Comments on "Planning Experience in Pakistan"

by

NURUL ISLAM*

Pakistan's industrial achievement in a relatively short span of time and in the light of the experience of the similarly placed countries has been favourably commented upon by the observers and analysts, both at home and abroad. Dr. M. N. Huda, in his Conference Address, refers to this impressive record of Pakistan's progress in the course of which many industries have grown from the state of infancy and that of teething troubles to a state of viability and adulthood [2, Pp. 10-11]. Indeed, the rapid growth of the manufactured exports from Pakistan in recent years may be considered as an indication of the extent to which the industrial progress in Pakistan has been successful. For the future, he rightly advocates an aggressive but selective industrialization based on both the home and export markets. Moreover, his observations do emphasize the need for increasing the productivity of the existing industries as well as for a careful application of the criterion of efficiency in the selection of the future pattern of industrialization. This note seeks to indicate the interrelationship between the industrial efficiency and the export performance; it draws attention to a few neglected aspects of the recent studies on industrial efficiency in Pakistan such as the intra-firm differences in efficiency. It explores the rationale and the implications of 'infant-industry" protection for industrialization in Pakistan.

Pakistan's manufactured exports have expanded considerably in the last few years, *i.e.*, at about 15 per cent per annum between 1960/61 and 1966/67 [5]. But the increase in the manufactured exports is not necessarily an incontrovertible indication of the competitive efficiency of the Pakistani industries. Since 1959/60, when the rate of growth of the exports of manufactured goods was accelerated, they have been the recipient of considerable subsidies. In addition to the export bonus and export-performance licensing, they are entitled to such additional incentives as the exemption from taxes on the imported components, the exemption from the sales tax and excise duties which are levied on the domestic sales, rebates of the income tax on the profits earned from the export sales and concessional freight rates on exports, *etc.*

---

*Professor Nurul Islam is the Director of the Pakistan Institute of Development Economics.

On the basis of the Export Bonus Scheme alone, the subsidy in 1966/67, worked out at 31 per cent of the *f.o.b.* value of exports for the items earning 20 per cent bonus (excluding the jute manufactures) and at 47 per cent of the *f.o.b.* value of exports for the items earning 30 per cent bonus. For some miscellaneous manufactured goods with the higher bonus rates the extent of subsidy was about 62 per cent or more of the *f.o.b.* value of exports. During 1967/68, with an increase in both the bonus rates and the premiums on the bonus vouchers, the magnitude of subsidy has gone up to the minimum of 54 per cent and maximum of 72 per cent respectively, excepting in the case of the jute textiles. The subsidy works out at 36 per cent during 1967/68 in the case of the jute manufacturers and the cotton textiles are getting a subsidy at the rate of 56 per cent of the *f.o.b.* value of exports. The "effective" subsidy provided by the export-performance licensing varies between 4 per cent of the *f.o.b.* value of those exports, which receive 10 per cent of the exports as the export-performance licences, and 20 per cent of the *f.o.b.* value of the exports, which receive 50 per cent. The export-performance licences have earned, according to past experiences, 40 per cent premium, if sold in the open market, on such licences. The import co-efficients, according to one estimate, range from 2.5 per cent of the output for 21 per cent of the industries to 22.5 per cent of the output for 32 per cent of the industries and to 37.5 per cent for about 5 per cent of the industries [7, pp. VI-22]. During 1965/66, 90 industries received export-performance licensing to an extent varying from 10 to 50 per cent of the export earnings. More than half of them received export-performance licensing to the extent of 50 per cent of the *f.o.b.* value of exports [14]. However, during 1967/68 the maximum export-performance licensing has been reduced from 50 per cent to 30 per cent of the *f.o.b.* value of exports, which has reduced the maximum subsidy from 20 per cent to 12 per cent of the *f.o.b.* value of exports. Moreover, the exemption from the import duties on the import components provides a subsidy at the minimum of 1 per cent of the *f.o.b.* value of exports, for those with an import coefficient of 2.5 per cent and the minimum rate of import duty. At the maximum it works at 30.4 per cent of the *f.o.b.* value of exports for those with an import coefficient of 30.7 per cent and the maximum rate of import duty.

Thus considering the export bonus, the export-performance licensing and the exemption of taxes on the import component of exports, the magnitude of the total export subsidy in 1966/67 varied between the minimum of 60 per cent of the *f.o.b.* value of exports and the maximum of about 110 per cent of the *f.o.b.* value of exports in the case of few minor exports. To this must be added the exemption from the indirect taxes on the domestic inputs, which have varied between 0.1 per cent and 8 per cent of the gross value of the output, and the rebate on the income tax on the earnings from exports. Until 1966/67 the industries exporting between 10 per cent and 20 per cent of their output were entitled to a rebate of 10 per cent on the income tax on the export earnings whereas the maximum rate of rebate of 20 per cent was allowed to the industries

exporting more than 30 per cent of their output [11, Pp. 5-6]. Moreover, the industries exporting more than 30 per cent of output were eligible to tax holidays in the initial stages for a number of years depending upon their location. The minimum and maximum rates of rebate on income tax have been increased to 15 and 25 per cent respectively during 1967/68 [13]. On the basis of 30 per cent tax on the corporate income, the implicit subsidy ranged between 0.2 per cent and 1.2 per cent of the *f.o.b.* value of exports during 1966/67 for those industries exporting the minimum of 10 per cent and the maximum of 30 per cent of their output.

It can be argued, however, that the various forms of indirect export subsidies only offset the relative overvaluation of the Pakistan rupee and do not, therefore, indicate a measure of the cost disadvantage of the Pakistan industry *vis-a-vis* the prices of competing goods traded abroad. But, at the same time, it needs to be pointed out that the effective import rate which applies to the import content of exports, both under the normal licensing and the export-performance licensing is the official exchange rate, *i.e.*, the lowest import rate. This implies that a uniform devaluation to the extent of the present magnitude of export subsidies will raise the cost of imported inputs and thus reduce the effective export rate below the present level. A devaluation of 50 per cent is likely to imply, according to one estimate, on an average only a 33.3-per-cent decrease in the export price in foreign currency, if the export prices depend upon the cost of production only and if the wages and profits remain constant. If wages and profits go up consequently on devaluation, and, say, constitute the same proportion of gross output as before, the export price may go down only to the maximum extent of 27.6 per cent [15]. Whether the magnitude of subsidy received by the manufactured exports at present merely offsets the relative over-valuation of exchange rate and does not provide, in addition, a compensation for the high cost of the domestic industries is difficult to determine, unless the equilibrium or shadow rate of exchange for Pakistan is known. There is, how-ever, evidence that the price differentials as measured by the ratios of the domes-tic wholesale prices to the *c.i.f.* prices of the competing imported goods in many cases are higher than the amount of export subsidy provided by the Export Bonus Scheme only. This is seen below for the year 1963/64[1].

Undoubtedly, it is quite plausible that within the above broad groups of industries there are specific industries which may have lower or higher price differentials; moreover, the price differentials do not cover all the commodities in each group and are often based upon a small sample of commodities in each group. With a different sample, price differentials would be different. Another set of price differentials obtained for a different time period, *i.e.*, 1951-66 from a

___

[1]Price differentials for the later year are not available. Price differentials given by Lewis [7, Tables 32 and 33] exclude indirect taxes on output. *See* also [8] .

different study and for a different composition of the individual industrial groups or products confirms this [6].

Industry	Price differential[2]
Footwear	54
Soap	25
Matches	44
Paper products	139
Rubber products	113
Metal products	57
Machinery and equipment	62
Electrical equipment	53
Transport equipment	113

If one takes into account the subsidies due to the other export-promotion measures the magnitude of subsidy will certainly be higher. The maximum subsidy goes up to 125 per cent of the *f.o.b.* for some manufactured exports in 1963/64 [5]. But there are still cases where the price differentials exceed considerably the extent of the maximum subsidy, at least in the case of eight groups of industries such as sugar, silk and artificial silk, rubber products, non-metallic mineral products, machinery and equipment, electrical machinery and equipment and transport equipment and miscellaneous industries. The magnitude of export subsidy has increased during 1967/68 owing to an increase in the bonus rates from 20 and 30 per cent to 30 and 40 per cent respectively, coupled with an increase in the rates of premium on the bonus vouchers from 150 per cent up to 170-180 per cent.

This raises the maximum subsidy from all sources to about 140 per cent which still falls short of the price differentials in the case of a number of industries. It is necessary to investigate in this context the circumstances under which exports may take place, even though the price differential exceeds the export subsidy.

There is an important difference between the price differentials as presented in Tables I and II; the former represents the ratio of the domestic wholesale price to the *c.i.f.* price, and the latter represents the ratio of the ex-factory to the *c.i.f.* price. The domestic wholesale price is different from the domestic ex-factory price, including normal or going profit margin, of the "representative

---

[2]Insofar as the price differentials relate to different years, scattered over the 16-year period, a strict comparison with the price differentials of the year 1963/64 is not possible.

TABLE I

Industries producing primarily	Price differential (1963/64)	Export subsidy from Export Bonus Scheme (1963/64)
Consumption Goods		
Sugar refining	322	45
Edible oils	100	45
Tea manufacturing	35	0
Cotton textiles	44	30—45
Silk and artificial silk textiles	323	45
Footwear	63	45
Printing and publishing	28	45
Soaps	81	45
Matches	27	45
Miscellaneous manufacturing	441	45
Plastic goods	223	45
Sports goods	60	45
Pens and pencils	140	45
Intermediate Goods		
Jute textiles	36	20
Paper products	87	45
Leather products (tanning)	46	45
Rubber products	142	45
Fertilizer	15	45
Petroleum products	192	45
Investment and Related Goods		
Non-metallic mineral products	217	45
cement	44	45
Basic metals	60	45
Metal products	88	45
Machinery and equipment	149	45
Sewing machines	60	45
Others		
Electric machinery and equipment	357	45
Electric appliances	286	45
Transport equipment	245	45
Motor vehicles	234	45

firm or firms"[3].   In the first place, the wholesale price includes the profit margin of the wholesale trader.   Secondly, when the ex-factory prices of the several individual firms are available the price differentials in Table II are based on an *average* of the ex-factory prices of the different firms producing the same commodity.   The domestic wholesale price in this case may represent either the ex-factory price of the marginal producers or the wholesaler's average price of purchase from the manufacturers, plus his own profit margin.   Thus the differentials between the international price and domestic cost would be higher than the differential between the international and domestic prices.   The wholesaler, to the extent that he sells the products of all at the same wholesale price, which is based on an average of the prices of the individual producers, absorbs a part of the excess cost of the less efficient firms[4].

It remains necessary to explain why an industry may undertake exports even when the amount of export subsidy does not fully compensate for the excess of the domestic wholesale price (the average ex-factory price, if the manufacturer is also the exporter) over the foreign price.   In the first place the domestic market is imperfect.   Under the conditions of monopolistic competition the ex-factory prices and the price differential based on them include the excess or abnormal profits, which are more than the normal profits in a competitive market.

Once the existence of the non-competitive conditions in the domestic market is recognized, the domestic prices diverge from the costs of the individual firms, depending upon the degree of imperfections in the market for the product. The differential between the international price and domestic price would be higher than the differential between the international price and the domestic costs.   A comparison between the magnitude of the export subsidy and the price differential, estimated on the basis of the domestic price rather than the *ex-factory costs*, will no longer provide a measure either of the cost disadvantage of the domestic industry or of the profitability and the international competitiveness of exports.   Moreover, the situation is further complicated by the possibility of price discrimination between the domestic and foreign markets.   The conditions for a profitable price discrimination between the foreign and domestic sales seem to exist in Pakistan.   The domestic market is non-competitive with a few firms and with a lack of free entry, which is regulated by the government, and is sheltered by tariffs and quantitative restrictions on imports.   The quantitative import restrictions and the prevention of the resale of exports in the domestic market, separate the two markets.   The foreign demand curve facing the domestic manufacturers and exporters is considerably more elastic than the

---

[3]As indentified by the Tariff Commission whose investigations provide the source for the second set of price differentials.

[4]The manufacturers in Pakistan frequently undertake exporting abroad without the intervention of an intermediary or trader: the various export-promotion measures relate directly to the manufacturer-cum-exporter and tend to strengthen this tendency.

domestic demand. Under these circumstances the export price will be lower than the price in the domestic market. If there is an export subsidy, the export price will be lower than the domestic price by a greater extent than that accounted for by the export subsidy. In the absence of price discrimination, the following situation will hold true. The domestic price would be equal to the foreign price plus the export subsidy per unit of export sales, even if the domestic market is imperfect. If the foreign demand is perfectly elastic and there is no price discrimination, there will be no excess profits even on the domestic sales and the export subsidy represents the difference between the foreign price or costs and the domestic costs. If the foreign demand is less than perfectly elastic, the industry will be able to enjoy excess profits on the total sales with uniform price in both the markets. In the latter case, the price differential between the foreign and the domestic price, which is equal to the export subsidy, does not indicate the extent of cost disadvantage; what is necessary to know for estimating the comparative costs is the excess of the foreign price over the domestic cost.

In a situation in which the foreign demand is perfectly elastic and the domestic market is imperfect and there is price discrimination, the receipts for unit of export sale, *i.e.*, the export price plus the per-unit export subsidy, may be less than, equal to, or more than the domestic costs of production; in the first case the losses on the foreign sales may still be more than offset by the excess profits in the domestic market and in the last case, the excess profits will be further augmented by the profits on the sales in the domestic market. The first alternative, *i.e.*, selling at a loss in the export market, however, is an extreme case; it assumes either that such losses are only short-term phenomena so that the exporter covers more than the variable costs but not the total average costs, *i.e.*, both the fixed and variable costs, or that he does not maximize profits in the strict sense in the interest of other advantages, as discussed later on, such as a favourable treatment, which the government meets out to a successful exporting firm, in terms of exploiting the highly profitable domestic market. If the total receipts per unit of export, including the export subsidy, fall short of the domestic costs, the profitability of exports depends upon *1*) the relative sales in the foreign and domestic markets and *2*) the excess of the domestic price over the unit costs, on the one hand, and the excess of unit cost over the export receipts, per unit, on the other. Under price discrimination, the domestic price will be higher and the domestic sales will be smaller than what they otherwise would be in the absence of price discrimination. With price discrimination, it is not only that the price differential no longer measures the excess of the domestic cost over the foreign price but also that the price differential is always higher than the export subsidy. If the export subsidy just covers the excess of the domestic cost over the export price, then it necessarily measures the cost disadvantage and the price differential is greater than the cost disadvantage. If losses are made on the foreign sales, then the price differential may or may not exceed the difference between cost and foreign price. Thus in the presence

of imperfections in the domestic market and the possibility of profitable price discrimination between the foreign and domestic markets, an industry can undertake exports, irrespective of whether the export subsidy compensates the difference between the international price and the *domestic cost.*

Even in the absence of price discrimination, there is the possibility of exports from an industry whose *average* ex-factory price, estimated as an average of the ex-factory prices of the individual firms, exceeds international price by more than the amount of export subsidy. One can think of two cases; firstly, the "average" ex-factory price is higher than the ex-factory price (*i.e.,* selling price) of the most efficient firms within the industry (because of full cost pricing based upon conventional profit margin) so that the amount of export subsidy may equal or more than offset the difference between the domestic ex-factory price and export price of the more efficient firms; secondly, the more efficient firms charge the same price as the "average" ex-factory price. In this case it earns a higher rate of profit than that of the less efficient producer. In fact the most efficient firms may also sell in the domestic market at the same price as the ex-factory price of the marginal producer and thus end up with substantial profits; in this case it may accept a lower profit margin on the foreign sales than on the domestic sales. This is very similar to the case of price discrimination insofar as the average receipts (including subsidy) per unit of export sale fall short of the domestic price, but it is also different in the sense that even the marginal receipts (including subsidy) from foreign sale are less than the marginal receipts in the domestic market either because the firm does not maximize profits or because there are other advantages of being in the export market, which compensate for any shortfall from the maximum possible profits. In a climate of intensive export drive, pursued by the government, coupled with a compulsory fixation of export quotas for many manufactured items, an exporter-manufacturer is likely to gain more in the long-run by performing well in the export market than the short-run profits which it may sacrifice. The advantages of performing well in the export market, one of the major economic policy objectives of the government, which retains considerable power of control and patronage over the operations of the individual firms, extending from the licensing of the capital equipment and the imported materials for production for the domestic market to the provision of credit facilities and taxes, *etc.,* can hardly be exaggerated.

TABLE II

PERCENTAGE EXCESS OF DOMESTIC PRICE OVER COMPETING C.I.F. PRICE

	Lowest	Highest	Percentage difference between highest and lowest
Fruit preserving	40	63	58
Diesel oil engine			
Product 1	63	93	48
Product 2	29	64	121
Product 3	189	250	32
Product 4	32	55	72
Soap	—20	60	400
Matches	26	31	19
Textile powerloom			
Product 1	29	43	48
Product 2	25	44	76
Electric Meter			
Product 1	33	54	64
Product 2	41	82	100
Product 3	09	82	811
Rubber vacuum brake fittings			
Product 1	0	96	—
Product 2	20	24	20
Hurricane lanterns	—36	—29	19
Dry cell and battery	26	74	185
Aluminium and brass utensils	11	55	400
Wire netting			
Product 1	42	81	93
Product 2	37	78	111
Electric bulb			
Product 1	39	64	64
Product 2	31	37	19

Supplementary data collected from the reports of the Tariff Commission on the individual industries in course of a study of the comparative costs of the Pakistan industries [6] indicate the existence of considerable differences in the relative efficiency or the comparative costs. The different firms within the

same industry have different price ratios for their products *vis-a-vis* the competitive imports. For a number of industries on which the data are available, the lowest and the highest price ratios, based on the prices of the highest and lowest cost firms, are given below.

The products produced by the different firms are the same qualitatively and in terms of physical properties. The ex-factory prices of the different firms, as estimated by the Tariff Commission, are based on their respective costs of production, and an additional percentage for profits, in each case a roughly similar percentage of the costs of production. Therefore, the higher prices of a firm do not imply the higher profit margins of that firm; with roughly similar profit margins, the differences in the prices represent the differences in costs. As the foregoing table indicates, the magnitude of the inter-firm differences in the efficiency and the costs of production are considerable. Many of the most efficient firms appear internationally competitive; in fact they are more than competitive if an adjustment for the overvaluation of foreign exchange is allowed for. Assuming a 50-per-cent overvaluation, all the above industries, excepting the diesel-oil engine industry in the production of its first and third category of output, are competitive.

The phenomenon of the inter-firm differences in costs is not limited to the minor industries listed in the above Table II; it is also characteristic of the most important industries, *i.e.*, the cotton and jute industries. In 1966, the cost of production of hessian of the least efficient jute mill was about 32 per cent higher than that of the most efficient firm and the difference in the case of sacking was about 18 per cent [3, p. 51]. In the case of the cotton-textile industry, the number of spindles per worker varies from under 20 to over 60 as between different firms, whereas the number of looms per worker varies from under 1 to over 3 [12, p. 64]. Insofar as the rate of return on the invested capital is concerned, it varies from 9 per cent in the case of 9 firms out of a sample of 20 firms to about 60 per cent in the case of 4 firms. Two firms earned more than 200 per cent on the invested capital [3, p. 61].

It may be argued that the cotton textile industry is widely dispersed over the whole country, between the various regions of which there are differences in the factor prices, especially in the costs of infrastructure such as power, the transportation and the communication facilities, *etc.* However, a regional breakdown reveals the persistence, even within the same region, of inter-firm differences, often considerable, in terms of profits as a percentage of total sales or of capital; such differences exist not only within East and West Pakistan but also within the individual subregions of each province. Moreover, a further subclassification of the firms within each subregion between the relatively old and the new firms does not reduce the inter-firm differences to any extent [12]. Moreover, there are considerable differences in each region and subregion between the individual firms in terms of the extent of their participation in the

TABLE III

PERCENTAGE EXCESS OF DOMESTIC PRICE OVER COMPETING C.I.F. PRICE

		Profits as % of sale	Profits as % of capital	Exports as % of sales
West Pakistan				
Highly developed region	new	7-15	1-11	5-66
	old	2-15	5-23	2-86
Developed region	new (one firm)	9	16	0-0
	old	10-19	9-18	0-36
Underdeveloped region	new	2-15	1-15	0-10
	old	10-26	9-18	0-36
East Pakistan				
Developed region	new	4-18	1-18	0-0
	old	0.2-27	0.5-29	0-28
Underdeveloped region	new	8-20	2-10	0-0
	old (one firm)	1	0.5	0-0

export trade. An analysis of a sample of the cotton-textile firms shows the following inter-firm differences[5].

Why do the cost differences persist? Why do not the more efficient firms expand and force the inefficient ones out of existence by capturing the market? What prevents the improvement of the efficiency of the relatively costly firms to the level of the less costly firms? These are some of the questions which warrant systematic and detailed investigation at the level of the individual firms within the specific industries. To the extent that the entrepreneurial and managerial abilities are different and scarce, the differential rents of scarce abilities will get reflected in terms of differences in the costs and the profits even in a perfectly competitive market[6]. Thus, it is necessary to isolate the differences in the factor prices or in the rents of the scarce factors as causative

[5]In West Pakistan, highly developed region refers to Karachi, developed region refers to Lyallpur, Multan and Rawalpindi, and underdeveloped region refers to all other areas in West Pakistan. In East Pakistan developed areas refer to Dacca and Chittagong and underdeveloped areas refer to all other areas in East Pakistan. The new firms are those which were started during the Second-Plan period, *i.e.*, 1960-65, and the old firms are those which have been in existence prior to this period.

[6]Strictly speaking one may argue that in a perfectly competitive market the differential scarcities will be reflected only in costs and not in profits since the price of the scarce factor will be bid up to eliminate excess profits. If the scarce factor happens to be the entrepreneur, one may consider the differential returns to the entrepreneur as part of the differential profits.

factors in the inter-firm differences in cost and to concentrate on those characteristics of the more efficient firms, which can be reproduced or duplicated from one firm to the other, with an increase in the overall productive performance. It is, however, known that owing to the government control over the establishment of the new firms and the extension of the existing ones, there is a restraint on the inter-firm competition. Similarly, such competition is restricted by the allocation by the government of the imported raw materials, in a more or less fixed relationship to the installed capacity of the existing firms, irrespective of their relative efficiency; a more efficient firm cannot expand output by a free access to imports. A change in policy, which introduces the criterion of efficiency in the allocation of scarce inputs, will help increase efficiency in the use of resources and increase the degree of competition within an industry.

A frequently cited factor responsible for the high costs of the Pakistani industries has been their small scale which hinders the realization of the economies of scale; the prevalence of a widespread excess capacity is universally recognized. To what extent the excess capacity is due to the limitation of the size of the market as against the shortage of imported inputs, among other things, is a question not yet satisfactorily answered and deserves further analysis. Expansion of exports is an effective way of overcoming the limitation of a small domestic market and thus to realize the economies of scale and to reduce costs. It is in this context that the suggestion has been made that in the future while considering the feasibility of an industrial project the relevant market size should consist of both the home and export market rather than the home market alone [2, p.10]. The importance of the size of the market in relation to the optimum size of the industrial firms is likely to be increasingly important in the field of intermediate-goods and capital-goods industries, which would hopefully be a larger fraction of the total industrial investment in the future[7]. This raises important questions regarding *a*) the appropriate export policy of the government and/or *b*) the pricing policy of the industrial firms. Even in the absence of export incentives the manufacturing industries, with a significant excess capacity, can profitably follow upto a point a pricing policy in the export market, which covers only the variable costs and which thus enables them to expand sales and reduce overhead costs per unit.

In some cases it may be necessary to provide considerable export subsidies to render the industries, established on the basis of an expected export market, viable. The alternative may be a growing excess capacity in an economy, acutely short of capital and burdened with an increasing debt service payment to finance the foreign-exchange component of the capital investment. The costs of the industrialization with excess capacity, on the one hand, and with

---

[7]Mr. Hirschman in [1] questions the hypothesis that there is any necessary relation between the minimum economic size and the stage of production. This is an empirical question on which further evidence is necessary.

substantial export subsidies, on the other, have to be balanced against the alternative uses of domestic resources. An industrialization policy with an export bias would suggest the establishment of effective export rates at a higher level than import rates or, better still, a relative undervaluation of the exchange rate, without discrimination between import and export rates, which will at the same time meet the needs of infant industry protection and deliberate import substitution. An exchange-rate adjustment provides protection in the same way as the quotas and tariffs do.

The foregoing discussion suggests that Pakistan has reached a stage of industrialization when it is not only necessary to analyse and measure the costs and inefficiencies of the past and present industrialization, as has been done in several recent studies [4 ; 6, Table 3, p.11 ; 16 ; 17] but also, more importantly, to quantify and explain the growth of productivity in the manufacturing sector, industry-wise and firm-wise, in the past as well as attempt to project in the future. This is necessary for the formulation of a successful industrialization policy and for the determination of criteria for the application of "infant industry" assistance.

While the excess cost of the domestic output of an infant industry over that of the competing import product needs to be offset by a temporary protection or subsidy it is essential to ensure *a)* that the inefficiency is in fact temporary and *b)* that the particular policy of protection or subsidy is so designed as to facilitate its eventual elimination. The strict logic of the infant industry argument implies that the costs of the domestic industries, after the period of infancy is over, should fall below world price, so that the discounted value of the gains in the future, measured by the excess of the foreign price over the domestic cost, would equal the present excess of the domestic cost over the foreign price, discounted over the number of years during which the excess cost of the domestic output is expected to persist. What is crucial in this decision, given the present cost difference and the expected rate of increase in efficiency, is the social rate of discount at which the future returns are discounted to compare with the present costs. At the minimum basis one can simplify the problem of choice if the social objective function is formulated in terms of an appropriate period during which the society is willing to bear the excess cost of the domestic production; it may be postulated that the domestic cost should equal the foreign price, let us say, in 15 years. Thus with a given rate of increase in the domestic productivity and with a given rate of change in the foreign price the permissible limit at present of the excess of the domestic cost over the foreign price can be determined[8]. The industries which have higher costs than this limit may,

---

[8]From the operational point of view, what is relevant for Pakistan is the expected world or foreign price of the commodity in question rather than the rate of increase of productivity in the world outside, even though the two are related.

therefore, be considered ineligible for the infant industry protection. It is when the factors underlying the rise in productivity can be identified and the rate of increase in productivity within the particular industries can be quantified that the rate of protection or subsidy and its duration can ideally be determined. Since decision-making under conditions of uncertainty about the future can not avoid margins of error, mistakes will be made. Efforts, however, should be to minimize the possibility of mistakes and, furthermore, once the results of mistaken decisions of the past become obvious, to try to rectify the situation. While an industry which is not only high cost at present but also enjoys no increase in productivity over time, as a result of a mistaken decision in the past, can be allowed to die only in a growing economy where resources so released can be re-employed, it should be possible to ensure that at the minimum its further expansion be stopped.

The evidence available on the growth of productivity in the manufacturing industries in Pakistan is very scanty. If we take the increase in the value added per worker as a crude first approximation of the increase in productivity, the data available in the censuses of the manufacturing industries [10] not only do not cover a sufficiently long period but also often reveal erratic movements over time in the value added per worker in the different manufacturing industries. The variations in the value added per worker may be the reflection of the fluctuations in the utilization of capacity, which are not reflected in the proportionate variations in employment in the same direction. Moreover, the available data relate to the averages for the various industrial groups which are affected by the changes in the composition of output as well as of firms. Therefore, the averages for an industry do not indicate the growth of productivity through 'learning by doing' in the same firms producing the same group of products. If one considers the change between 1955 and 1959/60, ignoring the changes in the intervening years, one finds that in the 26 out of the 38 cases, the value added per employee has gone up at a rate varying between 80 per cent and 5 per cent, (in one case, it has gone up by 150 per cent), whereas in the remaining fifteen cases, the value added per employee has gone down at a rate varying between 1 per cent and 47 per cent. In view of the fluctuations in the intervening years, one does not know what significance to attach to these figures[9].

The magnitude of the rate of growth of productivity, as measured by the increase in the value added per employee, is not necessarily proportionate either to a) the decrease in costs per unit of the domestic output or to b) the decline in the cost ratio, *i.e.*, ratio between domestic costs or prices, and the foreign

---

[9]The value added per employee has been computed for each of the sectors wherever figures for all the four years, 1955, 1957, 1958 and 1959/60 are available, in the C.M.I. The value added figures are available in current prices and have been converted into constant price of 1959/60, using the price indices of the various industrial sectors as available in [9, Table A-1 (W) and A-1(E)]. The separate price indices for East and West Pakistan have been combined by taking the total value added in each province for each sector as the relevant weights.

price. The latter is more directly relevant to the problem at hand. Data on this are also very rare; the cost ratios of 15 products which are available over the period 1951-66, reveal the gains in the relative efficiency of varying magnitude, *i.e.*, from 0.10 per cent to 7.6 per cent per year [1]. The sample is too small to indicate as to which category or kind of industries enjoy a faster improvement in cost ratios. This, however, indicates the kind of data and analysis, which are necessary in order to evaluate the fast growth of efficiency provided one can isolate the movements in the factor prices over time.

To conclude, many industries in Pakistan are able to export only with the help of substantial subsidies, (which have been sought to be quantified in this note) reinforced by the possibility of profitable price discrimination between the export market and the highly protected, monopolistic domestic market. A thorough analysis of export performance and industrial efficiency needs to go beyond the industry aggregates to the analysis of the inter-firm differences in costs and efficiency which are substantial. The need for a systematic drive for an increase in productivity, through changes in the institutions and the policies, at the level of an enterprise as well as at the level of an industry, insofar as the externalities are involved, with a due reference to the economies of scale and the training of management and labour, can not be exaggerated, if the infant industries are indeed to grow into maturity.

REFERENCES

1.   Hirschman, A. O., "The Political Economy of Import Substituting Industrialization in Latin America", *The Quarterly Journal of Economics*, February 1968.

2.   Huda, M. N., *Planning Experience in Pakistan*. Address delivered at the 15th Annual Conference of the Pakistan Economic Association, held in Karachi, April 12-14, 1968. Reprinted in this issue of the *Review*.

3.   I.B.R.D., South Asia Department, *The Industrial Development of Pakistan*. (Washington: I.B.R.D., June 1966).

4.   Islam, N., "Comparative Costs, Factor Proportions, and Industrial Efficiency in Pakistan", *The Pakistan Development Review*, Vol. VII, No. 2, Summer 1967.

5.   Islam, N., "Export Policy in Pakistan". To be published in North-Holland Publishing Company's forthcoming *Essays in Honor of J. Tinbergen*.

6.   Islam, Nurul and Irfan Omar Malik, *The Comparative Costs of Manu-facturing Industries in Pakistan: A Statistical Study.*   Mimeographed Research Report No. 57.   (Karachi: Pakistan Institute of Development Economics, 1967).

7.   Lewis, S. R., *Economic Policy and Industrial Growth in Pakistan.* Research Memorandum No. 18.   (Williamstown: Williams College, December 1967).

8.   Lewis, S. R. and S. E. Guisinger, *Measuring Protection in a Developing Country: The Case of Pakistan.* Research Memorandum No. 6. (Williamstown: Williams College, December 1966).

9.   Lewis, S. R. and S. Mushtaq Hussain, *Relative Price Changes and Industrialization in Pakistan: 1951-64.* (Karachi: Pakistan Institute of Development Economics, 1967).

10. Pakistan, Central Statistical Office, *Census of Manufacturing Industries, 1954, 1955, 1957, 1958, 1959-60.* (Karachi: C.S.O.).

11. Pakistan, Export Promotion Bureau, *Fiscal Incentives for Exports.* (Karachi: Export Promotion Bureau, 1966).

12. Pakistan Industrial Development Bank, *Survey of Textile Units Finan-ced.* (Karachi: Industrial Research and Statistics Department, June 1967).

13. Pakistan, Ministry of Finance, *Budget Speech of the Finance Minister.* (Karachi: Manager of Publications, June 1967).

14. Pakistan, Office of the Controller of Exports and Imports, Rawalpindi.

15. Sanders, M., "The Short-run Impact of Devaluation on the Cost of Pro-duction", *Pakistan Development Review*, Vol. VI, No. 4, Winter 1966.

16. Soligo, R. and J. Stern, "Some Comments on the Export Bonus, Export Promotion and Investment Criteria", *Pakistan Development Review*, Vol. VI, No. I, Spring 1966.

17. Soligo, R. and J. Stern, "Tariff Protection, Import Substitution, and Investment Efficiency", *Pakistan Development Review*, Vol. V, No. 2, Summer 1965.