

INDUSTRIAL DEVELOPMENT IN PAKISTAN*

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As the manufacturing industries of Pakistan have grown sharply since Independence, they have suffered from gross inefficiencies; resulting in enormous cost to the economy. The cost was as high as 5.7 per cent of GDP in 1980-81 slightly falling to 5 per cent by 1990-91. The study calls for a protection structure that accords with dynamic comparative advantage of the country for an improvement in industrial efficiency. It points out the need for consistent economic investment levels. The study shows that as the import-substitution was a major source of demand in the initial stages, the domestic demand has been the major source of growth in the subsequent periods. The study also suggests both the stimulation of domestic demand and higher level of investment for an industrial recovery.

I. Introduction

While the large scale manufacturing sector of Pakistan has grown at a rate of more than 9 per cent over the last five decades, the growth has slowed down in recent years due to various structural problems including lack of diversity in industrial output; limited exposure to competition, distortions in the protection structure; allocative, technical and x-inefficiencies, negligible growth in productivity; absence of research and development and lack of quality and standardized products. The sector is still dominated by traditional industries which is seriously constraining its growth potential. The poor state of affairs is mainly due to the import substitution policies pursued since the fifties, which left very little incentives for the infant industries to grow and mature. It is therefore argued that if instead an export oriented industrialization strategy is pursued, the country would specialize in accordance with her comparative advantage. Such a strategy would also maximize employment generation and would make the producers conscious of quality and significance of research and development activities.

In this paper we examine the industrial strategies, the policy measures and their impact on growth, pattern of output and investment, and level of efficiencies in the manufacturing sector. The paper is structured as follows. The industrial strategies

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pursued over different periods are examined in Section II. Their impact on growth and pattern of industrial production and investment is analysed in Section III. Levels of efficiency and protection to manufacturing industries of Pakistan is discussed in Section IV. The required shifts in the industrial strategies and the prospects for industrial growth and their pattern are discussed in Section V.

II. Industrialization Strategies

Ever since the first industrial policy was announced in 1949 and subsequently revised in 1956, import substitution has remained the industrial strategy in Pakistan. The detailed policy measures and the role of private and public sectors in the economy, however was quite different in different time periods. During the Fifties imports, investments and prices were subject to direct control, creating rigidities in the system and hampering the investment production and levels of efficiency.¹ Because exchange rate was overvalued and hardly any subsidies were provided to exports, anti export bias was maximum during this period. By the end of the Fifties and early Sixties a number of initiatives were taken, including lifting of price controls, liberalization of the foreign exchange market, subsidizing exports and providing fiscal incentives in the form of tax holidays, which accelerated depreciation allowances to the manufacturing industries. This not only helped in sustaining the high growth rate of output but led to increasing investment in the manufacturing sector.

During the Fifties and Sixties the private sector played a major role and the public sector was constrained to investing only in those industries in which private sector was shy. However, in 1972 a major shift in policy towards the role of private vis-a-vis public sector in manufacturing was effected. Heavy industries were nationalized and cement, fertilizer, oil refining, engineering and chemicals industries were reserved exclusively for the public sector. Price controls, under profiteering and hoarding acts were once again instituted. Fiscal incentives and export subsidies were removed, import duties on finished goods were reduced but imports of finished goods were deleted from the free list. Introduction of anti-monopoly measures further eroded incentives for investment. Low levels of profits amid an uncertain environment resulted in massive flight of capital. Consequently, investment in manufacturing, particularly private investment as a percentage of GDP fell.² On the other hand, devaluation of rupee reduced significantly, the multiplicity of exchange rates and provided a level playing field to large and small scale industries.

¹ As manufacturing industries in Pakistan are heavily dependent on imports for their requirement of capital and international goods; rigid import quotas neither allow optimal allocation of investment nor let the industries use their capital at an optimal level of intensity. Similarly, price controls leave less incentives to expand production in the most profitable branches of production.

² For details of policy initiatives and growth in the seventies, see Azhar and Sharif (1974), Kemal and Alvi (1975), Naqvi and Sarmad (1985), and Naqvi and Kemal (1991).

Because small scale industries had equal access to the imported inputs the growth of small industries accelerated and unification of exchange rates made them competitive in the export market.

The 1984 industrial policy combined the elements of ad-hoc measures taken during the period 1977 to 1984 and deregulated the economy further. Since the announcement of the policy a number of initiatives have been taken to make the markets more friendly for the investors. Direct control was replaced with the market-oriented forces, import policy was liberalized, and the tariff structure was rationalised. Export duties were reduced earlier and eventually eliminated. Incentives and facilities were given to the exporters, fixed exchange rate system was replaced with the managed float, investment was deregulated and prices were de-controlled; thus, most of the public enterprises were divested. Foreign private investment actively encouraged transfer of technology. With a view to encouraging assembly-cum-manufacturing, the government provided incentives to assemblers through lower import duties on components provided they agreed to a programme of indigenization called 'deletion programme.' While some transfer of technology in motor vehicles has taken place, the cost of transfer of technology may have been prohibitive.³

During the early stages of development import substitution has played a major role in the growth of manufacturing industries of Pakistan. During the period 1951-52 to 1954-55, 96.9 per cent of the growth was accounted for by import substitution, the contribution of export expansion and domestic demand was negligible. Import substitution has not played that significant a role since 1954-55, and domestic demand, rather than export orientation, has replaced it. Export expansion has

TABLE I

Sources of Manufacturing Growth

Period	(Percentage)		
	Domestic Demand	Export Expansion	Import Substitution
1950-51 to 1954-55	2.4	1.8	96.6
1954-55 to 1959-60	53.1	24.0	22.9
1959-60 to 1963-64	95.7	4.6	-0.3
1963-64 to 1970-71	60.0	15.0	25.0
1980-81 to 1988-89	79.7	10.2	10.1
1988-89 to 1991-92	60.4	37.9	1.7

Source: [Khan (1964), Lewis (1970), Kemal (1990), (1993)].

³ For details of policies and their impact on manufacturing industries during this policy, see IMG Consultants (1988), Kemal (1990, 1993), Kemal, Mahmood and Ahmed (1993), Naqvi and Kemal (1996).

been relatively less important except in 1988-89 to 1991-92 period. The analysis of the source of growth in manufacturing suggests that the recent decline in output may have been due to the slackness in domestic demand.

III. Growth of Output and Investment in the Manufacturing Sector of Pakistan:

a) Growth and Pattern of Output

At the time of independence, small scale industries (essentially the household and cottage manufacturing units) accounted for about five per cent of GDP and only a handful of large scale manufacturing units existed in Pakistan. The data on small scale industries is available only at different points in time but the average growth rate over 1949-50 to 1996-97 period was around 7.2 per cent. The large scale manufacturing sector grew at an even more rapid rate of 9.1 per cent, for the same period. (see Table 2).

While the large scale manufacturing industries have shown a healthy growth over time, the growth rates show sharp fluctuations over different time periods. The large scale manufacturing output grew at a rate of 15.4 per cent during the Fifties but both in the Seventies and Nineties, the growth rates have been less than 4 per cent. It is generally argued that the high growth rates observed in the Fifties were a reflection of the low base, but this is only partly true. The fact that the share of large scale manufacturing in GDP increased by 4.7 per cent over the decade indicated a phenomenal growth in the large scale manufacturing sector.

TABLE 2

Growth Rate of the Manufacturing Sector

Period	Small Scale Manufacturing Sector	Large Scale Manufacturing Sector	Total Manufacturing Sector
1950-60	2.3	15.4	7.7
1960-70	2.9	13.3	9.9
1970-80	7.9	3.9	4.8
1980-90	8.4	8.1	8.2
1990-97	8.4	3.5	5.0
1950-97	5.4	9.1	7.2

Source: Economic survey, various issues.

The sharp increase in manufacturing output in the Fifties could have not been sustained if the structural problems were not resolved. Private sector was reluctant to invest in non-traditional industries and the government responded with establishing the Pakistan Industrial Development Corporation (PIDC) in 1958, through which it made investments in the industries where private sector was reluctant to invest. Since domestic demand for Pakistani products, especially the textiles was inadequate for rapid growth of the manufacturing sector, the government provided export incentives. The most important incentive was the Export Bonus Vouchers scheme. These measure allowed Pakistan to sustain a high growth rate of 13.3 per cent.

Due to a number of factors like dislocation of industries resulting from the loss of East Pakistan market, the nationalization of the industrial sector and oil shocks, the growth rate of manufacturing fell to a low 3.9 per cent in the Seventies. The growth rate of manufacturing output increased to 8.1 per cent during the Eighties, mainly due to improvement in productivity in the public sector enterprises, de-regulation and import liberalization. The growth rate slipped to just 3.5 per cent in the Nineties and in 1996-97 the output of large scale manufacturing declined. A number of factors which are responsible for the decline in the growth rate include restructuring of the industrial sector following reduction in protection, deflationary tendencies in the economy, inconsistent policies, lower level of investment and poor law and order situation.

Small scale manufacturing sector in the Fifties and the Sixties grew at the rate of only 3.2 and 2.9 per cent respectively; because not only were all incentives focused on the large scale manufacturing sector but also the small scale sector was discriminated in the sense that it had to purchase raw material at relatively higher cost. During the Seventies growth rate of the small scale sector increased to 7.9 per cent, which further increased to 8.4 per cent in the subsequent periods. The increase in growth rate of small scale sector owes a great deal to exemptions from sales taxes and excise duties, and better access to imported inputs. Unfortunately, recent data on the sub-sector is not available and it is assumed that small scale industries continue to grow at a rate of 8.4 per cent. There is some evidence to suggest that this growth rate may have been underestimated and the true growth rate of the sub-sector may have been even higher, [Kemal (1977)].

Due to the sharp growth in the manufacturing sector, its share in the GDP increased over time. The share of the large scale manufacturing sector in GDP increased from 2.2 to 11.7 per cent.⁴ The share of both the large scale and small scale manufacturing sectors in the GDP increased from 7.8 in 1949-50 to 17.9 per

⁴ The share of large scale manufacturing sector had increased to 12.7 per cent in 1989-90 but has fallen since then.

TABLE 3

Share of Manufacturing in GDP (at constant prices)

(percentage)

Period	Small Scale Manufacturing Sector	Large Scale Manufacturing Sector	Total Manufacturing Sector
1949-50	5.5	2.2	7.8
1959-60	5.1	6.9	12.0
1969-70	3.5	12.5	16.0
1979-80	4.6	12.4	17.0
1989-90	4.9	12.7	17.6
1996-97	6.2	11.7	17.9

Source: Economic survey, various issues.

TABLE 4

Shares of Manufacturing Industries in the Overall
Value Added in the Manufacturing Sector

(percentage)

Industry	1954	1959-60	1969-70	1980-81	1985-86	1990-91
Food Manufacturing	8.5	7.6	10.0	24.2	15.7	14.1
Manufacturing of Beverages	0.4	0.3	0.1	0.9	1.5	1.4
Tobacco Manufacturing	5.5	5.3	6.1	3.0	2.9	6.4
Manufacturing of Textiles	46.7	39.1	28.5	24.3	19.9	26.3
Manufacturing of Footwear and other Wearing Apparel	3.5	2.4	3.8	2.7	1.9	1.4
Manufacturing of Paper & Paperboard	0.0	1.6	1.2	1.0	1.3	1.6
Printing and Publishing Industries	2.7	2.4	5.2	1.2	1.5	2.3
Manufacturing of Leather and Leather Products except Footwear	2.4	0.7	2.2	1.6	2.3	1.5
Rubber and Rubber Products	0.9	0.5	0.7	1.3	1.9	1.0
Chemical and Chemical Products	9.5	8.3	7.9	13.2	23.5	12.3
Non-metallic Mineral Products	4.0	6.1	2.5	2.3	4.9	7.6
Basic Metal Industries	2.1	3.1	2.0	6.6	5.3	5.5
Manufacturing of Metal Products	2.1	3.9	3.7	1.3	1.1	0.9
Non-Electrical Machinery	0.9	2.1	3.9	2.6	3.3	2.5
Electrical Machinery	0.8	2.7	2.6	4.3	4.0	4.1
Transport Equipment	1.1	3.4	1.6	2.5	3.4	2.6
Other Industries	8.9	10.5	18.1	7.3	5.9	8.5

Source: Census of Manufacturing Industries, various issues.

cent in 1996-97 (see Table 3). Nevertheless, it is important to note that the share stagnated since 1969-70 in the range of 17 to 18 per cent and has declined since then.

As share of the manufacturing sector in GDP increased, there was a very little diversity in the manufacturing output; and textiles and food products still accounted for an overwhelming proportion of output. The removal of quantitative restrictions, lifting of import bans and reduction in tariff rates on the import of raw materials and intermediate goods resulted in higher levels of output in the import intensive industries. As such there was a decline in the share of traditional and indigenous raw material based industries; though the decline was quite modest. The share of industries, exclusively based on indigenous raw materials, accounted for 71.0, 61.5, 50.6, 64.5, 52.4 and 58.7 per cent of value added in 1954, 1959-60, 1969-70, 1980-81, 1985-86 and 1990-91, respectively (see Table 4). A rather slow move towards diversity is the result of bias in the incentives structure towards traditional and indigenous raw material based industries.

The manufacturing sector played an important role in generating employment opportunities in the Fifties and Sixties and by 1969-70 manufacturing sector accounted for 15.6 per cent of total employment. However, since then the share has fallen both because of slower growth of the manufacturing sector as well as an increase in capital intensity, resulting mainly from the labour laws promulgated in the Seventies. As a consequence, the share of manufacturing in employment went down to just 10.5 per cent in 1994-95.

TABLE 5

Employment in Manufacturing Sector

Year	Employment in Manufacturing (000 Nos.)	Employment in Manufacturing as % of Total Employment
1963-64	2.21	13.60
1969-70	2.76	15.57
1979-80	3.47	14.37
1989-90	3.96	12.84
1994-95	3.49	10.50

b) Growth of Industrial Investment

Data on investment in the manufacturing sector during the Fifties is not available, though it is generally presumed that as a percentage of GDP it was relatively small. It reached a maximum of 5 per cent of GDP in 1964-65 but declined sharply to 3.3 per cent in 1969-70 and further to 2.3 per cent by 1974-75. The decline in investment may be attributed to at least three factors. First, capital inflows fell sharply and investment in Pakistan was constrained by the availability of investible funds. Second, the manufacturing sector suffered from lack of demand; the inefficient industrial sector developed behind a steep wall of protection and was unable to compete in the export market and domestic demand was insufficient for adequate growth of traditional industries. In the existing industries room for expansion was also limited. It is therefore evident that investment in the manufacturing sector had already started falling much before the advent of nationalization policies.

Mainly because of investment in the public enterprises, total investment in the manufacturing sector increased to 4.3 per cent by 1979-80. The new government which came to power in 1977, allowed the ongoing public sector project to be completed but did not encourage setting up new projects in the public sector. With a view to promoting private investment a conscious effort was made to limit the public sector investment in the manufacturing sector. Though the private sector

TABLE 6

Investment in Manufacturing Industries during the Eighties

Year	Investment in Manufacturing as per cent of GDP			Share of Private Investment in Total Manufacturing
	Private	Public	Total	
1963-64	4.6	0.2	4.8	96.6
1964-65	4.5	0.5	5.0	90.6
1969-70	2.9	0.4	3.3	88.6
1974-75	1.3	1.0	2.3	57.4
1979-80	1.5	2.8	4.3	34.7
1984-85	2.0	0.8	2.7	72.1
1989-90	3.3	0.4	3.7	88.0
1994-95	2.2	0.5	2.7	80.8
1996-97	2.1	0.6	2.7	77.4

Source: Economic Survey, various issues.

investment increased somewhat but it hardly compensated for the decline in public investment. As a result investment fell to 2.7 per cent by 1984-85. However, as the investors gained confidence, the private investment started rising and reached 3.7 per cent in 1989-90, which further increased to 4.7 per cent of GDP by 1992-93. In the subsequent years private investment declined due to various reasons and by 1996-97, it fell to 2.7 per cent of GDP.

IV. Protection and Industrial Inefficiency in Pakistan

Cascaded tariff structure and rather high rates of nominal protection resulted in high rates of effective protection. In some industries the protection was so high that value added at the world market prices was negative. While the protection rates were still high, they have declined over time. The average rate of effective protection⁵ declined from 271 per cent in 1963-64 to 125 per cent in 1968-69 and further to 66 per cent by 1980-81. However, it increased to 77 per cent, mainly due to removal of negative protection to some of the industries by 1990-91. [Lewis and Guisinger (1968), Little, Scitovsky and Scott (1970), Kemal (1978), Naqvi and Kemal (1991) and Kemal, Mahmood and Ahmed (1994)].

Effective rates of protection do not necessarily measure the degree of inefficiency in an oligopolistic/monopolistic market structure as it may reflect, in addition to inefficiency, the excessive profits and other distortion in the system. The Domestic Resource Cost, which in the absence of other distortions (except trade related), would be equivalent to the measure of Effective Protection Rates, indicates a level of efficiencies in a better way. Unfortunately estimates of DRC for 1963-64 are not available but they must have been very high, considering the levels of EPRs. During the Sixties there was a sharp increase in productivity, as a result DRC fell to

TABLE 7

The Average Implicit Effective Protection Rates
and the Domestic Resource Cost

Year	IEPRs	DRCs
1968-69	125	1.20
1980-81	66	3.33
1990-91	77	1.44

Source: [Kemal (1978), Naqvi and Kemal (1991, 1996)].

⁵ All the EPRs refer to Corden definition.

1.20 by 1968-69. The decline in productivity as a result of nationalization, lack of investment to upgrade technology, non-friendly investment environment and various rigidities in the system led to a sharp reversal in the efficiency levels. Consequently DRCs increased to 3.33 by 1980-81. The liberal import policy and de-regulation in the Eighties resulted in efficiency. Though quantitative estimates of total factor productivity are not available, the DRC declined to 1.44 but paradoxically the average effective protection rates also increased. This result may be explained by noting that the increase in average EPRs may have been due to the fact that the industries which were earlier suffering from negative protection did not suffer any longer. The liberal import policy especially relative to intermediate goods and raw materials, and de-regulation and de-control policies, helped in improving the levels of efficiency. The decline in DRCs over 1980-81 to 1990-91 period may also be explained by the fact that the efficient industries have grown at a faster rate compared to other industries [Kemal (1993)].

While effective protection rates may not necessarily reflect inefficiencies and there is no one to one relationship between the two, yet the two concepts are related. The relationship between the two is portrayed in Tables 8 and 9. In 1980-81, out of 63 inefficient industries, 49 industries were highly protected while the remaining 14 inefficient industries were penalized. All in all, there were 13 efficient industries, out of which 4 were protected and 9 were negatively protected. This shows quite clearly, a negative relationship between efficiency and protection.

In 1990-91, besides 12 value-added industries, there were 3 inefficient industries and they were all protected. Out of 45 efficient industries, only 3 enjoyed negative protection. Once again, this shows a negative relationship between efficiency and effective protection. Nevertheless, the fact that processing cost in 1990-91 was 44 per cent higher than the world prices is a cause for concern.

The import substitution industrialization strategy resulted in higher growth but imposed a heavy cost on the economy, through the higher levels of efficiency. The cost of protection amounted to 9.9 per cent of the GDP in 1980-81 and 3.9 per cent in 1990-91, when defined as the wasteful use of domestic resource and to 5.7 per cent of the GDP in 1980-81 and 5 per cent of GDP in 1990-91 when defined as increase in the share of manufacturing sector in the GDP.

V. The New Investment Policy and the Growth of Manufacturing Sector

The objective of industrialization policy in Pakistan have generally lacked coherence and consistency. For example, the industrial policy of 1989 set out four objectives, viz., maximization of employment, dispersal of industries, encouragement of small scale industries and promotion of "key" industries. These objectives are not mutually consistent and do not include export orientation and efficient indus-

TABLE 8
Degree of Protection and Level of Inefficiency
in the Manufacturing Sector: 1980-81

	Negative Value	IEPR > Average	Average 50 < IEPR	0 < IEPR < 50	IEPR < 0	Total
Negative Value-added	9	-	-	-	-	9
Extremely Inefficient DRC > 2.0	-	34	3	-	4	41
Highly Inefficient 2.0 ≥ DRC > 1.50	-	1	-	5	4	10
Very Inefficient 1.50 ≥ DRC > 1.25	-	2	-	1	3	6
Moderately Inefficient 1.25 ≥ DRC > 1.00	-	0	-	2	1	3
DRC ≤ 1.00	-	1	-	3	9	13
Total	9	38	3	11	21	82

Source: Kemal (1993).

TABLE 9
The Number of Industries by Efficiency Levels
and Protection: 1990-91

	Negative Value	IEPR > Average	Average 50 < IEPR	0 < IEPR < 50	IEPR < 0	Total
Negative Value-added	12	-	-	-	-	12
Extremely Inefficient DRC > 2.0	-	6	-	-	-	6
Highly Inefficient 2.0 ≥ DRC > 1.50	-	3	-	-	-	3
Quite Inefficient 1.50 ≥ DRC > 1.25	-	2	-	-	-	2
Moderately Inefficient 1.25 ≥ DRC > 1.00	-	-	1	1	-	3
DRC ≤ 1.00	-	28	1	13	3	45
Total	11	34	3	14	3	70

Source: Kemal (1993).

trialization. Inconsistent and frequent changes in the policies have been responsible for low levels of investment.

In the past, regional development has always been given an over-riding consideration in the industrial policies. While the policies failed to realize that objective, they resulted in distortions in the system. Probably, at present Pakistan has to pursue the sole objective of accelerating the pace of industrial investment in activities which are in accordance with her dynamic comparative advantage.

To the extent, dynamic and static comparative advantages differ, the government will have to influence the structure of incentives, largely governed in Pakistan by the protection structure. Seen in this perspective, the new investment policy is rather important. Instead of giving objectives of the policy it indicates the type of priority industries. The priority is rightly accorded to high-tech, value added and export oriented industries and they are provided maximum fiscal incentives. However, considering that the most important fiscal incentive is in the form of depreciated allowances it would encourage capital intensive industries. For the success of policy it would be even more important to ensure that these industries enjoy relatively more protection.

While incentives are important they are not sufficient, for provision of adequate, physical and social infrastructure. A regulatory framework is absolutely necessary. For diversification of her manufacturing output, augmenting the science and technology apparatus of the private sector, bringing research institution up to international standards, and streamlining of technology creation, absorption and diffusion systems are absolutely essential.⁶

A cluster approach, i.e., an agglomeration of key industries, supporting sectors, infrastructures, and institutions that are inter-linked, and inter-dependent because of some shared technological or skill base, can be quite helpful in the development of vendors. The clusters funds provided by government can be used to carry contract research which would enhance the technological landscape. As a result, entrepreneurs would be able to use the imported technology in a better way, also be able to implement ancillary system such as quality control, material handling and distribution system.

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⁶ See, DRI/Pakistan Institute of Development Economics (1997).

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