresponding to an average annual increase of 3.8%. However, at the end of the decade productivity dropped and led to an increase of only 15.7% from 1980 to 1990. Although, this decade witnessed a considerable crisis, there were countries that expanded significantly. For instance, Japan increased its industrial productivity 70.5% from 1980 to 1987, Belgium 65.4%, Italy 58.9%, and the United States 34.2%.

However, during the 1980s Brazil increased its share of global exports because of the bad internal economic situation produced a reduction in domestic demand.

The protectionist policy pursued until 1990 didn't stimulate industries to invest in research, development and labor skills. They had limited capacity for innovative management and organizational techniques.

Since 1990, there has been an upturn in the industrial sector, due to the liberalization process and to Mercosul, which induced the industries to lower costs, to innovate and to achieve better quality in order to keep their position in the market.

In 1992 and 1993 Brazil presented the best world index of ISO 9000 certificate growth, an increase of 500%. The International Organization of Standardization in the end of 1994 granted quality certificates to more than 400 Brazilian products, a ranking far superior to any other emerging economy. For example, India was awarded only 200, Hong Kong 200, and South Korea 122. These numbers show the great willingness of the industrialists to pursue competitiveness through modern methods of production and the absorption of new technologies.

Brazilian productivity jumped 18% in 1993 over 1992. A report from 1994 by McKinsey's Global Institute put Brazilian productivity at slightly less than one half of the United States, but ranked it first among Latin America countries with productivity averaging 26% higher than in Mexico.

Brazil's steel industry has doubled its productivity since 1990, with annual production per worker very close to Japanese levels. Brazil's car industry is another example of growing competitiveness. In 1993, vehicle output rose 29.5%

overtaking Italy and Mexico to make Brazil the world's tenth largest producer.

Unfortunately in telecommunications, Brazil presents very poor indexes. With a rate of only 9 telephones for every 100 inhabitants, it is ranked 39th in the world and eighth in Latin America in terms of telephone density.

In textiles also, Brazil shows a lack of technological sophistication in the industries. Of the 14,000 apparel manufacturers currently operating in Brazil, one third have begun investment plans and another third are expected to be investing in the near future. Exporting companies are the first to make such investments.

VI. Conclusion

Brazil is in a transition period passing through a process of macroeconomic stabilization, integration with other countries within the Mercosul agreement, and liberalization of the economy. There is an awareness that international trade is a fundamental way for growth, and the Brazilian government should continue adopting and implementing trade reforms.

The foreign commercial policy of recent years led to low entry of investments, technologies and development in the country. On the other hand, the private sector was not stimulated to invest, since they were protected and there were strong barriers to imports. The investment in research, technology and development was very low in relation to other countries, where the private sector provided most of the economic investments.

The public and private sectors invested poorly in education, research and development in the 1980s, creating a significant gap between Brazil and countries that, though in a similar situation in the 1970s, invested heavily in these sectors. Moreover the infrastructure investments were reduced drastically due to the public sector crisis.

The main challenges for Brazil in the coming years should be the following:

- 1) Strengthen pro-competition sectors that have been losing their

share in the world market;

2) Stimulate development of national technological competence and innovation in the process of production, development of new goods, and modernization of industries;

3) Accelerate the privatization process in order to lower the government deficit and promote the better allocation of resources: reduce the costs of strategic sectors, such as transport and communication, helping Brazil advance in the global economy;

4) Encourage efficiency and high quality of products, and also stimulate investments in sectors of high technology products;

5) Create new comparative advantage sectors through incentives to investments, research and development;

6) Create mechanisms to optimize administrative organization within the companies in order to disseminate innovation, promote more integration between suppliers and clients, develop new technologies, etc.;

7) Promote an aggressive export policy in order to expand the participation of Brazilian products in the world markets;

8) Lower "Brazil cost" through a more equitable fiscal system, reduced labor duties and deregulation of economic activity;

9) Strengthen Mercosul integration.

References

- . Brazil Watch, vol.11, no.25, dec.19,1994 - jan.9,1995
- .CNI, Doing Business with Brazil, 1994
- . The Economist Intelligence Unit 1995, Country Report 3rd quarter 1995
- .Forum Nacional As Bases do Desenvolvimento Moderno, A Nova Insercao Internacional do Brasil, 1993
- .Francoise Simon, Susan Kaufman Purcell, The Impact of Regional Integration on European-Latin American Relations
- .Inter-American Development Bank - Economic and Social Progress in Latin America - 1992 Report
- .IMF, World Economic Outlook, 1995
- .Klaus Esser, Wolfgang Hillebrand, Dirk Messner, Jorg Meyer-Stamer, International Competitiveness in Latin America and East Asia, 1993
- .Luiz C.Bresser Pereira, Vera Thorstensen, From Mercosur to American Integration
- . Mercosul - Revista de Negocios - Mercado do Cone Sul, Ano IV, no.41, out/95
- . Mercosul - Revista de Negocios - Mercado do Cone Sul, Ano IV, no.39 ago/95
- .Office of the United States Trade Representative, 1995 National Trade Estimates Report on Foreign Trade Barriers, 1995
- .OAS Trade Unit, Toward Free Trade in the Americas, 1995
- .Vera Thorstensen, Yoshiaki Nakano, Camila de Faria Lima and Claudio Seiji Sato, O Brasil frente a um Mundo Dividido em Blocos, 1994
- .Werner Baer and Joseph S.Tulchin, Brazil and the Challenge of Economic Reform, 1993
- .The World Bank - IFC, Exporting to Industrial Countries, 1994
- .The World Bank, Latin America and the Caribbean, A decade after the Debt Crisis, 1993
- .The World Bank, International Competitiveness, 1990
- .The World Bank, Technological Development, 1989
- .The World Bank, The New Regionalism in Trade Policy, 1992
- .Trade Integration and Industrial Restructuring - The Case of Mercosur, 1993
- .Competitividade Internacional e Reestruturacao Industrial no Mercosul
- .IDB, Economic Integration in the Americas, 1995