The Competitiveness of Capital-Goods Industries in Developing Countries

by

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In the past two decades developing countries have invested an increasing proportion of their resources in new industries and the infrastructure needed to support them. Many of the new industries have been light, simple and consumer-oriented. But a significant number of LDC's, mostly the larger or richer ones, have established heavy, more complex capital-goods industries. Both sectors of industry have been largely domestic-oriented, although there are some LDC's which have succeeded in sharply increasing their industrial exports, mostly of light and simple products.

The absence of export success may, in itself, cast a doubt on the efficiency and competitiveness of the new industries. The question has been raised in several quarters whether, in fact, the resources spent on industrialization have been well spent or whether the LDC's could have achieved more growth—in domestic product or export earnings—by a different design of industrialization or by more emphasis on other sectors. These questions are of special relevance for the newly-established capital-goods industries, because:

(1) Several LDC's which have not yet, or hardly, begun with heavy industrialization are appraising the case for establishing capital-goods industries.

(2) The investment outlays for capital-goods industry and related infrastructure are substantial and may impose severe strains on the country's finances, leading to inflation and eventual impairment of industrial efficiency.

(3) While there has been promising growth of exports of light industrial products in some countries, a breakthrough of exports from the *larger* LDC's (which have invested in heavy industry and had, by and large, the poorer indus-

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trial export performance) will require exports from the engineering and other capital-goods industries (*see* [3]). When competitive, these industries can obtain the large orders which will make for substantial and sustained export growth.

Questions about the competitiveness of industry in the LDC's and, more broadly, the success of import substitution as a development strategy have been extensively discussed in the literature. There is now a growing body of empirical material, in particular on Latin American and Indian experience, which can provide guidance to policy-makers in these countries as well as others which should benefit from this expenditure. This article adds to the empirical findings on competitiveness of capital-goods industries and then discusses the main explanatory factors underlying the price difference between LDC's and industrial countries.

THE NATURE AND LEVEL OF PROTECTION

The difference between LDC prices and prices of comparable competing supplies is maintained with the help of a wide variety of measures in the importing countries. The measures include outright prohibition, quantitative restrictions, multiple-exchange rates, and restrictions on procurement for public or infrastructure projects. One particular measure, common to many LDC's, is the requirement that no import licence be granted for products which are also locally produced unless it can be demonstrated that the local product does not suit the purpose of the user. The particular form or technique by which price differentials are maintained may over time have an impact on the competitiveness of industry. For the present purpose, the degree of protection will be measured by the differences in prices between imported and domestic products, thus combining into one yardstick the effect of various forms of protection.

It is now generally recognized that in calculating protection a distinction must be made between gross or nominal protection and net protection, *i.e.*, protection of value added after allowing for the excess cost (over international levels) of material inputs [4; 8; 9]. These two measures make it possible to single out material input costs as one important cost-raising factor.

Let, for the LDC producer:

p = price of final product
a = cost of imported materials
b = cost of domestic materials and supplies
c = value added
$p = a + b + c$

and $p' = a' + b' + c'$ the comparable prices and costs of a representative foreign producer, expressed in the same currency as p *etc.*, calculated at the applicable rate of exchange.

Gross protection is

$$T_1 = \frac{a + b + c}{a' + b' + c'} - 1.$$

Protection, assuming imported inputs at international prices, is

$$T_2 = \frac{a' + b + c}{a' + b' + c'} - 1.$$

Net protection is

$$T_3 = \frac{a' + b' + c}{a' + b' + c'} - 1.$$

It will be noted that net protection is similar to "effective" protection T_4, a measure which has recently been widely used (*e.g.*, [1]):

$$T_4 = \frac{c}{c'} - 1 = \frac{p'}{c'} . T_3$$

When either T_3 or T_4 is negative, but T_1 is positive, the industry can be export-competitive if appropriate allowance is made for excess input costs.

The differences of the first three measures of protection, all expressed as a proportion of the foreign price of the finished product, are:

$$T_1 - T_2 = T_a$$

$$T_2 - T_3 = T_b$$

where $T_a = \frac{a - a'}{p'}$ measures the excess of the cost of the import component of materials over international levels (*i.e.*, the prices paid by a representative foreign producer). This excess may be caused by duties or other taxes or by imperfections in international prices and purchases by LDC producers being on a smaller scale than their competitors.

$$T_b = \frac{b - b'}{p'}$$

measures the excess of prices of domestically produced material and supply inputs over comparable prices paid by producers in developed countries.

In testing the competitiveness of LDC capital-goods industries one would like to have calculations for a wide range of individual products at different

times and in different countries. Such results cannot be expected for some time, especially since these price data are not included in regular statistical series. Instead, one has to take resort to a comparison of fairly broad aggregates which may cover up points of relevance to certain policy decisions. An alternative would be comparisons over time even if possible for few products. This paper presents price calculations for four countries and 30 products in four countries as of approximately the same time (1966).

The accompanying table presents the observations of a, b, $\frac{a}{p}$, $\frac{b}{p}$, and the four measures of protection for products of the automotive, heavy electrical and mechanical equipment industries in Argentina, Brazil, Mexico and Pakistan[1].

Comparisons have been made between LDC prices of finished products and components with those prevailing in industrial countries (converted to a *c.i.f.* import basis). For the automotive industry, the comparison was between prices of home plants of international manufacturers and their subsidiaries. For the other industries, comparisons were made with import prices of finished products in the LDC's and material input prices of representative producers in the industrial countries (again often parent companies).

The data presented should be interpreted with care, considering in particular that:

(a) Price data from both developed countries and LDC's change over time. Most of the data presented here are based on information obtained in 1966.

(b) The coverage is limited and uneven.

(c) Firms may quote different prices for the same or nearly the same equipment depending on their particular relations with the customer or country. Price indications may vary with the source of the information, *e.g.*, as obtained from bid analysis or company interviews.

(d) In practice, selection of a price for the purpose of comparison must allow for many factors, including delivery time, financing terms, quality, performance, maintenance costs, *etc.*

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[1]This section draws on findings from field visits undertaken by Jack Baranson, Ayhan Gilingiroglu and Jose Datas-Panero of the IBRD staff. Most of these will be presented in more detail in [2] and [6]. Col. (11) of the table presents the domestic resource cost per unit of foreign exchange saved, or $T_5 = \frac{b + c}{p' - a'}$

Subject to these reservations one may draw the following general conclusions:

(1) The excess material costs account for a significant part of gross protection.

(2) The protection rates, either gross or net (T_1 or T_3), show considerable variation within individual countries.

(3) Eliminating the excess material costs reduces the extent of variation: the T_3 series has a smaller standard deviation (35.3) than the T_1 series (46.0).

(4) Among the countries included, industry in Argentina has the highest protection rates, both net and gross.

The effect of commonly recognized cost-raising factors on the variation in protection rates is less obvious and straightforward. The next section discusses these factors in the light of the data and the experience obtained in collecting the data and discussing them with the firms concerned.

MAJOR COST-RAISING FACTORS

Start-up Costs

In its early years an industrial firm is bound to incur special costs associated with getting established. These costs are training of the production workers, of the technical, administrative and supervisory force and management; expenses associated with the start-up of a new plant; the build-up of production volume to capacity level and adaptation of the production process to local conditions; the opening-up of supplier industries.

After an initial training-in period for labour, and management and break-in of plant, a firm producing heavy equipment will gradually upgrade the size and quality of its product—at least part of this process may be regarded as a starting-up of the plant.

In the LDC's start-up costs will tend to be higher and they may extend over a longer period of time than in advanced industrial nations. In some cases start-up costs may exceed the cost of fixed plant. The starting-up period cannot be defined with precision. It will vary with countries, industries, and even firms.

An argument can be made for treating start-up cost separately in calculating the cost of the industrial investment. Since much of this cost will be peculiar to the conditions in the LDC, it may also be argued that it should be treated somehow without being expressed in the price paid by final users or in the price used for comparison with import prices. Rarely, the start-up cost

INTERNATIONAL PRICE COMPARISONS OF SELECTED PRODUCTS

	Material and supplies[1] as % of final price			Import component	Price ratios domestic over international price[3]		Gross protection	Protection, assuming imported inputs at international price	Net protection, *i.e.* assuming all material & supply inputs at international prices	Effective protection (percentage premium of value added of domestic industry over that of representative international manufacturer)	Domestic resource cost (per unit of foreign exchange saved)
	Total	Domestic	Imported[2]	[Col. (3) as % of (1)]	Domestic materials	Imported materials	Percentage of foreign price[4]				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Small Trucks[a]											
Argentina	61	49	12	19.7	2.34	2.43	80	67	17	31	1.74
Brazil	57	53	4	7.0	1.54	2.25	28	25	2	3	1.26
Mexico	71	39	32	45.1	2.66	2.03	52	27	—10	—18	1.36
Small Trucks[b]											
Argentina	74	62	12	16.2	3.48	2.50	104	90	—1	—2	1.99
Brazil	72	68	4	5.6	2.32	2.50	50	46.5	—11	—20	1.48
Mexico	75	43	32	42.7	2.23	2.00	30	10	—20	—38	1.07
Mechanical Industry											
Argentina											
Diesel engine 225/280 HP	37	22	15	40.5	2.43	1.09	99	97	71	132	2.35
Diesel engine 410/685 HP	40	22	18	45.0	3.30	1.12	133	129	93	200	3.07
Tractor Deca A-55	47	42	5	10.6	3.44	1.11	207	205	114	233	3.38
Mexico											
Excavators	45	25	20	44.0	1.30	1.09	21	19	12	22	1.25
Crushers	28	8	20	71.4	1.32	1.07	24	22	20	28	1.29
Road rollers	41	24	17	41.5	1.57	1.11	43	41	29	50	1.52
Motor graders	49	23	26	53.1	1.40	1.11	25	23	15	30	1.33
Boilers	40	24	16	40.0	1.40	1.11	40	38	28	51	1.48
Heavy Electrical Equipment											
Argentina											
Generators:											
(1) 2109 KVA	39.0	15.3	23.7	61.0	2.13	1.49	150.0	131.0	112.0	260.0	4.95
(2) 4000 KVA	33.5	15.3	18.6	55.0	1.68	1.42	81.0	71.0	59.8	100.0	1.83
Brazil											
Transformers 33 MVA 220/88 KV	51.8	12.6	39.2	75.7	1.28	1.64	17.0	—2.0	—5.9	—9.9	1.5
Generators 42 MVA 13.8 KV 100 rpm	45.9	11.6	34.3	74.9	1.38	1.09	46.0	42.0	36.5	77.0	2.0
Motors 700 HP 6.9 KV	19.3	12.5	6.8	35.2	1.65	1.00	50.0	50.0	42.0	44.0	1.6
Generators 1500 KVA 380 V 900 rpm	50.3	25.7	24.6	48.8	1.56	1.37	6.1	—1.5	—11.3	—20.4	1.1
Mexico											
Transformers:											
(1) 25/33 MVA 161/69 KV	80.6	40.2	40.4	50.1	1.61	1.16	20.0	13.0	—5.0	—17.6	1.38
(2) 12.5 MVA 115/6.9 KV	79.5	34.1	45.4	57.0	1.53	1.20	—10.0	—17.0	—27.6	—59.9	.83
(3) 40/55 MVA 115/66/13.8 KV	80.9	25.7	55.2	68.4	1.30	1.34	40.0	20.0	11.1	78.4	2.77
(4) 92 MVA 230/13.2 KV	77.4	22.0	55.4	71.6	1.66	1.22	28.1	15.0	4.0	16.4	1.97
Switch panels 2400 V 3 phase	78.9	29.2	49.7	63.1	1.25	1.39	25.0	16.0	8.6	43.2	2.06
Motor control panels 480 V 3 phase	73.9	60.3	13.6	19.5	1.47	1.08	45.0	45.0	17.3	54.3	1.56
Distribution tables two sections	79.1	19.9	59.2	74.8	1.96	1.32	45.0	24.0	9.8	47.8	4.19
Current transformer	17.1	13.0	4.1	56.3	1.36	1.00	40.0	40.0	35.0	43.1	1.57
Pakistan											
Motors 20 HP 380/220 V	64.9	23.2	41.7	64.3	2.17	1.34	71.0	52.0	29.0	92.0	3.3
Transformers:											
(1) 25 KVA 11/0.4 KV	46.6	26.8	19.8	42.4	2.48	1.15	48.8	45.0	21.2	36.0	1.81
(2) 50 KVA 11/0.4 KV	53.2	21.6	31.6	59.3	1.93	1.18	77.7	68.0	50.0	148.2	2.7

NOTE: The definitions of columns (7)—(11) are discussed in the text.

[1]Supplies include electricity, fuel, lubricants, office supplies and rent.
[2]Including indirect, *i.e.*, import component of domestic inputs and depreciation unless otherwise specified.
[3]Domestic prices include taxes unless otherwise indicated.
[4]International price (C.I.F., port of entry, unless otherwise indicated).

[a]Foreign prices F.O.B. Foreign and domestic prices excluding indirect taxes.
[b]Prices, C.I.F., and including indirect taxes.

can be written off by the parent firm. Part or all of the cost may be absorbed by the LDC government, for example, in the form of an outright subsidy, exemption from taxes, a participation in equity, or a loan on concessionary terms. If no special arrangements are made, the start-up costs will increase the product's price during the early years of the firm: the protection in those years may need to be substantial.

The impact of start-up costs is difficult to trace in the data. Most of the firms presented are in the latter part of the start-up period, having been in production at least 3 or 4 years. Most of them are also receiving special financing to cover at least part of the start-up costs — *e.g.*, in the form of tax holidays (*e.g.*, Mexico) or financing at subsidized interest rates (*e.g.*, Brazil). No comparative analysis was made of the arrangements for financing start-up cost. A substantial part was probably absorbed by the parent company which, however, will expect a return on its investment in later years.

Apparently Brazilian truck manufacturers received domestic inputs at better prices than their counterparts in Argentina or Mexico. The former were further ahead in the start-up period. In Mr. Hirschman's terminology there was more backward linkage in Brazil. The cost of establishing backward linkage is part of the start-up cost. Hirschman [7] discusses some deep-seated social reasons for limited backward linkages, whose impact may stretch well beyond any reasonable start-up period and will keep input costs high. Additional reasons why input costs may be high will be discussed next.

Cost of Material Inputs

An important determinant of input costs ($T_a + T_b$) may be the relative importance of the import component since imports are often cheaper than domestic products. Even so, imported materials may be expensive when compared with prices paid by competing industries in developed countries. At times the smaller LDC firms may have to pay for smaller lots than their much larger counterparts in the industrial countries. International firms may control the price of their inputs and charge prices for industrial components which appear high when compared with the cost of the final product of which they are a part. The premium thus charged may be higher as the imported components are reduced[2]. At the same time, material cost will go up as domestic producers switch to domestic supplies. In some industries the cost differential rises sharply as the domestic content begins to include the more complex components. The size of the domestic component will vary with the availability of local raw materials and components but in many cases is pushed up regardless of cost consideration by government requirements. Thus, the excess of LDC prices over imports may be directly related to the size of the domestic component.

[2]In the trade the premium takes the form of a "deletion allowance".

The relatively high cost of material inputs in the truck industry makes for a sharp difference between gross and net protection. In some cases the latter is negative, suggesting that the industry can be competitive on export markets. In the production of trucks, domestic costs become especially high after the import component falls below 35 per cent, both because of the deletion allowance and the excess costs of engine, driveline and sheet metal, especially in Argentina (*cf.*, Baranson [2]).

A striking feature is the high cost of imported inputs in the electrical equipment industry, caused by high ex-duty prices paid for raw material inputs (*e.g.*, electrolytic copper).

It is conceivable that the high cost of inputs ($T_a + T_b$) turns a low net protection (T_3) into a high gross protection (T_1). As noted, this appears to be the case with the truck industry. But in a larger number of cases both T_1 and T_3 are high (or low) at the same time, or — put in another way — high net protection and high input costs go together. The data suggest a high correlation between T_3 and T_1 and between T_3 and $(T_a + T_b)$[3]. It would seem that, in intercountry comparisons, singling out input cost as a cost-raising factor in a way begs the question. One suspects that in some situations the factors causing net protection to be high also operate on input costs. These factors might be volume of production, or exchange rate policy and the general level of protection, which are taken up next.

Volume of Production

Economies of scale, important for several products, are hard to come by in the relatively small markets of most LDC's. In many lines there are few plant and product designs which will make for efficient operations at low volumes. Export growth, a crucial way of widening markets, is often handicapped by excessive domestic orientation of industry. A comparison of the electrical equipment industries of Austria and Argentina is telling. These industries have markets of similar size in these countries. Austria exports two-thirds of the output of its industry; Argentina exports none. None of the firms for which data are presented in our table exported to any significant extent.

The structure of the industry may further limit the volume of production of individual firms. In fact, some countries have far too many firms, all of them too small for efficiency. They began by providing home producers with heavy protection. Then they sought to obtain competition by permitting several firms under the protection umbrella. The final result has often been

[3]The correlation coefficient between the T_3 and $(T_a + T_b)$ series is $R = .7018$; that between T_1 and T_3 is .922. While these are based on intercountry comparisons, it is noteworthy that Lewis and Guisinger found that for Pakistan a ranking based on gross protection would provide a reasonable approximation for one based on effective protection (*cf.*, [10]).

high production cost and low capacity utilization. An almost classic example is the Argentine automobile industry in which there are 13 manufacturers producing 68 models.

Related to economies of scale is the better capacity of larger firms to adopt and assimilate advanced technology.

It is well known that economies of scale are different for different products. Least affected are the more complex products, made to specific order such as heavy electric generators. Transformers are another example of a product which may have modest economies of scale. Because of the variety of products covered in the data, it is not possible to pin-point precisely the impact of volume.

In several industries the cost of fixed plant per unit of product was relatively low. Improvement in capacity utilization, frequently low, would reduce the capital cost. However, for many products, this factor was outweighed by the impact of high (domestic and imported) material cost.

Exchange-Rate Policy

The importance of appropriate exchange-rate policy has been discussed extensively in the literature. From the viewpoint of making industrial products export-viable, it is the basic export rate of exchange which counts. Thus, the maintenance of an overvalued rate is not in the interest of achieving favourable cost competitiveness. This situation has tended to prevail in some LDC's which have emphasized heavy industrialization, either because overvaluation was pursued as a matter of industrialization policy (*see, e.g.*, [2]) or the exchange rate lagged behind inflationary price increases which accompanied the industrialization efforts.

The exchange rate must, of course, be considered in conjunction with prevailing charges and subsidies on imports and exports. The general level of protection will depend on the level at which the exchange rate is fixed. In some cases the basic rate of exchange may be accompanied by surcharges or uniform duties applicable to broad import categories, while the basic rate applies to most exports. Such practices are not equivalent to maintaining a more depreciated basic rate and doing without some or all of the surcharge. In the former case the basic rate is lower and works as a penalty on exports. LDC's producing capital goods would be especially adversely affected, since in their present phase of development they are able to diversify by increasing exports of new products, both manufactured and agricultural, which may be particularly sensitive to a more favourable exchange rate.

A higher level of general protection may itself be a cause of industrial inefficiency. Protection, especially when exercised through quantitative con-

trols, will shield industry from outside competition and give it an inward orientation. This may be reflected in the structure of industry, small production volumes, high profits, tardiness in adopting new techniques, *etc.*

Of the countries considered, Argentina clearly had an overvalued basic rate at the time the data was collected. It subsequently devalued by 41 per cent in 1967. This factor accounts for a substantial part of the high protection rates observed in Argentina. In Brazil, exchange-rate policy was to adjust the rate with domestic price changes, but the policy was implemented step-wise (about every 12 months), while inflation proceeded at 25 per cent-40 per cent per annum, so that the "realism" of the exchange-rate was bound to erode even in a period of months. On the other hand, as part of Brazil's stabilization efforts manufacturers attempted to keep their own prices stable even though the general trend was upward.

Other Factors

The impact of the factors enumerated thus far must be seen against the background of others which may have affected the observations to some extent.

Besides exchange rates and protection, LDC policies may influence costs through the impact of inflation and demand stability. LDC governments must often take measures to moderate the pace of expansion. These measures, affecting public expenditure or credit extension, impinge heavily on the demand for capital goods. LDC industries, confining their sales to the home market, are not able to offset domestic fluctuations with larger exports. Capital-goods industries in the LDC's have probably been subject to more severe fluctuations than their counterparts in industrial countries. These fluctuations have aggravated the problem of excess capacity.

High protection rates (as defined in this paper) may be associated with (or cause) high profits per unit of product. There was some evidence of this in the cost breakdown underlying the data presented.

The cost of capital (per unit of output) varied greatly from country to country or product to product. It will depend on the capital intensiveness of the production process. The real interest rate in LDC's is, of course, at least as high as in developed countries. The amount of working capital required may be high in the LDC's because of the absence of a dependable raw material supply (both domestic and imported); its costs may be high particularly as the manufacturer — squeezed by inflation with costs rising faster than finished product prices — must rely on outside financing. Furthermore, financing of finished products, indispensable for capital equipment sales, may be more expensive than in developed countries, if facilities for such financing exist at all.

The costs per worker of supervisory and production staff are generally below those in industrialized countries. But this advantage may be offset by higher labour requirements so that labour costs per unit of output may be close to or above those in industrial countries[4]. The share of wages (and sometimes also profits) in total costs may rise in the inflationary process — this may account for the relatively high non-material component of the Argentine products on which observations were made.

It has not been possible to make a comparison of wage share in total cost. The data available often pertain to firms which in turn have greatly different product mixes.

The LDC cost of selling and distribution (per unit of output) also is usually above (some times double) that in industrial countries.

CONCLUDING REMARKS

The price differential between LDC's and industrial countries is influenced by many factors. These factors or their combinations apply in widely varying intensities. Consequently, there are wide differences in price differentials for individual products among countries or for various products in individual countries. No hard and fast rules seem to exist whereby countries or industries can be classified as to their competitiveness in the manufacture of capital goods.

Any new firm or industry must incur special costs in getting established. Most of these costs are commonly associated with *infant industries*: the training of labour and management, the working-in of the plant and adaptation of the production process to local conditions, opening of supplier and marketing channels, development of supplier industries, *etc.* In LDC's these costs are bound to be higher and may be stretched over a longer period than in industrial countries with whose products the LDC firm must compete. Unless special provisions are made to finance start-up costs, they will be reflected in the final price: the price differential between local and imported products will then often be substantial. The level and duration of start-up costs vary with the individual firm, industry and country.

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[4]For example, following are data on direct labour requirements of three Brazilian items shown in the table (*cf.*, [6]):

Equipment	*Man-hours required in Brazil*	*Man-hours required in industrial countries*	*Ratios*
Diesel generator 1500 kva; 900 rpm	1850	600	3.1
Transformer 33 kva — 220/88 kv	9880	4100	2.4
Water-wheel generator 42 mva — 13820 v	28000	16000	1.75

After an initial starting-up period the costs of establishing the industry will be eliminated or at least greatly reduced. The prices of the final product will become more in line with import prices. However, inherent in the basic conditions or prevailing policies of many LDC's are several factors which may keep their prices well above comparable import prices.

These factors fall into two broad categories. The first are those factors which may be influenced by appropriate changes in *government policy*, *e.g.*, exchange-rate adjustment, less reliance on direct controls, moderation in domestic content requirements, stabilization of public procurement and investment credit. Secondly, there are factors, associated with the hard core infant economy argument, which will change only as the economy becomes more developed: scarcity of skills, management and capital, high cost of services, supplies and material inputs, high-risk factors, lagging technology, low production volumes. There will be a grey area between these two categories which may be narrowed by government policies, but which will also be affected by the attitude or actions of industry itself and the progress in establishing the basic conditions for modern industry. A further consideration is the increasing efficiency of some industries in developed countries, reflected in falling prices during the past 5-10 years.

As the start-up period is completed, infant economy factors will tend to outweigh the factors associated with a particular infant industry. Moreover, factors considered *internal* to a particular firm may also reflect country-wide conditions and affect other firms and industries.

Generally, the more competitive LDC industries are those which have effectively incurred the initial costs of getting established, are located in countries where there is a reasonably realistic exchange rate and the number of firms in the industry does not cause unduly low production volumes in individual firms. Even where this combination of favourable factors prevails, infant conomy factors may impinge on LDC competitiveness and it is not uncommon to find price differentials up to 15-25 per cent.

Much empirical work currently in progress is based on industry aggregates. However, the data on individual products presented here suggest great variation within the industries. It is worthwhile to check the findings based on industry studies against those pertaining to individual products. Perhaps one ought to be more cautious about broad tariff-policy conclusions based on industry aggregates. Certainly, proposals for individual tariffs must be based on studies of individual products.

The data in this paper make possible some intercountry comparisons for similar products. Although industries in the countries selected are in different stages of development, the differences in protection observed are caused also

by other factors, such as the structure of industry and exchange-rate policy. The conclusions should be substantiated further by studies of the development of industry or production of individual products *over a period of time.* After a five-year lapse it would be worthwhile to take a repeat look at the firms and products studied here.

The high cost of inputs is an important cost-raising factor for some (*e.g.*, the automotive) but not all industries studied here. The data suggest a close correlation between net and gross protection and between the net protection of finished goods and the protection of inputs used in the production of these finished goods. This points to the importance of factors operating on the whole industrial sector or even the economy. This is of particular relevance to the formulation of "minimum conditions" which, as suggested above, should refer in part to conditions for the economy as a whole.

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