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**Some
considerations
regarding recent
trade policy in
Brazil**

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Guimarães**

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ABBREVIATIONS

BEFIEEX - Export Improvement Commission
NTB - Non-Tariff Barrier
CACEX - Foreign Trade Office
CDI - Industrial Development Council
FIBGE - Brazilian Institute of Geography and Statistics
ICM - Commodities Circulation Tax
IOF - Financial Operations Tax
IPEA/INPES - Institute of Economic and Applied Research/
Research Institute
IPI - Manufactured Products Tax
BCN - Brazilian Commodities Nomenclature
SUDAM - Superintendency for Development of the Amazon
SUDENE - Superintendency for Development of the Northeast
BCD - Brazilian Customs Duty

SOME CONSIDERATIONS REGARDING
RECENT TRADE POLICY IN BRAZIL

1. INTRODUCTION

There is a reasonable consensus that trade policy has contributed to Brazilian industrial development. This is because since the 1950s, it has been used to promote a significant amount of industrialization, and since then foreign trade policy has played an explicit part to one degree or another in global economic development strategy. (1) At the time, its role was limited to making the substitution of imported consumer goods feasible. Subsequently -- during the 1960s -- policy shifted to promoting exports of manufactured goods, though without reducing the levels of protection afforded to areas involved in import substitution (basically the automotive and industrial-infrastructure sectors) established during previous years.(2)

Therefore, in 1957 a value-added tax structure suitable for creating a margin of protection against outside competition was created, which was consistent with the import-substitution process then under way. By the late 1960s, a number of measures ensured the competitiveness of Brazilian manufactured goods abroad (IPI and ICM credit-premiums, income tax exemption on export earnings, preferential interest rates, foreign-exchange administration favorable to exports, etc.), judging by the results shown in a number of studies. (3) Owing to this strategy, there was a heavy industrial concentration in certain markets. Domestic price control with government subsidies was instituted (subsidized credit from the National Bank for Economic and Social Development, BNDES, preferential interest rates and tax exemptions contemplated by the CDI for Brazilian-ownership programs and others). This would guarantee the expansion of domestic sales and make economies of scale feasible in the most highly concentrated industrial sectors.

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- (1) Regarding this aspect, see Tyler (1976) and Tavares (1972), among others.
- (2) For the situation in Brazil, see Skidmore (1975).
- (3) Carvalho and Haddad (1980) summarize studies that estimate the effects of trade policy on Brazilian export performance during the 1960s and the mid-1970s.

Despite a number of arguments about inconsistencies in the use of trade policy during this period, the handling of economic development strategy was undeniably successful: An extensive and rather diversified industrial structure was created in the country, and manufactured products currently make up more than 50% of Brazilian exports.

The approach taken in this study was primarily to evaluate the protection given to industry during the first half of the 1980s. It therefore expands upon Tyler's findings (1983) (1) where he evaluates the degree of protection for Brazilian industry by comparing international prices for 1980-81. He demonstrates the inappropriateness, in the case of Brazil, of using tariffs for measuring levels of protection while arguing that substantial allocational benefits can be obtained should effective protection rates be made uniform. Moreover, reduction of the anti-export bias would lead to an increase in exports with favorable distributive implications (expansion of unskilled labor and decline in poverty).

In this paper we have applied a methodology similar to the one formulated by Tyler, based on 1985 prices. Our results reinforce Tyler's arguments in regard to excessive protection given to certain sectors of Brazilian industry, although to a lesser degree than was the prevailing case in 1980-81. In this regard, results are consistent with the gradual exhausting of certain export-promotion mechanisms noted during the first half of the 1980s and expressed by a negative anti-export bias.

Nowadays, the question of modernizing Brazilian industry so as to ensure Brazil's competitive integration into the international community is being emphasized. The recent New Industrial Policy and tariff reform implemented by the government has an eye toward spurring productive efficiency through foreign competition and technological progress. Along these lines, trade policy must be reformulated in order to reach the goals outlined above.

This study is structured as follows: The second chapter evaluates the protectionist goals for the years 1975, 1980 and 1985. For 1985, a price differential (domestic and foreign) has been used to explain the nominal and effective protection of Brazilian industry while

(1) Tyler (1983).

quantifying tariff redundancy. In addition, export incentives for 1980-85 are summarized and export promotion of Brazilian goods is quantified in chapter 3. Finally, the last chapter sums up conclusions and makes some recommendations concerning economic policy.

2. IMPORT POLICY

2.1 Introduction

In this chapter we will analyze protection against foreign competition obtained by industrial sectors for the years 1975, 1980 and 1985. Common variables are utilized, mainly tariffs and non-tariff barriers.

The evaluation of protection for this period involves empirical problems, since there is no consensus of opinion regarding which measurement reflects the actual degree of protection -- the legal tariff contained in the Brazilian Customs Duties regulations (BCD) or the actual tariff reflecting the ratio between import duty paid and the value of the import. (1) Furthermore, non-tariff barriers (NTB) in Brazil have been a protection tool as effective or more so than tariffs. However, to estimate their importance is especially difficult because the comprehensive use of such barriers may result in varying degrees of impact on trade flows depending on supply situation of the different economic sectors (2). Estimates for 1985 are particularly useful due to the reliable data available on domestic and international price differential for the processing industry. This provides an accurate estimate of the actual protection afforded to the manufacturing industry by a comparison between domestic and international prices.

2.2 Price Comparison

International price comparisons have been emphasized in several empirical studies on foreign trade and industrial organization. From the standpoint of international trade theories, studies traditionally start from the assumption that for similar products domestic prices are the same as the current international ones. The prevalence of this principle is generally based on the prior acceptance of a perfect competitive balance in the international market and is therefore consistent with the restrictive assumption of the small country. According to recent macroeconomic approaches to open economy for the law of one price to be sustained, it must be consistent with the purchasing power

(1) This occurs due to the number of tariff exemptions and reductions.

(2) Deardorf and Stern (1985).

parity theory, thereby suggesting that price changes in a country be offset by shifts in the exchange rate.

Although no consensus of opinion has yet been established on the validity of the purchasing power parity theory, and recent studies in other countries point to the possibility of international market structures under imperfect competition conditions (1), the use of price comparisons has reinforced the notion that the law of one price is valid (2). The utilization of this methodology has also been contemplated in other studies so as to provide a measure of the international competitiveness of individual industries (3).

The main reason for the widespread use of a price comparison approach is that knowledge of the nature of relationships established between national and international prices can be extremely important in formulating economic policies, whether or not the law of one price prevails. The reason is that prices can reflect institutional influences for every country involved in foreign trade, in addition to the usual impact of the balance between commodity supply and demand. Particularly in regard to industrial policy, estimated ratios between internal and external prices are useful for determining the advantages to industrial sectors obtained through protection against foreign competition.

In fact, trade policy distorts external prices and allows the prices of domestic-made goods to move close to those distorted prices. Thus, domestic and foreign prices contracted for in the domestic market tend to be similar whatever the allocation of production factors and the different cost structures practiced in the Brazilian market.

In Brazil, the use of price differentials has been emphasized only as of late, limited to the empirical treatment relative to industry. (4) Due to the lack of price data, earlier studies only dealt with the protectionist effects of tariffs. (5)

(1) Hazlediner (1980).

(2) See in particular Nambiar (1983), Greenhill and Herbolzheimer (1980) and Richardson (1978).

(3) De Vries (1972), Kravis and Lipsey (1971), Weinblatt and Zilberfard (1981).

(4) Tyler (1983) and Braga et.al. (1987) compare the results of protection in a number of studies with those noted through price differentials.

(5) Bergsman and Malan (1971), Neuhaus and Lobato (1971), Kume and Rosa (1981), Braga and Guimaraes (1982).

The first studies in Brazil concerning aspects of the policy protection of industry against outside competition and based on price comparisons were developed by Tyler (1983) and Braga et.al. (1987). In the case of Brazil, this approach is important due to the difference between tariffs provided for under Brazilian Customs Duties (BCD) and tariffs applied in contracting for imported good (the actual tariff is the ratio between import duty paid and imported value).

This situation results from the variety of tariff exemptions and rebates given to imported products used in priority projects involving cooperation between countries (bilateral agreements), regional development projects (SUDAM, SUDENE and others), and those supplementing basic activities for capital accumulation against set political guidelines (increasing the degree of national ownership, CDI, BEFIEEX, drawback and others). As an illustration, in 1985 the base rate for import duties actually paid by the processing industry was 6%, while the legal rate was 22%. The use of tariffs (legal or actual) in studies on protectionism is therefore limited; for this reason, results are somewhat neglected by policy makers. (1)

There are three other no less important characteristics that favor the use of an internal and external price differential. The first is that part of the tariff may be redundant, meaning that it exceeds the level desired for making domestic supply meet demand. Since the tariff structure is designed to a large extent in response to pressures from groups demanding protection against competition, it is reasonable to assume that in some cases when tariffs are set they lose their allocational function with time. The second characteristic is that control of imports has also recently consisted of non-tariff instruments: prohibited imports, protected markets (the 'market reserve,' for example the data-processing law), the law of national similarity, financial operations tax (IOF), and other instruments that are hard to quantify. (2)

(1) Several studies treat this aspect of Brazilian trade policy and summarize the difficulties in estimating the real degree of protection for the domestic economy resulting from tariffs. Of particular interest is Guimaraes (1986).

(2) Guimaraes (1987), Moreira and Araujo (1984).

The third characteristic is that an economic sector can benefit from a favorable pricing policy while at the same time having its profitability affected by other political interferences in the production process. Although for Brazil there are no empirical calculations of the degree of functional imbalance between industrial and foreign-trade policy, there is a certain consensus among business and academic circles in regard to this fact. (1)

With this line of reasoning, the basic idea contained in studies by Tyler (1983) and Braga et al. (1987) is that the differences between internal and external prices for similar products quoted during the same period are representative of the implicit nominal protection on which Brazilian products depend. The value-added tax base obtained from the price differentials can be interpreted as an implicit tariff, which is entirely different from the one provided by law (BCD) or from the actual tariff applied, because it incorporates the whole gamut of policies that are reflected in prices.

Tyler's formula is as follows:

$$T_{\text{impj}} = \frac{PD_j}{PM_j} - 1 \quad (1)$$

where

T_{impj} = implicit tariff

$$PM_j = (PW_j + CF_j) r \quad (2)$$

where

PD_j = domestic price for manufacturer, FOB plant, of product j, excluding IPI and ICM;

PM_j = import price (CIF) of product j, in cruzados;

(1) Carvalho (1985) gives examples of this process in partial support of this argument.

PW_j = "international price" of tradable product j , FOB at some reference point of origin, in foreign currency;

CF_j = Freight and insurance cost, from reference point of origin to Brazilian entry port, in foreign currency; and

r = official exchange rate, defined as cruzados per unit of foreign currency.

This approach agrees completely with the law of one price in the international market. In addition, Tyler extends the basic implicit-tariff formula to incorporate direct subsidies to production (s), obtaining a more generalized measure of implicit nominal protection (P_{impj}) for sales in the internal market, described as follows:

$$P_{impj} = \frac{PQ}{PM_j} (1 \pm S) - 1 \quad (3)$$

Braga et al. (1987) follows the same development as Tyler describes, with one fundamental conceptual distinction: the border price represented by the FOB price of Brazilian exports is used as an international price (PW_j^*), excluding transportation costs and reinforcing the notion that export incentives and subsidies are incorporated into the domestic price. He therefore dispenses with the calculation of implicit nominal protection (P_{impj}) since he computes the effects of export promotion and the subsidizing of domestic activity, into price formation.

In addition, the findings by Tyler (1983) and Braga et al. (1987) should be compared with caution for the reasons given, and also because the latter uses the sophisticated method to calculate effective protection, unlike Tyler. (1) Moreover, in order to make a comparison with tariffs enforced by trade policy, Braga's results must

(1) Lee (1982) and Braga (1987) summarize the methodology of this sophisticated calculation method for effective protection.

be adjusted to the CIF price base, because this is the basis on which customs duties are used as an instrument of protection. The price-vector adjustment should therefore be as follows:

$$T_{impj} = \frac{PD_j}{PW_j r (1 + N_j)} - 1 \quad (4)$$

with N_j being the base rate for international shipment costs that will result in the formation of domestic prices (1), once the PW is defined as the border price.

On the basis of these arguments the rates of nominal and effective implicit protection were (re)calculated using the prices available for 1985 from IPEA/INPES. Unfortunately our figures are not strictly comparable to those of Braga et al. for the at least two reasons. We did not use the sophisticated method of effective protection estimation. Our choice was the traditional method and critique of price differentials was based on the study made by FUNCEX and IPEA in 1987 to harmonize Classifications covering the domestic and international markets.

2.3 CONSTRUCTION OF VARIABLES

a) Implicit Nominal Protection

The main problem in obtaining a vector for implicit nominal protection lies in the requirement that products be homogeneous in order to have their prices compared. This fact can be seen in the 1961 UN study (2), which established substantial differences on the prices of (groups of) commodities classified in 4 and 5 digits by the Standard International Trade Classification (SITC) when exported by different countries. One reason for this result is as stated the need to classify essentially different products, though with similar physical characteristics, under the same SITC heading.

The implicit nominal protection vector constructed has maintained homogeneity among products because the source of data utilized has gathered 1710 pairs of prices from manufacturers who are the ones best prepared to report the prices of their products sold in different markets, ensuring homogeneity among products. (3)

- (1) Along these lines, see Braga & Guimaraes (1982).
 (2) United Nations, 1961, Standard International Trade Classification, revised (NY), Statistics Papers, series M, no. 34.
 (3) The set of price differentials envisioned by Tyler (1983) has a different price-appropriation system.

We have therefore constructed 1710 implicit nominal protections and have grouped them according to the BCN (Brazilian Commodities Nomenclature) product classification into 790 8-digit items, which is the finest product breakdown for this classification. It was therefore possible to make these (groups of) products consistent with sectors of the FIBGE Intersectorial Relations Matrix (1975), and to express nominal implicit protection for these sectors (j) through simple averages. (1)

In formal terms, the implicit nominal tariff vector has been constructed at product level (i) as follows:

$$T_{\text{impi}} = \frac{PD_j}{PW_i * j} - 1 \quad (4a)$$

$r(1+N)$

where

PD_j = price, FOB plant, received by producer net of IPI and ICM, quoted in cruzeiros on June 1, 1985, for product i of sector j;

r = official cruzeiro/dolar exchange rate on June 1, 1985; —

PW_i = international price of product i rounded off to FOB export price in dollars, quoted on June 1, 1985, for sector j;

N = base rate of shipping cost for product i, sector j.

The 1710 pairs of prices that form implicit nominal protections for the 105 industrial sectors have been obtained for internationally tradeable products, to ensure their usefulness in calculating effective protection.

b) Tariff Protection

The actual tariff vector -- import duty actually paid -- has been prepared by averaging the ratios between duty paid and the taxable amount of imported commodities for the

- (1) Domestic prices of tradeable products, cattle and farm goods have been considered as highly sensitive to international prices quoted on the main commodities exchanges abroad. This consideration is backed up by evidence that these prices vary considerably in view of the inelastic offer of these products.

years 1975, 1980 and 1985. This is, therefore, the value-added base for the import duty paid for contracting the imported commodity. In addition, we have provided a legal tariff vector taken from base rates as given in Brazilian Customs Duties (BCD) for almost 11,000 items and for these same years. The construction of this vector has been based on the calculation of the simple average for industrial sectors, these sectors were then weighted on the basis of 1975 output for estimates by type of industrial good.

c) Shipping Cost

The value-added base rate for shipping cost (N) has been computed as the relevant increment to the domestic price resulting from this charge.

$$N = \frac{\text{CIF cost} - \text{FOB cost}}{\text{FOB cost}} \quad (5)$$

Base rates for shipping cost have been obtained for tradeables (8 digits in BCN) from two different sources. Special consideration was initially given to shipping cost estimates furnished by companies reporting on prices that were part of the IPEA/INPES study. For those products with no available data, an estimate has been made of the incidence of international shipping cost by means of the respective difference between the CIF and FOB costs as given in the Brazilian Foreign Trade Yearbook (CACEX, 1985) (1)

2.4 CHANGES IN PROTECTION 1975-85

Import trade policy resulting from global economic development strategy has undergone significant modifications. Foremost among them has been the value-added tariff structure created in 1957, and subsequently changed over the years. Brazilian government activities have contributed to these changes. Beginning in the mid-1960s, it has expanded its role in business to where today it is responsible for some 70% of gross capital formation, while in the 1970s it began an ambitious investment program for the domestic production of basic raw materials and capital goods.

(1) This measurement was originally suggested by Beckerman (1956) and has been used in a number of empirical studies on shipping cost. By construction the two sources of data include freight and insurance for internationally tradeable commodities. For Brazil, this yardstick was used by Braga & Guimarães (1982) to compute overall effective protection.

As part of this strategy, a number of inputs saw their tariffs raised by as much as 100% during 1974-75; subsequently, an advance deposit, for a 360-day period, of value equal to the commodity, was created, and lasted until 1979. During this time import controls were tightened by means of non-tariff barriers. Expectations were that in view of the economic vulnerability caused by the oil crisis the economy would come to depend less on a group of goods produced abroad for which international prices were rising.

Along this line of reasoning, Table 1 contains evidence of the control policy for importable products through tariffs for 1975 to 1985. It has been prepared on a basis of actual imports to show the relevance of special regimes that provide exemptions or reductions in the legal tariff in contracting for imported commodities by type of industry. We can see that for the years in question the ratio between the legal and actual tariffs was reasonably constant for the processing industry (actual tariffs at 65 to 70% of the legal tariffs). Such figures suggest a certain rigidity of access to the special arrangements and show that reducing the legal tariff for the period has led to a similar reduction in the actual tariff. An evaluation at a further level of detail shows that the greatest differences have normally occurred for goods in the area of metallurgy, mechanical equipment, transport equipment, wood products, furniture, leather goods and food. Despite this contradictory aspect of trade policy it is interesting to observe that in regard to goods with a high rate of social return, the difference between the legal and actual tariff is generally high, favoring the actual tariff in detriment to the legal one. (1)

It is also important to note that tariff exemptions and reductions require bureaucratic procedures that involve costs payable to public agencies while requiring companies to have specialized personnel for such work. Although it is difficult to calculate these costs in order to add them to the actual tariff as would be desired, it is reasonable to assume that actual tariffs are underestimated.

Table 2 shows the frequencies and coverage for NTBs, specifying commodities by BCN item and the value of controlled imports, respectively, for 1975-84. The methodology adopted does not include restrictive acts that indiscriminately affect every product, such as the import quota for the Manaus Free Trade Area, the Law of National Similarity, Data-processing Law, etc.

(1) Moldau (1986) estimated the cost of domestic resources for export by type of industrial good.

Table 1
Legal and Actual Tariffs Applied to Imports
by Type of Industrial Good (1) 1975-1980-1985

by %

Code	Item - FIBGE	1975			1980			1985		
		Legal	Actual	Diff.	Legal	Actual	Diff.	Legal	Actual	Diff.
10	Non-metallic Minerals	36.46	14.95	21.51	46.38	28.57	17.81	35.00	23.07	11.93
11	Metallurgy	31.48	3.73	27.75	35.45	3.97	31.48	23.82	3.49	25.33
12	Mechanical Equipment	37.14	19.87	17.27	51.64	29.74	21.90	58.26	15.65	34.61
13	Electrical Equipment	42.89	26.06	16.83	60.15	23.93	36.22	52.27	23.42	28.85
14	Transport Equipment	44.25	11.40	32.85	66.13	7.13	59.00	59.24	3.29	55.95
15	Wood Products	58.26	11.16	47.10	31.02	10.68	20.34	48.00	5.65	42.35
16	Furniture	45.23	16.73	28.50	54.15	37.09	17.06	50.72	26.28	24.44
17	Paper	31.22	10.52	20.70	41.91	22.14	19.77	41.19	26.70	14.49
18	Rubber Products	29.86	18.75	11.11	29.50	21.07	8.43	29.20	9.04	20.16
19	Leather Product	47.77	11.89	35.88	53.22	14.97	38.25	46.94	10.90	36.04
20	Chemicals	7.66	2.21	5.45	6.21	2.04	4.17	4.49	2.48	2.01
21	Pharmaceuticals	22.24	16.04	6.20	29.01	20.82	8.19	28.77	22.85	5.92
22	Perfumes, Soaps	36.13	20.26	15.87	49.87	17.83	32.04	42.20	22.83	19.37
23	Plastics	42.78	20.29	22.49	44.67	23.14	21.53	43.71	23.88	19.83
24	Textiles	34.79	12.28	22.51	44.13	21.93	22.20	44.84	16.61	28.23
25	Clothing, Footwear	75.58	12.29	63.29	91.64	15.62	76.02	75.33	3.10	72.23
26	Food	52.07	11.65	40.42	44.67	7.66	37.01	35.88	6.50	29.38
27	Beverages	38.64	30.47	8.17	29.11	16.32	12.79	22.59	13.82	8.77
28	Tobacco Products	47.72	39.25	8.47	52.60	48.20	4.40	34.75	33.63	1.12
29	Printing	30.33	12.03	18.30	19.78	4.84	14.94	22.37	5.54	16.83
30	Other Industry	36.24	21.93	14.31	39.71	25.64	14.07	34.99	12.89	22.10
	Processing Industry	24.32	8.46	15.86	21.08	6.59	14.49	18.39	5.68	12.71
	Other	42.88	9.17	33.71	39.43	7.05	32.38	39.07	6.17	32.90
	Total	28.32	8.62	19.69	24.65	6.68	17.97	22.15	5.77	16.38

SOURCE: Brazilian Foreign Trade Yearbook: CACEX Imports, 1975-1980-1985
(1) Based on Import Value

Table 2
SHARE OF TOTAL IMPORTS (VALUE) AND NO. OF PRODUCTS WITH NON-TARIFF BARRIERS (NTB) - 1975-80-84 (*)

Code	Item - FIGE	1975		1980		1984	
		BCN WITH NTBs (1)	IMPORTS WITH NTBs (2)	BCN WITH NTBs (3)	IMPORTS WITH NTBs (4)	BCN WITH NTBs (5)	IMPORTS WITH NTBs (6)
01	Vegetable Extract	5.67	53.23	0.52	-	92.20	30.66
02	Farm Products	3.12	68.47	15.62	95.15	88.54	100.00
03	Farming and Cattle Raising	8.62	53.67	12.00	2.11	95.50	47.09
05	Non-metallic Mineral Mining	1.44	0.57	6.90	0.54	13.51	0.87
10	Non-metallic Mineral Prods.	-	-	33.33	11.14	77.45	49.07
11	Metallurgy	23.33	100.00	51.49	98.42	53.95	23.04
12	Mechanical Equipment	0.30	0.74	13.02	21.96	33.70	19.92
13	Electrical Equipment	1.96	2.10	19.52	36.35	90.46	58.02
14	Transport Equipment	0.35	0.55	20.91	2.59	60.62	26.76
15	Wood Products	-	-	-	-	98.00	87.83
16	Furniture	-	-	9.38	2.49	100.00	100.00
17	Paper	1.10	1.37	19.78	1.15	1.15	20.27
18	Rubber Products	6.20	39.69	3.45	0.04	81.63	26.46
19	Leather Products	-	-	17.64	16.49	17.12	0.21
20	Chemicals	1.75	17.82	4.32	25.47	18.17	41.38
21	Pharmaceuticals	0.56	1.31	3.37	4.16	22.47	21.64
22	Perfumes, Soaps	-	-	9.09	1.62	92.77	24.29
23	Plastics	-	-	69.15	2.67	92.55	83.88
24	Textiles	0.48	0.00	64.61	66.75	99.28	92.27
25	Clothing, Footwear	-	-	65.25	50.84	90.50	18.58
26	Food	0.95	5.70	52.45	42.71	94.30	19.71
27	Beverages	7.32	12.50	70.74	17.35	65.86	0.02
28	Tobacco Products	-	-	88.89	6.65	16.67	0.01
29	Printing	-	-	10.91	0.21	74.55	2.20
30	Other Industry	1.64	1.02	20.81	12.58	70.65	20.88
	Processing Industry	3.66	18.33	21.49	23.43	55.66	17.88

* NTBs considered are only those that specify the product classified by the BCN: Quota System, contingencies, reference price, minimum value, suspended imports, prior authorization from a trade organization, technical barrier, etc.

SOURCE: Guimaraes et al. (1987).

It is clear that the political intent to restrain imports in Brazil through the NTBs grew considerably during the period under study. In 1975, the NTBs affected some 3.6% of BCN products, while by 1984 this percentage climbed to 55.6%. On the other hand, the value of imports with non-tariff restrictions (NTB) increased only 5% between 1975 and 1980, and in 1984 returned to the 1975 level. These results suggest that a more effective control using NTBs does not depend on the scope of legislative acts.

The intent, in 1980, to control imports by using non-tariff mechanisms was emphasized for tobacco products (89% of BCN items for this type of good), plastics (69%), textiles (65%) food and beverages (70%). In 1984, items involving farming and livestock, transport equipment, wood products and pharmaceuticals were added to this group. No decline in the government's intention to control imports with NTBs could be seen for any industrial product. However, evidence shows that imports might have been rechanneled goods free of NTBs, or perhaps importable products also under NTBs already had sufficient internal supply, and required this control mechanism to a lesser extent.

It is interesting to observe that the rank correlation between the frequency indexes for 80 and 84 is not statistically significant, suggesting an extremely diversified use of this instrument. However, the correlation between coverage indexes for the same period is 83.4%. These results can be explained by the need to restrain imports due to the foreign-exchange crisis, applying NTBs to different degrees by type of industrial good, since this mechanism was less transparent and did not hamper negotiations with the IMF that were underway at the time. (1)

(1) Silva and Horta (1984).

2.5 IMPLICIT TARIFF IN 1985

Table 3 shows calculations of the nominal implicit tariff as explained in section 2.3. Its composition at the industrial-good level has required that average values for sectors in each group be weighted by national output values in order to express the actual degree of nominal protection intended for the domestic industrial structure. Results suggest that some sectors are extremely competitive from the standpoint of supply, since profitability obtained in the international market vis - a - vis that in the internal market is higher for manufactured products involving the following industries: wood products (implicit protection -18.0), paper and board (-1.42), food (-30.84), beverage (-42.63), tobacco (-66.33) and printing (-14.24).

The implicit nominal tariff, because it naturally includes the influence of trade and industrial policies expressed in prices, cannot be accurately analysed from the standpoint of international competitiveness factors. Nevertheless, these results no doubt reinforce the notion that industrial sectors for which implicit tariffs are negative need no conventional protection against outside competition, seeing that their domestic prices, converted to the exchange rate, are lower than those in the international market, even considering that many domestic prices are maintained beneath the prevailing international prices by government agencies.

The highest implicit nominal tariffs are for electrical and communications equipment (41.0%), pharmaceuticals (31.0%), rubber products (48.0%), plastics (109.0%), textiles (34.0%) clothing and footwear (62.02%), chemicals (38.0%) and other industry (48.2%).

We can also see that the previous intent to protect Brazilian industry, reflected by the nominal tariffs based on legal provisions (BCD) was stronger than the one afforded by implicit protection. Tariff redundancy, measured by the difference between the legal and implicit tariff, is found for every good except plastics (1). The greatest redundancies occur in traditional sectors such as tobacco products (165.3%), beverages (140.0%), food (86.3%), furniture (85.0%), perfumes and soap (85.9%), and leather

(1) The method for calculating tariff redundancy is found in Wogart and Marques (1984), and Kume and Patricio (1988). It basically consists in the difference between implicit and legal tariffs.

Table 3
ESTIMATED NOMINAL PROTECTION AND TARIFF REDUNDANCY
BY TYPE OF INDUSTRIAL GOOD - 1985

Code	Item - FIBGE	Implicit Tariff	Legal Tariff	Redundancy	Transport Cost
10	Non-metallic Minerals	16.68	58.58	41.84	24.21
11	Metallurgy	19.46	48.35	28.89	15.40
12	Mechanical Equipment	13.89	53.58	39.69	17.10
13	Electrical Equipment	41.42	71.11	29.69	15.67
14	Transport Equipment	7.94	76.84	68.90	9.83
15	Wood Products	-17.80	74.40	92.20	32.00
16	Furniture	17.96	103.36	85.40	34.37
17	Paper	-1.42	58.23	59.65	10.14
18	Rubber Products	48.27	75.22	26.95	11.57
19	Leather Products	16.70	93.50	75.80	9.00
20	Chemicals	38.03	40.55	2.52	22.03
21	Pharmaceuticals	30.90	53.00	22.10	11.10
22	Perfumes, Soaps	1.10	87.00	85.90	47.90
23	Plastics	108.73	94.50	-14.23	14.98
24	Textiles	34.94	98.59	63.65	14.43
25	Clothing, Footwear	62.02	79.85	17.83	9.72
26	Food	-30.84	55.46	86.30	42.31
27	Beverages	-42.63	97.72	140.35	60.29
28	Tobacco Products	-66.33	99.00	165.33	58.00
29	Printing	-14.24	35.17	49.41	17.43
30	Other Industry	48.20	95.00	46.90	24.00
Processing Industry		9.99	60.69	50.70	25.19

SOURCE: Statistical Appendix, Table 1

NOTE: Data regarding goods was obtained using the average production value for 1975 of sectors pertaining to each type of good, from Braga et. al. (1987).

products (76.0%). These data illustrate the distorted nature of the tariff structure for this year and suggests the need to establish a proper balance between policies directed toward domestic sales and the foreign trade policy.

In Table 4 sectors have been grouped by use category. When tariff redundancy rates are ranked in order, we have consumer goods (96.8%), followed by capital goods (45.9%) and intermediate goods (38.9%).

The fact that tariff redundancy is the highest for the non-durable consumer goods category is understandable because the tariff structure was created in 1957 with the idea of substituting imports of such goods, and it has remained in force ever since. It has been constantly changed, generally by adding surtaxes, while tariff reductions observed throughout the years have been sparse and affecting few products.

Based on the Spearman rank correlation, one can also see a slight correlation between the sectorial ranking of legal and implicit tariff (coefficient of 0.19). Although nothing can be affirmed in regard to the adjustment of implicit nominal tariffs to fit the current Brazilian industrial structure, from the standpoint of political rationality the results are indicative of the need for greater integration between domestic pricing policy and trade policy. Furthermore, based on the results, it is recommended that tariffs be lowered without prejudice to the levels of implicit tariffs noted, placing the tariff structure more in line with current protection standards. This argument is reinforced by the fact that transport cost base rates are too high for certain industrial goods. Although this cost is not a variable that can be easily controlled by policy, awareness of it will nevertheless allow tariff base rates to be more accurately calibrated.

TABLE 4

ESTIMATED NOMINAL PROTECTION AND TARIFF REDUNDANCY

BY USE CATEGORY - 1985 (1)

USE CATEGORY	IMPLICIT TARIFF	LEGAL TARIFF	% REDUNDANCY
Capital Goods	13.02	58.93	45.91
Intermediate Goods	16.4	55.3	38.9
Semi-manufactured goods	-15.3	51.83	67.13
Basic Inputs	30.84	45.63	14.79
Other	11.43	64.53	53.1
Consumer goods	-19.01	77.80	96.81
Durables	2.4	102.89	100.49
Non-durables	-23.7	72.4	96.1
Processing Industry	9.99	60.69	50.7

Source: Statistical Appendix, Table 1

Note: Data regarding goods were obtained on the basis of averages weighted by the 1975 output value for sectors pertaining to each item.

2.6 EVIDENCE OF EFFECTIVE PROTECTION IN BRAZIL - 1985

The usual formula for effective protection results in a ratio or coefficient that expresses the proportion of added value generated in a productive process owing to the existence of a protection structure versus the added value obtained in free trade.

The measure of implicit effective protection (G_{impj}) can thus be expressed as follows:

$$G_{impj} = \frac{T_{impj} - a_{ij} T_{impi}}{1 - a_{ij}} \quad (6)$$

where a_{ij} represents the technical coefficient of inputs corrected for free trade.

The results of estimating effective protection for 1985 are shown in Table 5, grouped by type of industrial good (FIBGE results at core-sector level -- 5 digits -- are given in the statistical appendix). Effective implicit protection for the processing industry was 8.12%, and -14.81% for agriculture and extractive industries. Strictly from the viewpoint of foreign trade policy, consisting of non-tariff barriers and tariffs for the processing industry, results indicate a marked gap between effective protection and the respective legal tariff. This reinforces the arguments by Tyler (1983) and Braga et al. (1987) concerning the inappropriateness of using tariff vectors to calculate effective protection.

Implicit effective protection is negative for nine industrial goods. The most-protected goods were plastics (490.45%), clothing, footwear and woven goods (47.6%), rubber products (102%) and electrical/communication equipment (81.38%).

The Spearman correlation coefficient between implicit and legal effective protection is 15.3%. This means that the package of protectionist measures together with domestic policies offer a profile of effective protection that differs from the underlying intentions of tariff policy. On the other hand, rank correlation measurements between nominal and effective tariffs are 80.0% and 82.2%, respectively, for implicit and legal tariffs, evidence that nominal protection is a good indicator for guidelines regarding resource allocation.

TABLE 5
ESTIMATED IMPLICIT AND LEGAL EFFECTIVE PROTECTION - 1985
BY TYPE OF INDUSTRIAL GOOD (*)

Industrial Goods - FIBGE		Effective Protection	
Code	Type	Implicit	Legal Tariff
10	Non-metallic minerals	-13.23	77.35
11	Metallurgy	16.81	95.89
12	Mechanical Equipment	-0.83	52.23
13	Electrical Equipment	81.38	110.84
14	Transport Equipment	13.07	104.83
15	Wood Products	-14.40	57.80
16	Furniture	-9.57	228.51
17	Paper	-15.35	86.06
18	Rubber Products	101.96	142.57
19	Leather Products	17.96	120.35
20	Chemicals	37.92	101.55
21	Pharmaceuticals	39.61	57.45
22	Perfumes, Soap	5.65	156.55
23	Plastics	490.45	360.13
24	Textiles	17.28	105.06
25	Clothing, Footwear	47.60	72.53
26	Food	-53.78	141.97

27	Beverages	-76.87	122.96
28	Tobacco Products	-112.05	154.17
29	Printing	-20.37	39.54
30	Other Industry	82.29	153.29

	Processing Industry	8.12	78.44
	Agricultural and Extraction Industries	-14.81	2.85

(*) Does not include sectors with negative free trade value-added figures.

Source: Statistical Appendix, Table 2

3. EXPORT POLICY IN BRAZIL

3.1 INTRODUCTION

The policy of promoting exports of manufactured goods in Brazil was first implemented in the late 1960s and resulted in some rather diversified instruments and mechanisms. This is due to the constant changes in foreign-trade policy, reflecting the ongoing importance of maintaining this policy suitable to economic development strategy.

Nowadays there are some 25 promotional instruments and mechanisms for exports, basically consisting of duty and tax exemptions. Generally speaking, they can be grouped into tax breaks, financial incentives, the drawback regime and the BEFIEX system. The following sections give a summary of the materialization of these incentives, using available data to quantify the incentive rates intended for export operations. Lastly, we offer some additional considerations concerning export policy during the first half of the 1980s, on the basis of calculations of anti-export bias.

3.2 THE BEFIEX PROGRAM

Among all the programs intended to spur Brazilian exports that sprang up early in the 1970s, BEFIEX turned out to be

one of the most important. Not only because of its initial concept and the export incentives regulated by Decree Law 1219 (1972), but especially due to the irrevocable nature of the incentives granted to business. What made these incentives irrevocable was the fact that companies linked their exports to the BEFIEEX program (for a maximum term of 10 years) so as to obtain import duty relief. Such a norm is based on incentive rules in effect for the entire export sector for the duration of a contract between the company and BEFIEEX.

In this regard, the lack of data affects reliable evaluations of incentives granted by the BEFIEEX program. From the quantitative standpoint, one must therefore add duty and tax exemptions on to imports to the export-incentive legislation (IPI and ICM credit-premium, reduction of the basis for calculating taxable profit obtained from exports, etc.) in effect at the time the agreement was made.

Table 6 shows estimated incentive rates included in the BEFIEEX program solely for imports. These figures must be taken with caution not only due to the fact that they do not include direct incentives to the formation of export prices, but mainly because tax and duty-exempt imports call for export commitments of up to 10 years, which limits the annual comparativeness of data.

We can see by this table that the incentive rate (gross or net) dropped considerably during the first half of the 1980s (a 55% decline for the net rate and 31.2% for the gross rate). Although this fact is important from the standpoint of quantifying export incentives, it does not invalidate the notion that the incentives in the BEFIEEX system are basically for importing of capital goods and raw materials.

Table 7 also gives shares of exports linked to the BEFIEEX program out of total exports, along with the inclusion of the transport sector in this program. The figures in this table indicate that throughout the years, exports linked to the BEFIEEX program gained an increasingly higher share of total exports of manufactured goods while transport equipment showed a decreasing share.

When these results are compared with those in Table 8, which presents the number of BEFIEEX program contracts initiated, they further reinforce the idea that duty exemptions for machinery and raw-material imports linked to the BEFIEEX program are yet another stimulus to the

TABLE 6
BEFIEEX PROGRAM, FEE AND TAX EXEMPTIONS
& EXPORT INCENTIVE RATE, 1980 TO 1985

US\$ million

YEAR	Imports BEFIEEX (1)	Exports of Manufacture Goods		Exemptions		Incentive Rate %	
		Total (2)	Linked (3)	Duty (4)	Taxes (5)	Net (4)+(5)/(2) (6)	Gross (4)+(5)/(3) (7)
1980	549.39	9,027.60	1,793.30	384.57	40.83	4.71	23.72
1981	1,247.20	11,883.80	2,581.10	803.87	100.27	7.61	35.03
1982	683.18	10,242.90	2,342.60	459.99	57.23	5.04	22.08
1983	412.06	11,275.70	2,934.40	293.30	33.77	2.90	11.15
1984	549.00	15,131.50	3,972.30	352.67	44.90	2.63	10.27
1985	566.71	14,062.80	4,851.40	313.85	47.19	2.57	7.44

SOURCE: BEFIEEX Executive Secretary and Secretariat of Federal Revenue
(Statistical Appendix, Table 3).

TABLE 7
 EXPORTS OF MANUFACTURED GOODS & GOODS LINKED
 TO BEFIEK PROGRAM, 1974-85 (US\$MILLION) - PERCENTAGE

YEAR	BEFIEK				% Transport Equipment Exported by BEFIEK Program (5)
	Mfg. Goods (1)	Total (2)	Transport Equipment (3)	% BEFIEK in Export Mfg.Goods (4)	
1974	2262.70	212.50	212.50	9.36	100.00
1975	2584.50	335.10	332.90	12.97	99.34
1976	2776.20	456.30	431.00	16.44	94.46
1977	3839.60	655.30	568.30	17.07	86.71
1978	5082.80	865.10	736.20	17.02	85.10
1979	6645.00	1118.90	884.20	16.83	79.02
1980	9027.60	1793.30	1290.70	19.86	71.97
1981	11883.80	2581.10	1885.80	21.72	73.06
1982	10252.80	2342.60	1492.80	22.80	63.72
1983	11275.70	2934.40	1486.60	26.02	50.64
1984	15131.50	3872.30	1802.60	25.60	46.55
1985	14062.70	4851.40	2162.20	34.50	44.57

SOURCE: BEFIEK Executive Secretary and Statistical Appendix Table 7

TABLE 8
NUMBER OF BEFIEX CONTRACTS BY TYPE OF INDUSTRIAL GOOD, 1972-1985

Code	INDUSTRIAL GOOD Classification	YEAR														TOTAL	
		1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985		
10	Non-metallic Minerals																
11	Metallurgy							1	3	2	4	7	1	3	9		38
12	Mechanical Equipment					1		1	1	3	3	16	3	3	3		34
13	Electrical Equipment			1			1		1	3	3	2	2	5	1		19
14	Transport Equipment	2	2		2	4	1	1	2	6	4	15	5	4	3		51
15	Wood Products																
16	Furniture																
17	Paper																
18	Rubber Products																
19	Leather Products																
20	Chemicals									1		5				1	7
21	Pharmaceuticals									1				3			4
22	Perfume, Soaps																
23	Plastics																
24	Textiles		1	2	1	1	2	1	3	7	9	3	3	4	9		46
25	Clothing, Footwear							1	1	2	1	9	5	12	6		48
26	Food				1	3		1	1			1		2	1		19
27	Beverages																
28	Tobacco Products																
29	Printing																
30	Other Industries					2	1	4	4	10	11	21	8	7	9		75
	Processing Industry	2	3	3	4	11	5	10	16	35	35	77	25	41	44		316

SOURCE: BEFIEX Executive Secretary and R. Bauwain (1986).

competitiveness of businesses in the national and international markets. Judging by the growing number of contracts, it is reasonable to assume that on a sectorial level when a company joins the BEFIEX program or expands its activities within the program it carries others along in a chain reaction as at results of competition among them.

Thus, of the 316 contracts signed by the processing industry, 16% (51 contracts) pertained to transport equipment, mainly in the 1980s (37 contracts). Beginning in 1980, this concentration was also noted in the chemical, petrochemical and pharmaceutical sectors.

In keeping with these characteristics, the transport-equipment industry continues to occupy an outstanding position in BEFIEX. Table 9 gives percentages taken from the consolidated balance sheet for this industry within BEFIEX, showing it to account for 60% of cumulative exports for 1972-85. When the global balance for BEFIEX is considered, the transport industry's share was 66%.

Although this evidence is descriptive, it reinforces the belief that BEFIEX has spurred the expansion of Brazilian exports. This success enjoyed by the transport-equipment industry has been echoed by other industries, resulting in efficiency gains for those companies involved.

The reason is clear: The advantage of this instrument as a means of stimulating exports consists of the differentiated access to foreign machinery and raw materials that can make Brazilian products more competitive. When the technological gap between Brazil and the rest of the world is reduced (or widened), it is reasonable to assume that the BEFIEX program will contribute less (or more) to Brazilian exports. Along these lines, import duty exemptions for goods committed to export under BEFIEX management are a good example of a powerful stimulus to modernizing the national productive structure while contributing more and more to the Brazilian trade balance. Evaluation of the contribution made by this instrument as of the 1980s sure would need more reliable data, including abstraction of incentive (credit-premium, for example) granted to BEFIEX companies, which is impossible in principle due to the lack of data.

TABLE 9
 BASIC INDICATORS OF (TOTAL) PERFORMANCE BY BEFIEX
 AND BY TRANSPORT EQUIPMENT INDUSTRY *
 (LINKED TO PROGRAM), 1972-1985

YEAR	Exported Value (US\$ millions)		Trade Balance (US\$ millions)		Global Balance/ Value Exported		Capital Goods Imports Value Exported		Raw Material Imports/ Value Exported	
	Total (1)	Transport Equipment Industry (2)	Total (3)	Transport Equipment Industry (4)	Total (5)	Transport Equipment Industry (6)	Total (7)	Transport Equipment Industry (8)	Total (9)	Transport Equipment Industry (10)
1972	2.3	2.3	(9.6)	(9.6)	(378.8)	(378.8)	74.4	74.4	-	-
1973	69.7	69.7	(100.3)	(99.1)	(97.1)	(106.1)	51.6	50.6	5.8	5.8
1974	212.5	212.5	(71.7)	(70.1)	(31.7)	(33.9)	4.8	4.5	9.9	9.9
1975	335.1	332.1	63.0	65.4	7.6	3.2	3.1	1.8	4.4	4.4
1976	456.3	431.0	174.3	157.4	64.3	53.3	4.4	1.6	20.6	21.7
1977	555.3	568.3	348.2	272.3	76.2	58.7	3.2	1.0	25.8	29.4
1978	865.1	736.2	222.0	386.9	76.2	55.2	36.7	2.2	21.0	24.3
1979	1,118.9	884.2	646.0	578.8	73.7	67.2	15.6	3.3	17.3	21.1
1980	1,793.3	1,290.7	1,068.2	709.7	83.4	75.5	12.7	12.9	14.7	19.4
1981	2,581.1	1,885.8	1,188.2	1,301.0	92.2	88.3	34.2	6.1	11.5	13.6
1982	2,342.6	1,492.8	1,030.9	1,014.1	76.4	74.7	31.3	4.9	9.7	12.6
1983	2,395.4	1,486.6	2,109.9	1,027.1	72.9	77.4	6.5	5.2	9.3	12.0
1984	3,872.3	1,802.6	2,864.8	1,249.9	73.4	65.6	4.1	4.6	8.2	12.1
1985	4,851.4	2,162.2	3,603.0	1,513.2	63.1	60.3	2.3	2.4	8.0	12.3
Total (72/85)	22,091.6	13,357.8	13,137.0	8,096.9	71.8	65.9	13.1	5.1	11.1	15.2

SOURCE: BEFIEX Executive Secretary and Statistical Appendix, Table 6.

(*) Values between parenthesis negatives.

3.3 DRAWBACK ARRANGEMENT

The so-called 'drawback' arrangement for export promotion has become a stimulus to export performance because it offers the same competitive conditions to the Brazilian exporter as to foreign competitors. It is basically utilized by firms that require imports as part of their exported products. Exports stemming from a drawback arrangement result in net earnings of foreign currency, since the share of imported components computed in the value of an exported product is limited to 30%.

The export-promotion regime embodied in the drawback mechanism was in fact one of the first incentive regulations available in the Brazilian export sector. It originally came into being through Law 3244 (Aug. 14, 1957), though it did not go into effect until June 16, 1964, with Decree Law 57,964. Subsequent changes in the law are significant, especially in regard to specifying which commodities may apply for this export stimulus. (1)

Table 10 quantifies tax and duty exemptions and has been prepared on a basis of two sources of data. The first was the Federal Revenue Service, whose records show the waiver of import duty, excise tax (IPI) and the Sales Tax (ICM). The second was Baumann (1987), who, in addition to these incentives, calculated relief from the Harbor Improvement Tax, the Added Tax on Freight for Merchant Marine Renovation, handling fees, and the financial operations tax, to determine global incentive rates.

We can see that the incentive rate granted by the drawback program during the 1980s remained reasonably stable (at around 9.0%), thus emphasizing the importance of this program to export promotion. Furthermore, statistics on exports carried out under the drawback arrangement are available only for 1983 and onwards. (2) In 1984, drawback exports were approximately \$5.538 billion, and \$6.198 billion for 1985. A net gain of \$4.327 billion in 1984 and \$4.756 in 1985 was achieved through this arrangement.

To acquire these net foreign exchange earnings required a waiver of import duty (II), IPI, ICM and others.

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- (1) Operational and legislative aspects of the drawback arrangement are described in Castro (1985).
- (2) CACEX began keeping a record of exports carried out under the drawback arrangement only in mid-1983; for previous years, exports figures refer to export licenses only.

TABLE 10
DRAWBACK REGIME, TAX AND DUTY EXEMPTIONS
AND EXPORT INCENTIVE RATE, 1980 to 1985

YEAR	Regime 06 Drawback (Exemption)			Regime 07 Drawback (Suspension)			Other Exemptions *	Total Exemptions (a)	Incentives Rate (%) (a/Exports of Mfg.Goods)
	Imports	Import Duty	IPI-ICH	Imports	Import Duty	IPI-ICH			
	US\$ millions								
1980	134.76	51.47	4.29	765.25	399.75	67.17	289.83	812.50	9.0
1981	172.58	56.75	5.87	1,049.72	529.25	83.06	441.67	1,117.10	9.4
1982	140.67	52.08	5.13	1,133.83	613.78	97.07	287.94	1,056.00	10.3
1983	103.40	33.20	2.65	850.33	562.94	103.03	267.88	969.70	8.6
1984	231.52	66.68	3.56	979.78	601.71	104.76	560.29	1,337.00	8.4
1985	218.81	55.53	4.33	1,223.11	613.26	115.14	491.44	1,279.70	9.1

(*) Calculations based on Baumann (1987).

SOURCE: Baumann (1986), Foreign Trade Yearbook and Secretariat of
Federal Revenue (Statistical Appendix, Table 3).

For 1984 and 1985, the figures in Table 10 show that incentives totaled \$1.337 billion and \$1.280 billion, respectively, or 30% of net foreign exchange earnings. We may assume that these export supply incentives were necessary in order to favor external adjustment, to the detriment of public revenues.

3.4 DUTY EXEMPTION BASED ON EXPORT INCREASES

Another type of export incentive consists of exemptions on import duties and taxes based on a company's increasing exports. Therefore, if for the period $t + 1$ company exports are higher than for period t , the firm may claim duty and tax exemptions for imports that have been previously listed by the government. Judging by figures shown in Table 11, this method was not a significant export stimulus.

TABLE 11
IMPORT INCENTIVES BASED ON EXPORT INCREASE

		1980 - 1985			\$ million
Year	Imports	Exemptions		Incentive Rate (%)	
		Import Duty	IPI - ICM	Mfg. Good Export Exempt.	
1980	94.82	57.20	6.55	0.10	
1981	59.46	36.60	4.15	0.30	
1982	38.78	22.43	2.69	0.20	
1983	14.66	8.70	1.42	0.09	
1984	8.44	4.81	0.60	0.04	
1985	16.90	7.96	1.15	0.06	

Source: Federal Revenue Service, Ministry of Finance.

3.5 FINANCIAL INCENTIVES

Incentives in terms of preferential credit to exports are currently very slight in the opinion of CACEX directors, who are seeing few requests for this type of incentive. The

first regulation regarding this type of incentive was Central Bank Resolution 71 (1967), whereby any commercial bank could obtain funds from monetary authorities at real interest rates of 4% per annum for loans to the export sector while charging 8% annually.

During the mid-1970s, the need to increase exports to adjust the balance of payments led the government to increase its financial incentives. Later on, export subsidies were to be lowered because of the stabilization plan adopted by agreement with the IMF.

Early in 1984, the subsidy implicit in the preferential credit given to exports showed a downturn on the basis of Resolution 882/883, which replaced Resolutions 674/643, returning the real interest rate charged to exporters on this credit line into a positive item (interest rate of 3% p.a. plus monetary correction).

In August of that same year, Resolution 950 substantially altered the financing system for exporters. Ever since 1967, financing had come from monetary authorities at pre-set rates. With this Resolution, financing began to involve commercial bank funds, with monetary authorities passing on the amount needed to equalize any differential among interest rates initially estimated to be as much as 15% of debt adjusted for monetary correction. In addition to these instruments there was the so-called Cic-Crege 11. Under an arrangement similar to 882, it envisioned variable interest rates on loans ranging from 3-7%, depending on the size of the company, and indexing of the debt.

This instrument was subsequently changed by Resolution 622, and in 1986 it came to be evaluated by and large on the basis of regional development strategy. Exporting firms located outside the regions covered by the Superintendencies for the Development of the Northeast and the Amazon (SUDENE and SUDAM) could therefore obtain a rebate of up to 12% of bank loans, while for these regions an 18% rebate was provided, similar to Cic-Crege 11.

From the standpoint of quantifying incentives based on preferential credit lines intended for exports during the first half of the 1980s, Baumann's results (1987) are quite comprehensive, with the additional advantage of making it possible to have a breakdown of post- and pre-shipment credit for exported goods. Obviously, it is reasonable to assume that in evaluating these results the effects of pre-

shipment financing weigh more heavily on export performance. The reason is that financing for production of exportable goods exercises a greater influence on the makeup of exports than do resources intended for marketing goods already produced.

Table 12 is self-explanatory; however, note should be taken of the sharp reduction in incentive rates for export financing beginning in 1982, caused by the scarcity of public funds, which became highly critical as of this date. It is important to observe that pre-shipment financial incentives after December of 1976 (Res. 398) ranged in percentages from 5-30% of the value of products exported the year before, as previously listed. This system is still in force, and the list of products covered has remained essentially the same during subsequent years. By way of example, in 1984 the number of products dropped from 9,672 to 9,660 items as classified by the BCN, due to the fact that Resolution 674 was replaced by no. 882.

The study by Baumann and Braga (1986) deals with financing amounts per BCN section under Resolution 674/882, 1983. The findings of Baumann and Moreira (1987) show that the main financial incentive in 1985 was provided by Resolution 950, which furnishes a list of favored products similar to Resolution 882. Based on these studies, we have adjusted these results for 1985 in order to calculate the financial incentive rate by type of industrial good, after the BCN product classification was made compatible with the FIBGE classification of industrial goods.

The use of 1983 financing figures for calculating the incentive rate in 1985 is due to the fact that until 1984 financing control data were filed in the Central Bank of Brazil, while as of that date control management was shifted to CACEX at the Banco do Brasil, which does not have computerized data available to the public, as required for this study.

Table 5 in the statistical appendix shows estimated calculation of financial incentive rates by type of industrial good. The basic assumption is that for total exports during the two years in question there has been no change in the share of financing, a feasible theory in light of the relative stability of favored products. Goods for which incentive rates rose in 1983/85 are furniture (3.87%), pharmaceuticals (4.87%), perfumes and soap (5.5%), plastics (15.14%), clothing, footwear and textiles (4.67%).

TABLE 12
FINANCIAL INCENTIVES, 1980 - 85

YEAR	Post-shipment Financing (1)			Preshipment Financing (2)		Total Incentives	
	Export of Mfg. Goods US\$ million (1)	US\$ millions (2)	% (3)	US\$ millions (4)	% (5)	US\$ millions (6)	Incentive Rate(%) (7)=6-1
1980	9,027.60	-		497.40	5.50	497.40	5.50
1981	11,883.80	576.40	4.85	1,649.50	13.88	2,225.90	18.73
1982	10,252.90	440.90	4.30	1,783.00	17.39	2,223.90	21.69
1983	11,275.70	90.20	0.80	959.60	8.51	1,049.80	9.31
1984	15,131.50	154.30	1.02	249.70	1.65	404.00	2.67
1985	14,062.80	233.40	1.66	277.00	1.97	510.40	3.63

(1) Financing for warehousing, exports on trade consignment abroad for project sales, marketing, direct financing to exporter, and equalization of external interest rates.

(2) Financing of working capital (Res. no. 674/882 Cic-Crege 14-11, Concex Res. 68, CMN Res. 950), financing of trading companies (Res. no. 643/883), Financing of foreign investments, and financing for project preparation.

SOURCE: Baumann & Moreira (1987), Foreign Trade Yearbook - CACEX Exporting, and Secretariat of Federal Revenue.

3.6 FISCAL INCENTIVES

Initially tax breaks consisted of reductions in the excise tax (IPI) as stipulated by Decree Law 61,514 (1967), and in the sales tax (ICM) for exported goods, Decree Law 496 (1968). (1) In addition, the taxable base rates on profits resulting from export operations lower than those applied to normal company profits were covered by Decree Law 56,965 (1965). Nevertheless, judging from results shown in certain studies (2), none of these incentives was substantial.

One of the most important tax breaks for exports in Brazil consisted of the IPI and ICM credit-premium, the latter instituted in January of 1970 and whose calculation base for maximum credit was the value equal to the IPI base rate, up to a maximum rate of 15% of FOB export value. As of 1979, credit-premium base rates for the IPI and ICM were combined. Subsequently, in December of 1979, there was a maxi-devaluation of foreign exchange (30% against the dollar), followed by the elimination of IPI credit-premiums. In April of 1981, the credit-premium was reinstated, with uniform benefits for almost every product. Applicable legislation implemented reductions in the area affected by credit until May of 1985, when it was eliminated. (3)

(1) Under the system prior to tax reform, these taxes actually did produce a snowball effect because they were applicable to the sale price, with a tax exemption only for exported goods. With the reform, this applicability came to be based on added value, a more rational approach to export promotion.

(2) Braga (1981), Baumann and Moreira (1987).

(3) At present, the credit-premium tax break for exports is in force only for companies with export commitments made under the BEFIEEX system before May of 1985. Decree Law 59,965 has recently been reformulated (end of 1987). The reduction of the non-taxable portion of export profits currently represents only 3%. Exports linked to BEFIEEX programs are also excluded, and the lower tax rates on export profit that were in force at the beginning of the program prevail.

Table 13 shows the values of IPI and ICM credit-premium incentives, as well as those specified in Decree Law 59,965 concerning the reduction of income tax on export profits. The latter equals the value of the tax applied to real gains multiplied by the tax-exempt portion of export profits. Another way is to consider the tax due on taxable profit in order to quantify the tax incentive rate for exports. (1) Econometric estimates, however, show that real gain as a taxable base is preferable to tax gain in view of the importance of the former to export performance. (2) These data were taken from the corporate income-tax yearbook of the Ministry of Finance. Unfortunately, the latest available edition of this yearbook pertains to 1983; we have therefore not shown fiscal incentives for 1984 and 1985.

TABLE 13
EXPORT INCENTIVE RATE, IPI/ICM CREDIT PREMIUM
AND REDUCTION OF IMPORT PROFIT TAX

US\$ millions

Year	Mfg. Goods Exports (1)	IPI-ICM Credit (a) (2)	Exemption from Income Tax (3)	Incentive Rate % (2 + 3)/(1)
1980	19,025.118	1,124.871	250.64	7.23
1981	22,065.344	648.004	248.72	4.06
1982	19,357.422	2,271.08	212.5	12.83
1983	20,777.67	1,611.27	248.77	8.95
1984	25,769.264	539.552	(b)	2.10(c)
1985	24,639.01	180.69	(b)	0.74(c)

(a) Values sampled

(b) Data unavailable

(c) Includes credit premium incentive only

Sources : Foreign Trade Yearbook - CACEX; IPI Purchasing and Sales, SRF, Ministry of Finance; Statistical Appendix, Table 4.

The IPI and ICM credit-premium also comes from this publication for 1980 and 1981. For subsequent years, the Federal Revenue Service has regularly included this information in its publication IPI Purchasing and Sales, which we have used to provide the results given in Table 13. Data available in these publications refer to the exporting of manufactured products and the incentive rates therefore

refer to these overall values.

Results of annual estimates for tax incentive rates for 1980-1985 show the political intent to gradually phase out the IPI credit-premium beginning in 1982, with this incentive ending in May of 1985. The reduction of income tax as a means of spurring Brazilian exports reflects a rather modest rate, never going beyond 2% for any of these years.

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- (1) Tyler (1983)
 - (2) Guimarães (1985)

3.7 GOVERNMENT INCENTIVES AND ANTI (PRO) EXPORT BIAS

Trade policy clearly has an impact on a country's exports. A policy for controlling importable products can work against export strategy when it makes the prices of importable raw materials protected by duties and non-tariff barriers higher than those of freely traded goods.

Protectionist policy can therefore have a negative effect on export performance, although firms may successfully compete in the domestic market with a cost structure higher than the one for the external market. To offset this negative effect on exports caused by a protectionist policy, exporting companies may have policies available to ensure access to raw materials at international prices. In Brazil, the institutionalizing of a number of export-promotion instruments and mechanisms has sought to maintain the protection necessary for substituting imports without harming the profitability of exports.

Other export incentives may help to lessen the anti-export bias caused by protecting industry, such as financial and tax incentives. For this reason, it is only when the rate of incentives offered to exporters exceeds the level of protection given to domestic industry through government control of importable goods that trade policy becomes biased in favor of exports.

Table 14 deals with this question for the year 1985. It also computes implicit effective protection separately, because when this protection is calculated on a basis of internal and external prices, it causes export protection and promotion programs to become embedded in prices, making it very difficult to separate the effects of these policies. The makeup of this table shows that for the processing industry, tax and financial incentives measured as a percentage of export value amounted to 4,12% in 1985. On the other hand, the lowest rates in both cases were seen for non-metallic minerals (2,04%), tobacco products (2,11%), and food (1,84%) and printing (2,31%).

In order to evaluate trade policy, column 5 in Table 14 repeats the estimates of implicit nominal protection previously made, while column 6 calculates the anti-export bias. For eight (8) types of industrial goods (13% of the total export, 1985), trade policy was favorable to exports (negative anti-export bias). For the remaining industrial goods trade policy favored internal sales (positive anti-export bias).

Although these results do not compare exactly with those for 1980-81 obtained by Tyler (1983) nor by Ugo Fasano Filho

TABLE 14
EXPORT INCENTIVES AND PROTECTION OF INDUSTRY - 1985

		Export Incentives (a)					
Code	Industrial Goods - FIBGE Classification	Fiscal		Financial	Total	Implicit	Anti/Pro-
		(1) Credit- Premium Reduction	(1) Income Tax Reduction	(2)	3=(1)+(2)	Nominal Tariff (b) (4)	Export Bias 5=(4)-(3)
10	Non-metallic Minerals	0.11	1.00	0.93	2.04	7.16	5.12
11	Metallurgy	0.41	1.30	3.73	5.44	19.87	14.45
12	Mechanical Equipment	1.25	1.50	3.51	6.26	5.07	-1.19
13	Electrical Equipment	3.40	1.60	3.23	8.23	59.58	51.34
14	Transport Equipment	4.46	1.50	1.00	6.96	13.10	6.14
15	Wood Products	0.01	1.70	3.05	4.76	-17.80	-22.56
16	Furniture	0.22	1.10	3.87	5.19	14.90	9.71
17	Paper	0.12	3.80	2.97	6.89	-10.19	-17.08
18	Rubber Products	3.49	2.20	0.78	6.47	52.10	45.63
19	Leather Products	0.07	0.90	3.26	4.23	16.69	12.46
20	Chemicals	0.02	0.40	0.65	1.07	24.73	23.66
21	Pharmaceuticals	0.07	2.00	4.87	6.94	30.90	23.96
22	Perfumes, Soaps	0.09	0.90	5.50	6.49	1.00	-5.41
23	Plastics	0.40	1.40	15.14	16.94	103.20	86.26
24	Textiles	0.00	1.70	3.85	5.55	20.00	14.45
25	Clothing, Footwear	0.00	2.10	4.67	6.77	53.73	46.96
26	Food	0.00	1.00	1.84	2.84	-10.25	-13.09
27	Beverages	0.03	1.70	1.57	3.30	-48.65	-51.95
28	Tobacco Products	0.00	2.10	0.01	2.11	-66.33	-68.44
29	Printing	0.01	0.60	2.31	2.92	-10.00	-12.92
30	Other Industry	0.15	11.00	2.17	13.32	48.14	34.82
	Processing Industry	0.65	1.31	2.16	4.12	11.35	7.23

(a) Export incentive rates have been calculated by the conventional method of the ratio of incentives to export value. The credit-premium value has been obtained from "Purchase and Sales Movement" (Min. of Finance, Sec. of Fed. Rev.). The incentive rate resulting from income-tax reduction has been calculated by the average from previous years (1981-1982-1983). For financial incentives, the percentages of exports financed are those that prevailed in 1983 (Baumann, 1986), multiplied by the interest reduction rate applied to exports in 1985. (b) Data weighted for exports, 1985 year

et al. (1987), who utilized a different methodology for gathering international prices, they show a marked reduction for protection of the industrial structure as well as for levels of export promotion. Although implicit nominal protection reached an average rate of 22.8% in 1980-81 (Fasano et al.), this rate fell to 9.99% (table 3) in 1985. The average rate for tax and financial incentives for exports in 1980-81 was 19.3% for the processing industry (Tyler), while our estimates show a rate of 4.12%.

These results reinforce the notion that during the first half of the 1980s, economic policy pursued an evident neutrality for economic policies dealing with activities that involved the internal market and exports, which is desirable from a regulatory standpoint.

In calculations that evaluate trade policy, it is common to introduce a social rate of exchange to adjust the rates of promotion and protection for exports and the domestic market. On the other hand, to estimate the social rate of exchange calls for extremely strong assumptions that are difficult to prove empirically. Recent studies generally assume a given reference period during which the social rate of exchange is equal to the nominal rate. In Brazil, the period used has been December of 1979, after the maxidevaluation of the cruzeiro was decreed. (1)

To update a period, these methods usually require that: a) there be an initial period when the nominal exchange rate equals the social rate; b) there be no alterations in terms of trade during the period under study, and c) the real income differential between the country and the rest of the world remain constant.

For such reasons, and considering that in 1985 the balance of payments current account balance was almost zero, we place special emphasis on the idea that the social rate of exchange would have been quite close to the official rate, therefore not requiring adjustment. (2)

(1) For example, see Moldau (1986).

(2) This argument is also backed up by the technical-political rationale of the Cruzado Plan implemented in Brazil in February of 1986, which gave priority to a price freeze so as to bring the inflationary process to a halt with no prior altering of the exchange rate, reinforcing the idea that it was probably in equilibrium.

4. CONCLUSIONS

The evaluation of protection levels for Brazilian industry has focused on implicit protection based on a comparison of domestic and international prices. In view of the great diversity in trade instruments and mechanisms associated with industrial policy measures utilized to favor specific sectors, we have qualified the levels of effective and nominal protection as reflected by these various measures. This focus has made it possible to obtain extremely useful results from the normative standpoint.

First of all, the data shows the existence of widespread tariff redundancy. For the processing industry in 1985, legal tariff redundancy was 50.70% while nominal implicit tariff was 9.99% (the increase in domestic prices relative to current international prices).

Results also show that great care must be taken when considering the effects of protectionism reflected solely by tariffs, as is traditionally done, not only due to the existence of non-tariff barriers but mainly because of the extensive tariff redundancy noted. Along this line of reasoning, knowledge of implicit protection and of the influence that industrial policy can have on levels of protection allows for a more rational appraisal of the protectionist structure.

We have also quantified Brazilian export incentives, distinguishing between incentives to supply and to marketing. Estimated results show that marketing incentives are more extensive than those directly intended for production. Unfortunately it has not been possible to calculate the effects that these incentives have on the domestic production structure. But there are unmistakable signs that marketing incentives basically consist of bringing liberalization policies in to line while export production incentives lead to additional production gains. This is obviously a question yet to be determined empirically and does not fall within the scope of this study.

The quantifying of the two main incentives to Brazilian exports has established the predominance of the drawback regime in absolute figures, with the requirement of a 30% tax and duty waiver relative to the net foreign-exchange balance obtained by using this promotional scheme for exports. BEFIEX, in turn, showed a net foreign-exchange gain of more than 80% for 1985, with the requirement of 12% of incentives relative to the net foreign-exchange balance.

Generally speaking, export incentives were considerably curtailed during the first half of the 1980s. On the other hand, this fact created no major problems for the Brazilian export sector, seeing that exports moved upward during the period. Available evidence in this study therefore points toward the need to efficiently widen the base of exportable products to improve export performance. In the present situation, this can be achieved through incentives to technological development.

Support for this argument lies in the fact that a company's penetration into the foreign market leads other firms in the sector to follow suit, given the true spirit of business competition. Because every industrial sector at the onset consists of traditionally exporting companies, the snowball effect would thus be established, therefore calling for an efficient supply of technological know-how so as to expand the range of products exported.

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(ANNEX TABLES)

TABLE 1
NOMINAL PROTECTION VECTORS - 1985

FIBGE Code	Classification	Implicit Tariff (1)	Legal Tariff (2)	Tariff Redundancy (3)=(2)-(1)	Transport Cost (4)
01010	Veg. & Silv. Extracts	-22.2	34.0	56.2	22.1
01020	Wild Game	0.0	0.0	0.0	0.0
02020	Coffee Growing	0.0	0.0	0.0	0.0
02030	Sugarcane Growing	0.0	0.0	0.0	0.0
02040	Rice Growing	0.0	0.0	0.0	0.0
02050	Wheat & Soybean Growing	0.0	0.0	0.0	0.0
02910	Other Farming	0.0	0.0	0.0	0.0
03010	Cattle	0.0	0.0	0.0	0.0
03020	Poultry & Eggs	0.0	0.0	0.0	0.0
04990	Agriculture & Livestock	0.0	0.0	0.0	0.0
05010	Metallic Mineral Mining	-35.5	19.0	54.5	17.9
05020	Non-metallic Mineral Mining	-42.4	49.0	91.4	89.1
05030	Petr. Natural Gas Extraction	0.0	0.0	0.0	0.0
05040	Coal Mining	-48.9	20.0	68.9	41.3
10010	Mfg. Cement	9.3	53.8	44.5	52.2
10020	Glassmaking	1.1	82.4	81.3	25.4
10030	Benef. Non-metallic Minerals	0.0	0.0	0.0	0.0
10040	Mfg. Cement Concrete Items	33.0	69.9	102.9	37.1
10050	Ceramic Manufacture	20.4	79.0	99.4	3.0
10910	Other Non-metallic Min. Prods.	24.1	54.8	30.7	6.2
11011	Mfg. Pig Iron	24.0	45.0	69.4	23.1
11012	Mfg. Iron, Primary Steel	36.9	36.8	0.1	7.1
11020	Mfg. Rolled Steel	7.0	32.3	25.3	16.3
11031	Mfg. Cast Steel	34.3	55.0	20.7	5.1
11032	Mfg. Forged Steel	24.0	72.2	48.2	9.0
11040	Nonferrous Metallurgy	21.0	50.0	29.0	8.2
11050	Mfg. of Drawn Shapes	66.1	66.0	0.1	13.8
11060	Mfg. of Fitted Steel Struc.	21.0	58.0	37.0	14.1
11070	Mfg. Stamped Metal	-29.5	70.0	99.5	52.4
11080	Mfg. Metal Packing	-11.5	66.8	78.3	12.8

11910	Mfg. Other Metal Prods.	35.3	58.0	22.7	15.8
12010	Mfg. Pumps & Motors	5.8	53.0	47.2	70.0
12020	Mfg. Machinery Acc. Parts	-1.0	62.8	63.8	16.8
12030	Mfg. Turbines & Boilers	-23.1	45.8	68.9	12.1
12040	Mfg. Industrial Machinery	14.9	58.9	44.0	12.2
12050	Mfg. Farm Machinery	-12.3	45.9	48.2	24.0
12060	Mfg. Tract. & Highway Mach.	0.4	38.3	37.9	11.3
12070	Mfg. Office Equipment	22.0	67.2	45.2	22.2
12080	Inst. & Mach. Repair	0.0	0.0	0.0	0.0
13010	Mfg. Elec. Power Equip.	25.9	55.0	29.1	21.0
13020	Mfg. Elec. Conductors	20.9	58.2	37.3	7.1
13030	Mfg. Elec. Equipment	57.7	72.9	15.2	6.9
13040	Mfg. Vehicle Elec. Equip.	43.4	78.1	34.7	7.0
13050	Mfg. Elec. Equip. Motors	-13.6	82.0	5.6	54.0
13060	Mfg. Electronic Equip.	114.8	52.0	-62.8	4.0
13070	Mfg. Communication Equip.	35.1	61.1	26.0	10.0
13080	Mfg. Radio-TV Sound Equip.	83.4	96.0	12.6	10.0
14010	Mfg. Automobile	-18.1	104.1	122.2	11.0
14020	Mfg. Bus & Truck	19.0	78.1	59.1	19.0
14030	Mfg. Engine & Auto Parts	24.0	64.9	40.8	4.1
14040	Naval Industry	0.0	7.0	7.0	11.9
14050	Mfg. Railway Vehicles	80.9	46.9	-34.0	18.0
14910	Mfg. Other Vehicles	9.9	86.9	76.8	15.8
15010	Sawmills & Plywood	0.0	0.0	0.0	0.0
15020	Mfg. Wooden Arts.	-17.8	74.4	92.2	32.0
16010	Mfg. Wooden Furniture	18.9	105.0	86.1	27.0
16020	Mfg. Metal Furniture	10.9	91.0	101.9	90.0
17010	Mfg. Cellulose	-37.5	20.0	57.5	16.9
17020	Papermaking	9.5	62.0	52.5	2.0
17030	Paper Arts.	7.6	80.0	72.4	18.0
18010	Mfg. Tires & Inner Tubes	34.7	85.3	50.6	10.0
18020	Rubber Arts. Mfg. & Process.	69.5	60.3	-9.2	14.0
19990	Leather Industry	16.7	92.5	75.8	9.0
20010	Chemicals	-11.4	43.0	54.4	32.0
20020	Sugarcane Alcohol Distill.	-15.2	85.0	100.2	43.0
20031	Oil Refining	79.6	37.0	-42.6	18.0
20032	Petrochemicals	0.3	36.0	35.7	24.0
20040	Mfg. Coal Byproducts	-21.3	20.0	41.3	28.3
20050	Mfg. Elastic Fiber Resin	45.3	49.0	3.7	15.7
20060	Mfg. Raw Vegetable Oil	-26.1	32.0	58.1	53.0
20070	Mfg. Paint & Pigments	47.6	50.0	2.4	15.3
20080	Mfg. Fertilizers	-6.0	49.0	55.0	5.7
20910	Mfg. Misc. Chemicals	27.4	58.0	30.6	15.0
21990	Pharmaceuticals	30.9	53.0	22.1	11.1
22990	Perfumes & Soaps	1.1	87.0	85.9	47.9
23010	Mfg. Laminated Plastics	56.3	85.0	28.7	10.0
23020	Mfg. Plastic Arts.	150.1	102.0	-48.1	18.9
24010	Natural Textile Fib. Process.	57.9	49.0	-8.9	9.1
24020	Natural Textile Spin/Weav.	35.1	80.0	52.9	9.0
24030	Art. Textile Spin/Weav.	1.3	81.0	78.7	15.0

24040	Knit Goods	25.1	105.0	73.9	16.0
24910	Other Textile Inds.	34.7	100.0	65.3	22.2
25010	Mfg. Apparel	94.7	94.0	-0.7	8.2
25020	Mfg. Footwear	48.8	53.0	4.2	12.6
26010	Coffee Processing	-52.7	60.0	112.7	4.0
26020	Coffee Roasting/Grinding	-69.6	73.0	3.4	74.2
26030	Rice Processing	0.0	0.0	0.0	0.0
26040	Wheat Milling	36.8	70.0	33.2	41.2
26050	Mfg. Canned Goods	46.8	100.0	53.2	12.8
26070	Process. Other Veg. Prods.	-16.6	66.0	82.6	16.7
26080	Slaughtering/Meat Prep.	-66.0	74.0	140.0	108.9
26090	Slaughtering/Poultry Prep.	42.9	39.0	-3.9	14.0
26100	Dairy Products	-4.7	37.0	41.7	4.9
26110	Sugar Mill	-16.1	55.0	71.1	40.0
26120	Sugar Refining	-35.2	85.0	120.2	26.0
26130	Breadmaking	-15.0	9.0	24.0	27.8
26140	Veg. Oil/Fat Refining	-7.8	65.0	72.8	18.0
26150	Animal Feed	-36.8	34.0	70.8	34.9
26190	Other Foodstuffs	33.6	81.0	47.4	17.0
27010	Mfg. Alcoholic Beverages	-26.5	105.0	131.5	41.0
27020	Soft Drinks/Mineral Water	-70.8	85.0	155.8	94.0
28890	Tobacco	-66.3	99.0	165.3	58.0
29010	Book Publishing	-30.4	13.0	43.4	21.0
29020	Other Graphic Ind.	10.4	69.0	58.6	12.0
30990	Mfg. Misc. Prods.	48.1	95.0	46.9	24.0

SOURCE: International Prices; IPEA/FUNCEX Data Bank, 1987, Brazilian Customs Duties, 1985, Import Yearbook, 1985; BCN-FUNCEX Compatability, IPEA-FUNCEX, 1986.

TABLE 2
EFFECTIVE PROTECTION VECTORS
1985

Industry Sectors		Implicit	Legal	Added
FIBGE	Item	Tariff	Tariff	Free-trade
Code		(1)	(2)	Value
				(3)
01010	Veg. & Silv. Extracts	-26.08	36.80	87.73
01020	Wild Game	-4.71	-4.72	86.98
02020	Coffee Growing	-0.40	-5.76	81.94
02030	Sugarcane Growing	-1.49	-13.76	69.76
02040	Rice Growing	-2.87	-8.72	73.68
02050	Wheat and Soybean Growing	-3.94	-31.30	47.62
02910	Other Farming	-0.63	-6.09	83.45
03010	Cattle	-0.09	-4.92	81.03
03020	Poultry and Eggs	62.07	-69.34	24.39
04990	Agriculture & Livestock	0.10	-6.36	71.19
05010	Metallic Mineral Mining	-52.65	21.66	61.87
05020	Non-metallic Mineral Mining	-59.38	56.92	78.49
05030	Petr. Natural Gas Extraction	-1.12	-0.97	81.56
05040	Coal Mining	-65.05	19.63	79.12
10010	Mfg. Cement	1.12	97.73	31.02
10020	Glassmaking	-5.80	132.01	52.22
10030	Benef. Non-metallic Minerals	0.00	-7.29	69.51
10040	Mfg. Cement-concrete Items	-52.52	98.45	63.98
10050	Ceramic Manufacture	-32.72	105.36	69.78
10910	Other Non-metallic Min. Prods.	43.71	82.18	45.68
11011	Mfg. Pig Iron	52.09	132.29	24.56
11012	Mfg. Iron, Primary Steel	988.75	74.52	4.79
11020	Mfg. Rolled Steel	-17.65	39.51	37.29
11031	Mfg. Cast Steel	-52.66	70.84	60.60
11032	Mfg. Forged Steel	35.50	133.27	43.99
11040	Nonferrous Metallurgy	43.97	88.08	28.95
11050	Mfg. of Drawn Shapes	552.47	466.82	7.66
11060	Mfg. of Fitted Steel Struc.	33.33	87.71	48.42
11070	Mfg. Stamped Metal	-71.55	-14.54	47.64
11080	Mfg. Metal Packing	-38.50	120.79	40.27

11910	Mfg. Other Metal Prods.	83.70	110.16	36.73
12010	Mfg. Pumps and Motors	6.75	56.55	49.94
12020	Mfg. Machinery Acc. Parts	-0.45	88.43	53.20
12030	Mfg. Turbines & Boilers	-37.89	54.87	62.87
12040	Mfg. Industrial Mach.	28.74	80.74	46.64
12050	Mfg. Farm Machinery	-25.80	57.76	48.50
12060	Mfg. Tract. & Highway Mach.	0.78	43.53	34.91
12070	Mfg. Office Equipment	54.29	119.44	34.93
12080	Inst. & Mach. Repair	-3.89	-14.83	70.68
13010	Mfg. Elec. Power Equip.	40.76	79.86	42.53
13020	Mfg. Elec. Conductors	24.48	88.66	34.58
13030	Mfg. Elec. Equipment	121.72	126.08	34.81
13040	Mfg. Vehicle Elec. Equip.	75.10	126.71	42.57
13050	Mfg. Elec. Equip. Motors	-38.93	124.98	46.93
13060	Mfg. Electronic Equip.	403.85	94.66	23.19
13070	Mfg. Communication Equip.	39.10	77.70	49.25
13080	Mfg. Radio-TV, Sound Equip.	181.74	221.90	27.99
14010	Mfg. Automobile	-87.63	203.00	34.97
14020	Mfg. Bus & Truck	-33.67	127.80	33.24
14030	Mfg. Engine & Auto Parts	68.75	124.72	24.99
14040	Naval Industry	1.38	-24.89	43.19
14050	Mfg. Railway Vehicles	403.97	118.00	15.06
14910	Mfg. Other Vehicle	-22.64	121.36	47.58
15010	Sawmills & Plywood	6.27	-14.94	56.09
15020	Mfg. Wooden Arts.	-42.40	162.44	41.41
16010	Mfg. Wood Furniture	33.65	243.94	36.73
16020	Mfg. Metal Furniture	-54.70	199.67	35.16
17010	Mfg. Cellulose	-74.24	21.73	49.68
17020	Papermaking	43.96	114.85	42.62
17030	Paper Arts.	1.57	186.38	23.54
18010	Mfg. Tires & Inner Tubes	33.20	125.79	45.22
18020	Rubber Arts. Mfg. & Process.	291.42	188.91	16.41
19990	Leather Industry	17.96	120.35	58.39
20010	Chemicals	-26.47	74.24	35.60
20020	Sugarcane Alcohol Distill.	-25.88	136.00	48.57
20031	Oil Refining	285.49	119.68	25.99
20032	Petrochemicals	-54.17	50.18	31.97
20040	Mfg. Coal Byproducts	60.82	70.89	10.10
20050	Mfg. Elastic Fiber Resin	196.30	130.32	19.15
20060	Mfg. Raw Vegetable Oil	135.07	150.32	19.36
20070	Mfg. Paint & Pigments	202.52	-106.34	19.29
20080	Mfg. Fertilizers	-12.10	80.39	33.03
20910	Mfg. Misc. Chemicals	60.96	97.10	36.74
21990	Pharmaceuticals	39.61	57.44	65.02
22990	Perfumes & Soaps	5.65	156.55	36.85
23010	Mfg. Laminated Plastics	120.88	174.58	31.16
23020	Mfg. Plastic Arts.	11,563.41	6,119.71	1.04
24010	Nat. Textile Fib. Process.	-444.32	-364.38	-12.48
24020	Nat. Textile Spin./Weav.	37.83	169.45	27.36
24030	Art. Textile Spin./Weav.	-34.89	112.71	43.57

24040	Knit Goods	31.29	156.59	36.46
24910	Other Textile Inds.	54.98	174.71	31.83
25010	Mfg. Apparel	100.41	192.09	14.74
25020	Mfg. Footwear	25.75	26.07	35.61
26010	Coffee Processing	-301.00	339.77	17.15
26020	Coffee Roasting/Grinding	-137.44	127.88	31.14
26030	Rice Processing	-2.24	-5.24	24.04
26040	Wheat Milling	-23.85	-42.99	-141.28
26050	Mfg. Canned Goods	1,326.84	2,087.35	3.49
26070	Process. Other Veg. Prods.	-45.37	173.20	34.06
26080	Slaughtering/Meat Prep.	-244.59	266.76	22.68
26090	Slaughtering/Poultry Prep.	-138.81	-126.18	-29.85
26100	Dairy Products	95.81	-554.46	-4.79
26110	Sugar Mill	38.73	-100.89	-48.79
26120	Sugar Refining	-128.49	243.04	22.25
26130	Breadmaking	-35.75	-19.78	58.96
26140	Veg. Oil/Fat Refining	37.29	160.43	21.99
26150	Animal Feed	-96.45	60.33	31.24
26190	Other Foodstuffs	139.41	206.18	24.63
27010	Mfg. Alcohol Beverages	-44.01	157.51	52.21
27020	Soft Drinks/Mineral Water	-101.89	103.58	68.59
28990	Tobacco	-112.05	154.17	53.43
29010	Book Publishing	-41.85	3.84	75.06
29020	Other Graphic Ind.	10.85	93.41	51.63
30990	Mfg. Misc. Prods.	82.29	153.29	47.01

TABLE 3
IMPORT DUTY AND TARIFF EXEMPTIONS
AS EXPORT INCENTIVES, BY TYPE OF
IMPORTED INDUSTRIAL GOOD - 1985

US\$ million

Importing Sector	Regime 04			Regime 05			Regime 06			Regime 07			Total Export Incentives			
	Exemption Proportionate to Export Increase			BEFIEX			Duty Drawback (Exemption)			Duty Drawback (Suspension)			Imports	Tax Susp.	Duty Exempt.	Tax
	Imports	Duty Exempt.	Tax Exempt.	Imports	Duty Exempt.	Tax Exempt.	Imports	Duty Exempt.	Tax Exempt.	Imports	Duty Susp.	Tax Susp.				
All Sectors	16.57	7.72	1.13	562.30	300.84	44.63	216.06	55.07	4.28	967.04	466.18	81.29	1770.94	902.42	131.77	
10 Non-metallic Minerals	1.19	0.06	0.01	1.09	0.29	0.05	0.29	0.07	0.003	1.02	0.60	0.10	2.52	1.03	0.17	
11 Metallurgy	1.75	0.78	0.15	30.00	12.26	2.19	98.22	19.45	0.48	132.81	30.50	2.45	263.56	62.99	5.01	
12 Mechanical Equipment	1.67	0.81	0.16	61.46	33.52	5.41	2.22	0.98	0.19	62.05	34.49	8.45	127.40	69.81	14.71	
13 Electrical Equipment	0.10	0.05	0.003	52.77	20.18	4.18	9.83	4.14	0.67	50.71	27.81	7.02	113.41	52.18	11.51	
14 Transport Equipment	0.49	0.32	0.05	302.27	195.87	27.42	3.00	0.78	0.15	258.78	161.75	39.60	534.54	353.71	87.51	
15 Wood Products	0.19	0.10	0.02	1.35	0.62	0.05	0.02	0.01	0.00	9.89	4.61	0.06	11.44	5.34	0.44	
16 Furniture	0.03	0.01	0.001	0.25	0.10	0.01	-	-	-	0.08	0.05	0.006	0.36	0.16	0.07	
17 Tapes	0.26	0.18	0.02	7.17	2.92	0.56	1.97	0.43	0.03	3.94	1.75	0.10	13.35	5.29	0.71	
18 Rubber Products	0.01	0.01	0.00	53.82	15.12	1.73	11.29	2.77	0.15	31.90	9.78	0.85	97.03	27.87	2.77	
19 Leather Products	0.55	0.26	0.03	0.02	0.003	0.001	0.88	0.17	0.02	6.22	3.52	0.12	7.67	4.35	0.17	
20 Chemicals	1.16	0.54	0.04	8.32	3.56	0.74	34.54	11.15	0.94	61.87	30.56	11.06	105.90	115.51	12.71	
21 Pharmaceuticals	0.003	0.001	0.00	1.12	0.49	0.08	10.40	3.05	0.01	23.97	7.67	0.07	35.50	11.18	0.44	
22 Perfumes, Soaps	-	-	-	-	-	-	0.003	0.001	0.00	0.22	0.19	0.04	0.22	0.19	0.01	
23 Plastics	0.03	0.02	0.01	8.12	1.96	0.47	1.15	0.52	0.07	5.95	2.79	0.77	15.26	5.20	1.03	
24 Textiles	1.66	0.81	0.10	15.24	6.09	0.67	4.26	1.16	0.06	44.84	21.95	0.21	66.01	29.96	1.62	
25 Clothing, Footwear	1.00	0.49	0.05	10.24	4.26	0.47	0.12	0.004	-	7.85	65.32	0.25	89.27	70.07	4.51	
26 Food	6.32	2.68	0.41	0.09	0.03	0.01	8.37	4.04	0.02	112.65	28.44	1.47	127.43	35.16	1.91	
27 Beverages	0.02	0.01	0.001	-	-	-	0.10	0.04	-	0.16	0.04	0.01	0.28	0.08	0.01	
28 Tobacco Products	-	-	-	-	-	-	-	-	-	0.02	0.003	-	0.02	0.003	-	
29 Printing	-	-	-	0.34	0.12	0.01	0.03	0.005	0.002	-	-	-	0.07	0.13	0.02	
30 Other Industry	0.16	0.07	0.02	3.20	1.31	0.22	23.11	4.53	1.10	52.52	19.27	5.55	76.98	25.15	6.11	
Total Industry	15.52	7.18	1.07	557.67	298.64	44.26	209.81	53.30	3.71	937.51	451.48	76.24	1720.51	881.20	12.77	
Non-Industry	1.05	0.54	0.06	4.60	2.21	0.37	6.25	1.77	0.37	38.53	16.71	3.05	50.43	21.22	3.07	

SOURCE: Ministry of Finance, Secretariat of Federal Revenue
NOTE: Average buy-sell exchange rate used.

TABLE 3

IMPORT DUTY AND TARIFF EXEMPTIONS AS EXPORT INCENTIVES, BY TYPE OF IMPORTED INDUSTRIAL GOOD - 1986

US\$ million

Importing Sector	Regime 04			Regime 05			Regime 06			Regime 07			Total Export Incentives		
	Exemption Proportionate to Export Increase			BEFIE			Duty Drawback (Exemption)			Duty Drawback (Suspension)			Imports	Duty Exempt.	Tax
	Imports	Duty Exempt.	Tax Exempt.	Imports	Duty Exempt.	Tax Exempt.	Imports	Duty Exempt.	Tax Exempt.	Imports	Duty Exempt.	Tax Exempt.			
All Sectors	1.16	0.61	0.10	821.96	435.90	65.21	233.98	58.26	4.75	1669.54	777.69	109.46	2726.63	1272.46	179.53
10 Non-metallic Minerals	-	-	-	3.45	1.16	0.17	0.00	0.31	0.04	2.02	1.01	0.14	6.27	2.46	0.34
11 Metallurgy	0.04	0.02	0.01	17.05	6.94	0.84	134.31	26.47	0.48	12.52	7.50	3.01	163.92	40.93	4.33
12 Mechanical Equipment	0.05	0.03	0.01	96.04	51.73	8.53	1.77	0.81	0.16	82.55	46.44	11.13	181.11	99.01	19.53
13 Electrical Equipment	0.02	0.01	-	89.91	32.20	6.66	3.84	1.25	0.20	98.02	57.20	14.45	191.79	98.66	21.32
14 Transport Equipment	0.14	0.13	0.02	445.56	286.57	41.91	3.81	1.20	0.22	362.16	237.43	55.81	811.67	525.32	97.96
15 Wood Products	0.05	0.03	-	1.89	0.78	0.07	0.11	0.05	0.01	10.01	4.73	0.10	12.06	5.59	0.77
16 Furniture	-	-	-	-	-	-	-	-	-	0.06	0.04	0.01	0.06	0.04	0.01
17 Paper	0.01	0.01	-	6.96	2.97	0.43	2.08	0.64	0.05	11.02	4.06	0.05	20.87	8.49	0.52
18 Rubber Products	-	-	-	67.55	18.98	1.93	12.55	3.27	0.19	42.05	13.25	1.15	122.15	35.50	3.27
19 Leather Products	0.11	0.05	0.01	0.07	0.01	-	0.84	0.21	0.04	19.04	11.65	0.17	20.50	11.91	0.21
20 Chemicals	0.05	0.25	-	4.81	1.46	0.20	35.65	11.56	1.19	89.01	32.40	1.20	129.52	45.65	2.60
21 Pharmaceuticals	0.02	0.01	-	4.88	1.97	0.23	4.25	1.21	-	46.01	14.10	0.79	55.17	17.40	1.02
22 Perfumes, Soaps	-	-	-	0.04	-	-	0.02	0.01	-	0.37	0.29	0.06	0.42	0.30	0.07
23 Plastics	-	-	-	5.07	1.55	0.25	1.17	0.57	0.08	5.29	2.46	0.65	11.53	4.58	0.98
24 Textiles	0.08	0.04	0.01	39.71	16.01	1.84	5.79	1.87	0.15	84.52	45.50	-	130.11	63.43	2.01
25 Clothing, Footwear	0.02	0.01	-	14.09	5.84	0.71	0.03	0.02	-	136.24	110.39	0.81	150.38	116.26	1.53
26 Food	0.07	0.03	0.01	2.14	0.73	0.14	0.48	0.17	0.02	43.52	44.42	0.45	46.21	45.35	0.61
27 Beverages	-	-	-	1.66	0.71	0.08	-	-	-	0.27	0.09	0.01	1.93	0.80	0.09
28 Tobacco Products	-	-	-	6.75	2.83	0.47	-	-	-	0.20	0.16	-	6.95	2.98	0.47
29 Printing	-	-	-	0.05	0.01	-	-	-	-	-	-	-	0.05	0.01	0.00
30 Other Industry	-	-	-	0.20	0.09	0.01	21.86	5.74	1.74	75.47	34.30	8.20	97.53	40.14	9.96
Total Industry	0.67	0.61	0.06	808.59	432.55	64.47	229.35	55.35	4.56	1121.15	668.31	98.20	2159.76	1156.82	167.29
Non-Industry	0.48	-	0.05	1.34	3.35	0.74	4.63	2.90	0.20	548.39	109.38	11.26	566.87	115.64	12.24

SOURCE: Ministry of Finance, Secretariat of Federal Revenue

NOTE: Average buy-sell exchange rate used.

TABLE 4.
BASE RATES FOR INCOME TAX ON ACTUAL PROFITS
AND EXPORT PROFITS
(1979 - 83)

INDUSTRIAL GOOD	INCOME TAX BASE RATE (%)						EXPORT PROFIT			US\$ millions	
	Code	CLASSIFICATION	1979	1980	1981	1982	1983	1979	1980		1981
10	Non-metallic Minerals	37.77	38.42	38.62	38.30	35.57	8.44	9.77	18.29	14.37	8.75
11	Metallurgy	37.55	37.71	37.97	35.93	35.30	120.22	57.43	60.78	70.76	85.84
12	Mechanical Equipment	37.10	37.38	37.50	36.00	39.77	25.21	53.06	51.78	69.27	28.12
13	Electrical Equipment	38.31	38.44	38.24	37.47	42.85	21.75	28.69	33.09	40.66	33.28
14	Transport Equipment	38.98	38.86	39.00	37.64	43.05	102.61	92.09	97.40	100.95	73.43
15	Wood Products	36.54	37.13	37.25	33.35	37.89	19.91	15.80	39.84	32.09	32.27
16	Furniture	35.29	35.85	35.41	31.13	35.74	0.51	0.69	1.48	1.27	1.53
17	Paper	37.69	38.24	37.77	37.29	37.93	83.32	74.97	42.35	75.45	24.60
18	Rubber Products	38.49	38.37	38.62	38.31	43.54	11.09	9.80	6.85	9.35	6.28
19	Leather Products	35.76	35.86	35.35	33.00	39.36	9.50	3.08	5.07	4.52	10.54
20	Chemicals	38.51	38.84	39.01	37.51	42.66	87.71	72.30	43.71	57.25	28.64
21	Pharmaceuticals	39.15	38.22	38.30	37.22	41.92	3.35	6.67	4.48	3.37	2.28
22	Soaps, Perfumes	38.28	37.96	38.18	30.41	32.39	0.51	2.24	0.51	1.47	0.90
23	Plastics	36.78	37.59	36.99	34.40	36.16	4.35	3.87	4.25	3.93	2.21
24	Textiles	31.39	37.97	37.95	35.23	38.48	67.00	43.09	69.01	44.62	80.01
25	Clothing, Footwear	36.32	36.57	37.40	31.29	40.02	65.26	46.86	40.51	57.75	37.24
26	Food	37.19	37.81	38.08	43.36	42.10	260.31	129.81	195.80	179.41	209.71
27	Beverages	37.83	37.66	38.32	34.37	43.34	2.92	5.12	2.77	9.42	1.23
28	Tobacco Products	39.66	39.58	39.75	39.60	44.68	53.98	49.32	16.18	0.09	0.26
29	Printing	36.18	36.88	36.54	32.09	38.47	0.34	0.90	0.70	0.07	0.34
30	Other Industry	36.95	38.02	38.33	36.20	40.85	97.57	86.53	63.10	116.30	18.47
	Processing Industry	37.07	39.48	38.02	37.60	38.00	1045.86	792.01	817.96	893.01	685.92
	Non-industry	36.07	37.02	37.02	35.00	37.50	694.65	398.70	209.32	254.83	204.77

SOURCE: Corporation Yearbooks, Ministry of Finance

TABLE 5
1985 ESTIMATED INCENTIVE RATE, RESOLUTION 882-950

Code	Item - FIBGE	Value financed (millions)		% of value financed for type of good	Subsidy Rate**
		CR\$	US\$ #		
00	Agricultural, Veg. & Mineral Ext.	185,444	273.085	32.44	5.57
10	Non-metallic Minerals	22,246	38.342	5.40	0.93
11	Metallurgy	246,237	424.401	21.74	3.73
12	Mechanical Equipment	126,750	218.460	20.47	3.51
13	Electrical Equipment	53,100	91.520	18.81	3.23
14	Transport Equipment	50,330	86.747	5.78	1.00
15	Wood Products	32,677	56.320	17.77	3.05
16	Furniture	2,000	3.447	22.55	3.87
17	Paper	51,690	89.090	17.30	2.97
18	Rubber Products	3,668	6.322	4.53	0.78
19	Leather Products	19,676	33.913	18.98	3.26
20	Chemicals	95,015	163.763	3.70	0.64
21	Pharmaceuticals	9,211	15.876	28.39	4.87
22	Perfumes, Soaps	5,410	9.324	32.06	5.50
23	Plastics	38,859	66.975	88.25	15.14
24	Textiles	114,713	197.713	22.46	3.85
25	Clothing, Footwear	118,190	203.705	27.24	4.67
26	Food	343,037	591.240	10.73	1.84
27	Beverages	4,604	7.935	9.20	1.57
28	Tobacco Products	126	0.217	0.05	0.01
29	Printing	1,153	1.987	13.46	2.31
30	Other Industry	14,961	25.786	12.69	2.17
	Processing Industry	1,539,097	2,514.708	11.48	1.97

* Estimated exchange rate: Buy-sell average, Dec. 1983 = 580.199

** Subsidy rate corresponds to formula by Baumann & Camargo (1987), assuming that the value financed in 1983 is same for 1985.

$$SV = \frac{i_m - i}{1 + i_m} \times \frac{\text{Value of financing}}{\text{Exports of Mfg. Goods}}$$

#

$i_m = \text{market interest rate}$
 $i = \text{subsidized int. rates}$

SOURCE: Baumann & Moreira (1987), Baumann & Braga (1986), Trade Balance and Other Current Indicators (1986), Expanded Edition, FUNCEX.

TABLE 6
CREDIT-PREMIUM FOR EXPORTS BY TYPE OF INDUSTRIAL GOOD

US\$ millions

Code	Industrial Good Classification	Year					
		1980	1981	1982	1983	1984	1985
10	Non-metallic Minerals	8.79	3.11	24.67	17.60	5.22	0.486
11	Metallurgy	117.52	45.84	453.47	0.364	117.14	10.715
12	Mechanical Equipment	82.33	46.79	187.70	117.22	38.16	18.568
13	Electrical Equipment	45.27	47.44	195.42	163.48	49.008	20.171
14	Transport Equipment	341.25	361.54	522.83	395.61	110.054	80.377
15	Wood Products	12.55	8.29	21.23	14.739	4.68	0.295
16	Furniture	2.93	0.49	5.00	3.472	0.967	0.075
17	Paper	14.13	4.19	58.63	41.521	12.685	0.606
18	Rubber Products	11.50	4.14	32.49	32.656	19.396	10.167
19	Leather Products	7.89	2.35	13.37	7.585	2.413	0.118
20	Chemicals	52.83	6.07	54.47	37.471	16.58	0.922
21	Pharmaceuticals	8.34	1.20	3.52	2.063	0.616	0.05
22	Perfumes, Soaps	1.55	0.28	2.56	0.864	0.483	0.026
23	Plastics	7.54	1.76	21.00	153.86	12.031	0.502
24	Textiles	69.03	32.92	8.22	0.683	0.077	0.014
25	Clothing, Footwear	49.92	6.03	158.40	8.238	1.331	0.067
26	Food	79.88	40.51	10.46	5.862	2.102	0.147
27	Beverages	1.71	1.16	2.63	1.546	0.558	0.03
28	Tobacco Products	0.23	0.09	0.04	-	0.06	-
29	Printing	1.61	0.70	0.83	0.72	0.214	0.139
30	Other Industry	43.54	5.65	14.39	12.61	5.40	0.415
	Industry	960.27	620.55	1,791.33	1,234.7	399.98	143.80
	Non-industry	74.21	27.45	479.72	376.62	139.57	36.90
	Total	1,124.90	648.00	2,271.08	1,611.27	539.55	180.70

SOURCE: SFR and Purchase and Sales Movement, IPI, SFR, 1982-85.

TABLE 7
CONSOLIDATED FOREIGN EXCHANGE BALANCE FOR COMPANIES LINKED TO
REFLEX PROGRAMS FOR TRANSPORT EQUIPMENT INDUSTRY
1972 - 85

Transport Equip.	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
A. Exports (A-2)	5,647,428	77,474,881	226,841,353	342,846,214	449,514,755	680,793,353	777,574,815	327,526,836	1,348,842,861	1,935,456,835	1,508,121,893	1,588,844,772	1,625,464,968	2,198,471,148
B1 - Lined	2,302,357	49,712,289	212,446,232	332,888,317	431,843,784	568,975,859	735,185,154	884,228,754	1,299,666,556	1,885,817,882	1,492,765,568	1,486,427,866	1,682,567,879	2,182,185,371
A2 - Non-lined	3,425,223	7,761,792	13,595,123	19,125,827	18,478,769	31,997,494	43,289,661	43,895,282	57,375,845	49,644,953	27,355,499	22,216,906	22,897,089	36,275,577
B. Imports (B1, B2, B3, B4, B5)	15,457,189	174,138,817	266,166,974	284,593,414	292,138,689	328,816,511	392,669,866	348,487,285	638,377,911	431,581,441	284,488,747	481,274,297	575,884,694	685,347,681
B1 - Freight	1,389,345	22,843,595	59,272,853	54,283,842	62,214,184	86,347,233	97,276,949	71,768,278	136,826,637	199,894,456	184,221,558	182,524,557	235,255,818	292,114,212
B2 - Parts & Equip.	1,773,856	35,298,197	9,491,848	5,089,328	7,619,654	5,454,378	18,165,815	28,954,781	166,054,453	115,184,898	72,295,338	77,771,188	85,199,413	52,244,158
B3 - Spare Parts	-	4,876,229	28,948,991	14,642,468	93,459,373	166,939,633	179,148,273	198,987,897	259,819,345	255,926,537	488,689,382	178,228,693	218,174,249	765,443,657
B4 - Other Equip. Incentives	-	-	-	-	838,796	1,468,556	2,587,827	271,528	781,591	1,391,837	3,018,732	5,292,882	(17,114)	74,348
B5 - Other	12,384,748	113,228,823	266,484,284	211,817,548	128,618,484	87,854,788	97,828,882	32,423,191	84,866,884	62,184,713	61,579,722	34,297,857	37,656,136	74,371,257
C. Trade Balance (A-B)	(9,659,489)	(99,664,766)	(73,845,619)	(45,412,738)	(47,364,146)	(22,276,892)	(386,844,949)	(578,818,751)	(789,664,158)	(1,398,957,394)	(1,814,128,288)	(1,827,118,495)	(1,249,668,674)	(1,513,143,462)
D. Services (D1, D2, D3, D4, D5, D6)	(12,455,111)	(45,954,271)	(61,426,492)	(65,214,923)	(45,829,897)	(66,716,409)	(103,910,103)	(199,617,178)	(98,481,726)	(132,384,548)	(133,284,331)	(51,885,018)	(229,924,974)	(267,254,383)
D1 - Tech. Assist.	9,126,462	15,833,733	17,735,341	23,812,358	1,232,678	221,237	9,441,191	435,812	6,788,788	1,923,724	2,469,389	1,323,769	3,482,418	2,114,141
D2 - Com. & Contract	42,794	883,975	381,327	7,247,428	8,562,306	11,244,151	15,484,832	37,168,818	39,490,839	65,584,926	49,689,684	29,474,751	47,874,474	42,123,677
D3 - Profits & Dividends	-	-	-	-	14,234,455	43,923,154	58,238,618	156,088,621	43,274,638	42,899,399	17,175,541	19,251,857	184,254,127	173,874,718
D4 - Interest	1,246,143	15,278,277	18,744,659	17,958,928	17,351,616	22,140,422	29,851,888	38,447,763	48,283,655	121,814,364	124,944,816	86,287,895	88,732,794	88,191,538
D5 - Insurance & Freight	92,874	875,313	4,751,272	14,521,425	15,874,748	21,453,798	25,745,893	41,298,858	73,479,356	184,145,839	77,546,683	78,846,748	84,647,487	99,524,678
D6 - Other Services	2,121,566	11,087,351	17,163,038	14,954,882	14,193,981	11,580,899	4,678,368	7,866,814	13,723,758	8,136,176	16,672,518	(6,897,954)	9,789,138	68,574,347
E. Current Transactions (C-D)	(22,124,600)	(145,621,127)	(136,499,114)	(197,884)	(111,555,649)	(285,568,753)	(382,994,841)	(379,281,581)	(611,682,424)	(1,168,572,854)	(888,915,987)	(975,025,427)	(1,819,935,378)	(1,525,987,784)
F. Capital Movement (F1, F2, F3, F4)	13,876,849	71,435,249	64,435,285	18,549,329	118,648,893	128,161,424	108,224,357	215,298,888	363,261,795	499,859,821	233,998,817	175,834,514	165,189,787	56,448,651
F1 - Direct Investment	2,982,732	43,353,794	18,234,145	936,166	24,668,495	37,625,416	28,286,717	320,879,475	332,559,644	429,991,636	387,358,718	278,157,458	158,187,849	49,593,562
F2 - Loans	49,248,988	29,178,849	42,808,819	25,478,888	92,842,868	87,158,888	87,978,517	41,145,333	47,588,888	129,655,333	35,774,789	58,617,343	28,945,338	24,985,288
F3 - Financials	214,975	33,416,413	8,094,276	6,897,425	72,308,381	182,879,629	188,278,755	141,553,275	141,553,275	359,004,147	285,442,632	177,329,775	312,234,764	354,322,118
F4 - Acquisitions	39,223,078	34,982,967	5,455,138	21,955,262	71,738,263	99,783,621	166,183,642	211,241,693	178,328,866	358,785,287	353,888,832	331,474,268	328,272,246	374,483,725
G. Global Balance (E+F)	(9,627,751)	(73,985,897)	(72,063,829)	(18,746,133)	(229,623,942)	(333,722,177)	(483,218,198)	(594,099,661)	(974,924,219)	(1,644,738,733)	(1,114,913,994)	(1,256,239,971)	(1,182,845,845)	(1,384,317,753)

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