

Industrial Sector and Sixth Five Year Plan

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Abstract

The paper analyses the pattern of industrial development with emphasis on the manufacturing sector and reviews the initiative of the government under the sixth five year plan for accelerating manufacturing and industrial development of the country. The paper analyses the structural change of manufacturing in terms of employment creation, value addition and export earnings. It highlights the sector strength for long term economic development of the economy and to achieving the target of high annual average economic growth of 7.3% during the plan period. The paper argues that the manufacturing sector can play a significant role in accelerating economic growth if various obstacles are removed and proactive measures are taken to induce private investment with positive public sector backing for creating enabling environment for investment. It has been found that for achieving the planned growth target, manufacturing adherence must grow by around 10% p.a. and in order to achieve that growth of export of manufactures must grow at the rate of around 18%. Manufacturing employment need to grow at the rate of 9-10% in order to attain 3.2% employment growth during the plan period. The paper has identified manufacturing sectors enjoying or having potentials competitive advantage. It has analyzed the constraints and strategies considered by the Plan document for the development of manufacturing in generic and specific terms and at aggregate and subsectoral level. The paper tried to reviews the strategic options outlined in the Sixth Five Year Plan and has suggested desirable strategic options for future industrial development of the country. The paper argued for parallel strategies of export expansion, domestic demand expansion and import substitution. Though labour intensiveness need to be emphasized, labour productivity enhancement can not be neglected for long term interest of manufacturing development. Both price

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and non-price competitiveness need to be simultaneously addressed for export sector development and import substitution. It is shown that the target of manufacturing growth is not unachievable if measures of industrial policy 2010 and Sixth Five Year Plan are translated into concrete action plan with proper institutional development for policy implementation and monitoring. The target of the Perspective Plan needs to be revised at the level projected by the Sixth Five Year Plan taking past experiences and future possibilities and global opportunities into consideration.

1. Introduction

1.1. Setting the Five Year Plan Framework and Placement of Manufacturing Sector for Development

It is widely acknowledged that breaking through economic backwardness of Bangladesh needs accelerated economic growth, which requires a radical structural shift favouring the industrial sector with emphasis on manufacturing (Different Plan Documents of Bangladesh)ⁱ. In the context of the limited resource base of Bangladesh, low technology and productivity base, narrow product mix, the constraints of the domestic market, the pressure for gainful employment of a growing labour force, the task of designing an industrial strategy and plan capable of addressing the emerging challenges, both domestic and global, has become important for the future development of Bangladesh. Industry sector is known to be unique in enjoying benefits of increasing return to scale. The importance of industrial development is also reinforced by the development of agriculture and services sectors for their backward and forward linkages with the industrial sector. In giving importance to industry in Bangladesh economy, a CPD Task Force regarded industrial development as an engine of economic growth of Bangladesh (CPD task Force Report, 2001)ⁱⁱ. Weiss (1988)ⁱⁱⁱ reported that the manufacturing sector retains the characteristics of an engine of growth rapid productivity growth, dynamic increasing returns to scale, rapid technological change, and various dynamic externalities. The case for industrialization, specially the development of manufacturing to accelerate growth and reduce poverty was firmly established in the country's First Five Year Plan^{iv}. This followed directly the post war orthodoxy of development economics where economists like Prebisch (1950 and 1984)^v and Singer (1950)^{vi} argued for industrialization to deal with deteriorating terms of trade for the backward nations, trade instability, and the necessity of employment creation for surplus labour. For a country like Bangladesh, thus, the question is not whether but how to industrialise. As evidence showed, industry and specially

manufacturing of Bangladesh was very slow to compensate for the decline in the share of agriculture in GDP, a reason why the country ranks low among comparable nations in terms of the contribution of manufacturing to GDP and its growth. The main aim of the paper is to analyse the pattern of growth and structural change in the economy as well as within industry itself and examine the priority accorded to the industrial sector in the Sixth Five Year Plan (SFYP) and also the adequacy and affordability of the planned targets and initiatives under the plan for the development of the industrial sector, with particular emphasis on the manufacturing sector.

1.2. Objectives and scope of the paper

Main Objectives of the Paper are:

- To analyse the role of the manufacturing sector over time in economic transformation and growth of the country and to analyse the role the manufacturing sector can play in the sixth five year plan for accelerating growth;
- To analyse the structural change of manufacturing;
- To analyse the sources of Manufacturing Growth of Bangladesh;
- To analyse the status of competitive performance of manufacturing and identify the important products enjoying comparative advantage for future growth;
- To review the challenges considered and strategies of development of manufacturing outlined under the SFYP.; and
- To identify the key areas of government intervention needed in the development of manufacturing.

Conforming to the objectives, the paper is structured into eleven parts: i. Introduction, ii. Vision of Perspective Plan for industrial Development and the strategy of Manufacturing Development in the Sixth Five Year Plan, iii. Structural Transformation in the Economy, the Role of Manufacturing Sector and Sources of Manufacturing Growth in Bangladesh, iv. Growth Projections of Manufacturing and investment Projections in SFYP, v. Manufacturing Employment as New conduit of Job creation and Rebalancing, vi. Manufactured Exports and Balance of Payment in the Sixth Five Year Plan, vii. Constraints and Challenges for Industrial Development, viii. Review of Sixth Five Year Plan Strategies and key areas of intervention needed for development of the Manufacturing sector, and ix. Conclusions.

2. Vision of Perspective Plan for Industrial development and the Posture of Sixth Five Year Plan for Manufacturing Development

It is important to recall that government abandoned the planning approach to economic growth after the end as the fifth five-year plan in 2002 and introduced donor-prescribed first Poverty Reduction Strategy Paper (PRSP) in July 2005, setting the target to achieve the Millennium Development Goals (MDGs)^{vii} by 2015. Surprisingly, there was no space for industrial development directly in PRSP. After nine years of discontinuation of the planning approach and just on the eve of implementation of Second PRSP, the five year plan is back for the sixth time to reinstate a home grown planned development endeavour under the Sixth five-year plan of Bangladesh from 2010-11. The sixth five year plan^{viii} is within the framework of the Perspective Plan of 2010-21 and to achieve the goals of Vision2021^{ix}. As the Plan document indicated, the implementation of Vision 2021 will be done through two medium term development plans, with the first spanning FY2011-15.

The perspective Plan of Bangladesh 2010-2021^x emphasizes the need for gearing industrialization to achieve the macroeconomic performance target of 10% growth by 2021 and 8% growth target by 2015. The overarching goal for the country's industrialization, as the document of Perspective plan notes, is to enhance the industrial contribution to GDP to 40% over the next decade, with a share of 30% for the manufacturing sector. Bangladesh Industrial policy of 2010^{xi} has recognized the importance of manufacturing for economy wide productivity enhancement and diversification of the country's economic base. Likewise, the manufacturing sector has received serious attention in the sixth five year plan and the perspective plan in consonance with Vision 2021 for the country's future development and achievement of high growth rate. It is projected that during the period of Sixth Five Year Plan, the manufacturing sector will outpace both agriculture and service sectors and follow a smooth upward trajectory. The manufacturing sector is planned to perform consistently and follow an upward trend from annual growth of 6.5% in FY 2010 to 11.7% in FY 2015 with average annual growth of 10% during the plan period. This five year development plan will facilitate the country in alleviating poverty to 26 per cent from the present 31.5 per cent, and raise industrial employment to 25 per cent of the population from the current 17 per cent by June 2015, its final implementation time.

In the Six Five Year Plan (SFYP) document, there is no such chapter as industrial or manufacturing as it was in the previous plan documents. Here, manufacturing sector has been covered in the chapter titled 'diversifying exports and developing a dynamic manufacturing sector'. This is a good strategic thinking but it does not

appear to fully conform with the goal of planned development through industrialization as envisioned in the Perspective Plan 2010-2021.

The Sixth Plan is claimed to be essentially indicative, taking the pretext of market economy. It will heavily rely upon on private sector for financing which supply of necessary public goods shall be financed and managed by the public sector. Though the plan document is well written, there is an ambiguity regarding the development strategy and mix of policy packages and sequences to achieve the dream goal of a middle income poverty free country. The strategy and policy will be made clear in the course of implementation of the planned objectives and goals. Coming to the industrial sector, there is no clear cut explicit sectoral, subsectoral and regional plan for industrial development. However, the farmers of the plan have realized that a development plan is better than the poverty reduction strategy paper (PRSP), which though of market drive development and reduced through of government in development to a minimum. There was no space for industrial development plan in the PRSP which was virtually an imposed document prepared as a conditionality for getting aid from the donor agencies. Yet, the government's role as envisaged in the sixth plan does not seem to have been much elevated. Public-private partnership as emphasized in the plan has the risk of taking evils of both sectors and dragging public resources for the private rent seeking interests. Private-public partnership can be a challenging area for modeling development in Bangladesh under pro-active leadership of government with support from private and community entrepreneurship.

The sixth Five Year Plan document is organized into three parts, and the manufacturing sector is covered in all the parts, though sporadically. The first part of the Sixth Five Year Plan provides the strategic directions and policy framework for implementing the main socio-economic targets of the Vision 2021. It focuses on the underlying strategies, policies and institutions for achieving the major targets and the required macroeconomic framework and aggregate financing strategies and resource requirements. Detailed sectoral strategies, plans and programs are presented in Part II of the Plan document indicating resource allocations for achieving sectoral plan targets. These investment allocations are indicative in nature and will be reviewed and made consistent with the available resource envelope in the framework of the annual national budget cycle. Part III contains an annex on selected national data and a description of the general equilibrium model used for ensuring the consistency of national and sectoral targets with policies and resources underlying the Sixth Plan.

The Plan document^{xii} notes that in a market economy like Bangladesh where the bulk of the economy is privately owned and managed, the role of planning has to

be essentially indicative and strategic in nature. A key focus of the plan would be on strategies, policies and institutions to help guide the private sector in helping Bangladesh achieve the goals set in Vision 2021. The Plan document recognizes that without prudent government regulations and supervision and public spending in core areas, the social and economic results can be devastating and unsustainable. Ensuring a proper balance between providing incentives to private sector and instituting regulatory policies for safeguarding public interests will be a major guiding principle of the policy and institutional framework of the Sixth and the Seventh plans. Similarly, the balance between private and public spending, especially in regard to the investment programs in the plans, will receive major attention.

At the operational level, the fundamental task of the Sixth Five Year Plan is to develop strategies, policies and institutions that allow Bangladesh to accelerate growth and reduce poverty. An essential pre-requisite for rapid reduction of poverty is to attain high economic growth such that it provides the foundations for sustainable productive employment and incomes for the country's growing labor force. The employment challenge in Bangladesh, according to the document^{xiii}, is not just to create any job but to create high income jobs in the formal sectors. At present, as the plan document recognizes some 78 percent of the labor force is engaged in low-income, low productivity jobs in the informal sectors. The employment target for the Sixth Plan is to create adequate number of high productivity, high income, jobs not only for new entrants but also to allow a substantial transfer of labor from the informal sector to the formal manufacturing and services sectors.

Much of the high productivity, high income jobs will need to come from the labour intensive manufacturing sector based on domestic and export markets and from organized services. Both large and small enterprises will need to contribute to this growth.

3. Structural Transformation in the Economy, Role of the Manufacturing Sector and Sources of Manufacturing Growth in Bangladesh

3.1. Strategic goal of Structural Transformation in the Economy

Structural transformation of the economy is one of the important strategic goals of the Perspective Plan of Bangladesh 2010-21. Within the time of Perspective plan-2011-21, agriculture's share will decline from 22% in 2009 to 16% at the end the Sixth Five Year Plan and 15% by the end of Seventh Five Year Plan. In the transformation process of the economy, the share of industry will increase from

29% to 35% by the end of Sixth FY Plan and 40% by the end of Seventh Five Year Plan. The share of manufacturing will grow from 17% in 2009 to 26% in 2015 and 30% in 2021^{xiv} (Table-1).

According to the Plan document, the SYFP target of reaching 8 percent annual GDP growth in the outer years is premised on a vibrant manufacturing sector growing at double digits on a sustained basis. Consequently, the broad industry sector will continue to account for a larger share of GDP compensating for the secular decline in the share of the agriculture sector. This trend is consistent with the stylized facts of structural change in the process of development experienced by different countries. Thus the strategy for achieving the high growth target under the SYFP and beyond includes further industrial deepening supported by a highly-productive agriculture sector. This was the basic thrust of the high-performing East Asian economies in the 1970s and 1980s.

For Bangladesh to reach middle income threshold by 2021, industrial expansion must accompany hand-in-hand with highly productive farm and non-farm agriculture. A strong and competitive manufacturing sector is especially important for creating productive, high income jobs. Though the strategic goal of the perspective plan is very ambitious, the goal of structural change as envisaged in SFYP is pretty reasonable (Table-1). But the change in favour of the services sector seems to be undesirable and may not be consistent with the high growth path pursued for Vision 2021. In that respect, the target of the Perspective plan was better though not achievable given the past goals performance of the industrial sector and manufacturing.

3.2. Past experiences in structural Transformation

Strategic transformation goal is important for achieving the Vision 2021 goals. Past experience of Bangladesh indicates that while the share of agriculture was on a sharp decline from 44% in 1972-80 to 20% in 2006-10, the share of manufacturing increased from 10.7% in 1970s to 17% in 2006-10. The share of industry increased from 15% to 29% during the same period (Table-2 and figure 1). Achieving the targeted 26% share of manufacturing by 2015 and 30% by 2021 would be a highly challenging task though not impossible. The same is true for the increase of industry's share to 35% by 2015 and 40% in 2021.

With development of the economy, usually the share of agriculture declines and the share of industry and services increases. In Bangladesh, with the decline of agriculture, the share of industry did not increase substantially. Rather, the services sector providing low paid employment to the surplus labour increased.

Table 1 : Strategic Goal of Structural Change (Sectoral Share of GDP, per

Sectors	Average (FY04- FY09)	Target 2015 as per Perspective Plan	FY 2015 as per SFYP	Target 2015 as per SFYP	Target FYFY2021
Agriculture	21.70	16.0		15.5	15.0
Industry	29.00	35.0		32.0	40.0
Manufacturing	17.10	26.0		21.1	30.0
Service	49.30	49.0		52.5	45.0

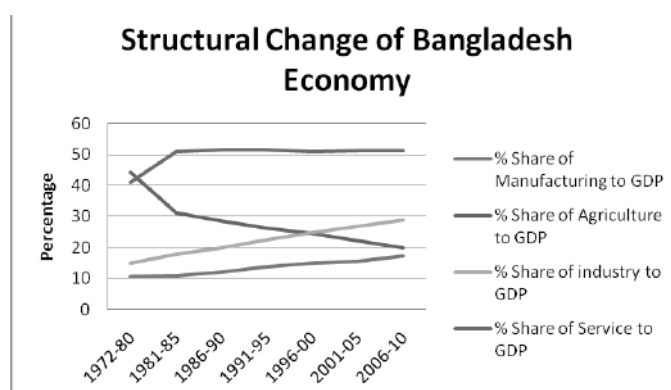
Source: Perspective Plan of Bangladesh 2010-2021 and Sixth Five Year Plan of Bangladesh 2011-15

Transforming Bangladesh's agrarian economy into a modern manufacturing and organized service based economy is a long term challenge to enhance productivity and achieve faster growth. The focus on manufacturing is based on two important

Table 2 : % Share of Manufacturing and Industry compared to agriculture and Service sectors in GDP

Economic Phases	% Share of Manufacturing to GDP	% Share of Agriculture to GDP	% Share of industry to GDP	% Share of Service to GDP
1972-80	10.70	44.12	14.97	40.91
1981-85	11.11	31.26	17.78	50.96
1986-90	12.16	28.59	19.99	51.42
1991-95	13.87	26.17	22.35	51.48
1996-00	14.96	24.42	24.66	50.92
2001-05	15.67	22.05	26.74	51.21
2006-10	17.30	19.88	28.83	51.29
Average	13.37	29.72	21.45	48.84

Source: Estimated by the Author from the data of BBS



points. Firstly, the expansion of agriculture is limited by fixed land area. Secondly, the switch over from low productive agriculture to high productive industry and modern services sector will require an increase in labour productivity. As a strategic option, the sixth five year Plan explicitly has chosen the path of boosting manufacturing and services for creating more employment opportunities in manufacturing and organized services sectors and allowing a shift of large number of workers engaged in low productive employment in agriculture and informal services to these higher productivity sectors of the economy. Therefore, much of the high productivity, high income jobs, as noted in the plan document, will need to come from a labor-intensive manufacturing sector based on domestic and export markets and from organized services. Both large and small enterprises need to contribute to this growth. The role of small enterprises is particularly important to provide the employment base. The promotion of small enterprises in rural areas needs to be a major strategic element for creating higher income and employment in the rural economy, which is critical for sustained poverty reduction.

The dynamic manufacturing sector will benefit from greater outward orientation as the highly positive experience of the ready-made garments (RMG) sector would seem to indicate. In order to increase the export potential as well as to diversify the export base, the Sixth Plan is set to seek further reduction of global trade barriers under the World Trade Organization (WTO) framework as well as seek more active cooperation with neighbours. Bangladesh will actively participate in concerned international and regional/sub-regional forums aimed at increasing Bangladesh's access to international export markets, easing and eventually eliminating any non-trade barriers to Bangladeshi exports, encourage investments, increase trade in services, including energy, promote regional connectivity, and establish best possible economic relations with all strategic countries, including neighbours.

In the 1970s and the 1980s the performance of the manufacturing sector was lack luster, growing below the average growth of the economy but improved during the 1990s and the 2010s (Table-2 and Figure-1).

3.3. Growth Performance of GDP and manufacturing during Five year Plans

Bangladesh witnessed decades of slow economic growth until 1990 (Table-4). Growth rate started to rise since early 1990s and the average economic growth rate approached 6 percent per annum during the first decade of the 21st century. However, Bangladesh is lagging behind some of its high performing comparators like China, India and Vietnam^{xv}. Manufacturing growth during the seventies lagged behind economic growth. In the later periods since eighties, manufacturing

Table 3 : Comparison of Bangladesh with countries in Asia during 1980-2010 in respect of % Manufacturing to GDP

Countries	1980	1990	2000	2008
Malayasia	21.5	24.2	30.9	28.0
Thailand	21	27	34	35.0
Vietnam	10.5	12.3	18.6	21.1
S. Korea	25	27	28	28.0
China	30.2	32.7	32.1	32.9
Bangladesh	10.8	12.7	14.7	17.2

Source: World Development Indicators, World Bank

growth outstripped GDP growth (Table-4) though not by high margin. Double digit growth in manufacturing is a long cherished goal for the country though it did not yet reach the goal. Though manufacturing has a small share of GDP, its growth over the years has been steady (7% p.a. in the last 10 years). The country needs double digit growth of manufacturing to achieve a significant structural change in the economy. Though double digit growth, it is challenging is not unachievable if power problems are resolved and political stability is not disrupted. Elasticity results show that for 8% GDP growth, manufacturing growth needs to be around 11.0-12.0% p.a, which should not be difficult to reach.

Table 4 : Growth performance of the economy and Manufacturing in Different Plan Periods 1973-2010 Growth and manufacturing in the Five year

Plan period	Annual average growth (%)		
	Target	Actual GDP Growth	Mfg Growth
First five year plan (FY73-FY78)	5.5	4	2.5
Two year plan (FY78-FY80)	5.6	3.5	6.3
Second five year plan (FY80-FY85)	5.4	3.8	4.7
Third five year plan (FY85-FY90)	5.4	3.8	5.1
Fourth five year plan (FY90-FY95)	5	4.2	6.9
Fifth five year plan (FY97-FY02)	7	5.1	5.78
FY02-FY06		5.5	8.95
FY06-FY10		6.3	7.48
Weighted Average		4.53	5.81

Source: Adapted and calculated from the data of Bangladesh Bureau of Statistics

3.4 Sources of Economic Growth and the role of Industry and Manufacturing

Industry and service sectors were the main drivers of structural change in all the plan phases of Bangladesh economy. There was a drastic reduction agriculture's contribution to economic growth during 1980-95 (Table-5). Agriculture revived its contribution to economic growth during the Fifth Five Year Plan period but fell again during 2002-2010. In the first Plan Period, the contribution of services sector to economic growth was only 28%. In this period, contribution of industrial and manufacturing sectors was spectacularly high (45% and 26%, respectively), which was not repeated in the subsequent periods. This might be associated with reckless divesture of public sector manufacturing plants to inexperienced investors and rental interests. During 2006-10, the contribution of manufacturing to economic growth was only 21.6%, which is much lower than that of First Five Year Plan Period. Though the contribution of agriculture to economic growth declined sharply, manufacturing sector could not fill up the vacuum and consequently the services sector of low value added activities came to absorb labour released from agriculture. With the declining share of low productive agriculture to economic growth, it was expected that the share of high productive manufacturing would increase creating a dynamic path of development of the backward economy. Instead, the contribution of the services sector to economic growth increased to 54% during 2006-10 which was the highest after 1990. This might be due to anomalies of the Caretaker Government, food and energy crisis, global financial crisis, and environmental hazards making great havoc on the economy. It would be desirable condition if the contribution of industry and manufacturing could be increased and the contribution of low value added service sector activities reduced.

3.5 Growth of manufacturing by scale of operation

Growth of manufacturing was as high as 26.8% in the 1970s because of high growth in large and medium enterprises. During 1981-1990, manufacturing growth did not increase more than 5%. During 1990-95 there was steady manufacturing growth of 8% per annum. Again, it slowed down in 1996-2000. During 2001-2010, manufacturing growth was on average 7.8% per annum (Table-6). Under the Sixth Five year Plan, manufacturing growth needs to be increased to around 10% p.a. on average to attain average economic growth of 7.3% p.a. This growth is expected to come from both small, medium and large sizes.

Table 5 : Sources of Economic growth and contribution of industry and manufacturing to GDP growth in different plan period

Plan Phases	contribution of Manufacturing to GDP Growth Source	contribution Industry to GPD growth	contribution Agriculture to GPD Growth	contribution Service to GPD Growth
1973-78	26.07	45.46	26.07	28.47
1978-80	9.17	15.54	20.34	64.12
1980-85	14.66	26.49	19.80	53.71
1985-90	17.06	30.76	11.61	57.63
1990-95	26.27	39.49	11.18	49.33
1997-02	17.17	31.79	18.36	49.84
2002-06	23.25	36.30	13.45	50.25
2006-10	21.58	31.95	14.29	53.76
Total	20.11	33.77	17.09	49.14

Source: Estimated by the Author from BBS data

3.6 Sources of Manufacturing Growth by Market Orientation: Export Expansion, Import Substitution and Domestic Demand Expansion

Historically there has been a strategic shift from import substitution to export orientation for manufacturing development in Bangladesh. In the seventies as estimated by the author following Chenery's methodology of decomposition of sources of growth, export orientation strategy could contribute only 15% manufacturing growth. In the early eighties its contribution rose to 24%. During the period 1986-2000, export expansion as source of manufacturing growth

Table 6 : Growth performance of Manufacturing by scale of operation

Economic Phases	Growth of Manufacturing Value Added	Growth of Large and Medium Mfg	Growth of small scale Mfg
1972-80	26.82	50.94	8.26
1981-85	5.29	5.14	5.72
1986-90	5.09	5.10	5.07
1991-95	8.21	8.34	7.89
1996-00	5.64	5.67	5.62
2001-05	7.66	7.56	7.90
2006-10	7.92	7.99	7.76
Average	10.89	15.96	7.00

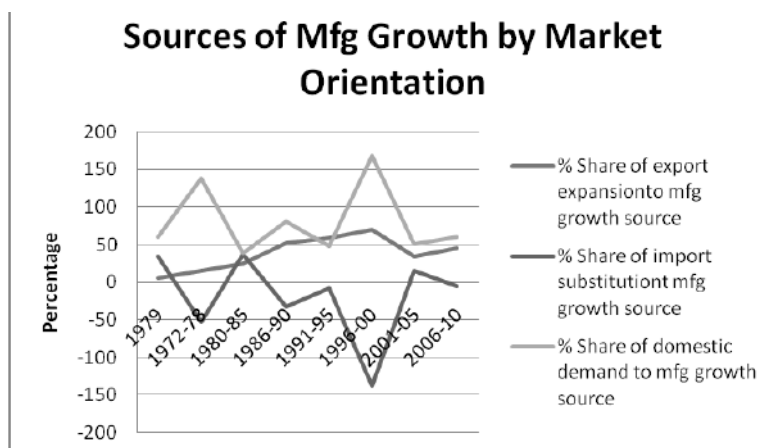
Source: Calculated from the Data of BBS

contributed more than fifty percent. After 2001, its contribution again declined from 69% in 1996-00 to 34% in 2001-05 and 45% in 2006-2010. Import substitution and domestic demand expansion together as sources of growth worked well upto 1985. But import substitution independently did not work well even in the seventies. Thus except in the two periods: early 1980s and early 2000s, import substitution could not show only any positive contribution to manufacturing growth. This is a reflection of the weak base of manufacturing and import dependence for consumption and long term industrial development of the economy. Domestic demand expansion has been found to have a crucial role in the growth of manufacturing in all the periods. Export expansion has steadily and increasingly contributed as well to the growth of manufacturing (Fig.2).

3.7 Sources of Manufacturing Growth by Subsectors and Identification of Potential products for future growth

We have identified 30 products that accourated for 66% of manufacturing growth, which have high growth potentials for manufacturing development of Bangladesh. Three products like garments, pharmaceuticals and textiles contribute 40% to manufacturing growth. Other important products contributing highly to manufacturing growth are cement, food products, books and periodicals,

Fig.2 : Sources of Manufacturing Growth by Market Orientation



re-rolling steel mills, leather footwear, perfumes and cosmetics, batteries, ceramics, glass products, wires and cables, motor cycle, plumbing equipment. Other products with low positive contribution are wooden furniture, paints and varnishes, machinery equipment, machinery parts and electrical appliances. The

Table 7 : Sources of Manufacturing Growth by Sub- Sectors during 1998-2009 and Identification of Potential Subsector

Subs-sectors of Manufacturing	High Growth Potentials			low contribution to positive growth	
	Component Growth Rate	% Share to Mfg Growth	Weight	Edible oil	Negative contribution to growth
Garments	14.89	19.25	9.13	Spirits	Sugar
Pharmaceutic	11.15	11.07	7.01	Soft	Cloth
Bidies	11.16	6.08	3.85	Wooden	Jute Textiles(potential)
Cotton	6.61	5.77	6.17	Paints and Varnishes	Carpets and Rugs
Books and Periodicals	12.91	3.44	1.88	Machinery	Tanning and Finishing
Silk and Synthetics	14.48	3.26	1.59	Equipment	Leather (Potential)
Re-rolling	6.92	1.87	1.91	Machinery	Board
Cement	11.16	1.85	1.17	Electrical	Paper of all kinds
Leather	7.90	1.79	1.6		Compressed Liquified Gas
Tea	1.48	1.65	7.87		Fertilizer (Potential)
Dyeing and	7.16	1.21	1.19		Insecticides
Bakery	7.91	1.08	0.96		Matches
Fish and Sea	3.79	0.97	1.81		Petroleum Products
Flour Milling	4.83	0.81	1.18		Rubber Footwear (Potential)
Perfumes and	11.85	0.76	0.45		Iron and Steel
Cigarettes	2.40	0.70	2.1		Fabricated Metal Products
Soaps and	2.61	0.64	1.74		Engines and Turbine
Bricks	4.25	0.54	0.9		Textile Machinery(Power
Wires and	7.66	0.49	0.45		Electric Machine Apparatus
Edible Salt	10.51	0.45	0.3		Radio
Electric	4.50	0.41	0.65		Electrical Apparatus
Batteries	2.31	0.32	0.97		Motor Vehicles
Ceramic	3.90	0.30	0.35		Shipbuilding (Potential)
Television	5.40	0.27	0.15		
News paper	3.71	0.27	0.51		
Glass	11.44	0.24	0.15		
Motor cycle	9.35	0.23	0.17		
Plumbing	8.73	0.21	0.31		
Aluminum	4.48	0.20	0.31		
30 products at	Growt	66.12	56.83		

Sources: Estimated by the Author from the data of BBS of Different Years.

potential products with negative contribution to growth are jute textiles, tanning and finishing leather, fertilizer, rubber footwear and shipbuilding.

4. Growth Projections and investment Projections of Manufacturing in SFYP

4.1. Growth Projections of Manufacturing and other Sectors

Manufacturing growth has been planned to increase from 6.5% in 2010 to 11.7% in 2015. This growth is necessary in the face of the predicted decline in the growth of agriculture over the period to sustain the growth momentum of the economy. Thus double digit growth in manufacturing and industrial sector is important for realization of the target goal of economic growth envisaged in the plan. In the eventual development, the share of manufacturing is planned to increase from 17.9% in 2010 to 21% by 2015, which is not very high (Table-8). In the growth projections of subsectors, textiles, leather products, fertilizer and machinery sectors have been given topmost importance. Textiles and clothing have the capability to increase its share with higher growth because of the growth of knitted and woven garments (Table-9). Among other manufacturing, jute textiles tend to rebound to respond to demand for environment friendly products. Food processing also has high prospect for growth in the plan period. As Table-9 shows, four products are projected to contribute more than 80% to manufacturing growth during the sixth five year plan period and there is not much breakthrough for diversification of the manufacturing base of the country.

4.2 Investment Requirement in Manufacturing in Sixth Five year plan Period

In manufacturing and trade sector, public sector allocation in the plan is 4009 crore Taka constituting only 1.5% of the total public investment (Table 10). Investment in manufacturing involves investment through three Ministries: Ministry of Industry, Ministry of Commerce and Ministry of Textiles and Jute. Around 70% public sector allocation will be through Ministry of industry and the rest 14% is for Ministry of Commerce and 16% is for Ministry of Jute and Textiles (Table 12). Manufacturing investment will be majorly in private sector. Public sector allocation for manufacturing seems to be very modest given the importance of the sector and the measures required to cope with the hazards of increasing global competitiveness and building technological, infrastructural and human capabilities for export expansion and import substitution.

Table 8 : Growth projections and Projections of share of the sectors and of Manufacturing

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Growth Rate (%)						
Agriculture	5.2	5	4.5	4.4	4.3	4.3
Industry	6.6	9.2	9.6	9.9	10.5	11.5
of which						
Manufacturing	6.5	9.5	9.8	10.1	10.7	11.7
Services	6.5	6.6	6.8	7.1	7.3	7.8
GDP	6.1	6.7	7	7.2	7.6	8
Share as % of GDP						
Agriculture	18.6	18.4	17.7	16.9	16.2	15.5
Industry	28.5	28.7	28.9	30.4	31.3	32
of which Manufacturing	17.9	18.2	18.7	19.6	20.4	21.1
Services	52.9	52.9	52.9	52.7	52.5	52.5

Source: BBS and SFYP Projections

Table 9 : Manufacturing Growth Projection for SFYP by subsectors of manufacturing

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
(Annual growth rates %)						
Manufacturing	6.5	9.5	9.8	10.1	10.7	11.7
Food Processing	6.1	7.2	8.4	8.7	10.5	12.5
Leather Products	7.7	8.5	9.4	10.5	11.2	12.2
Textile & Clothing	7.6	14.4	13.5	13.8	14.2	15.1
Chemical Fertilizer	5.3	6.1	6.7	6.8	7	7.4
Machinery	5.9	6.2	6.6	6.7	7.2	7.9
Petroleum Products	4.3	4.7	5.5	5.6	5.9	6.1
Other manufacturing	8.2	8.4	8.9	9.1	9.2	9.3
Share as % of Total GDP						
Manufacturing	17.9	18.4	19	19.7	20.5	21
Food Processing	2.5	2.5	2.6	2.7	2.8	2.9
Leather Products	0.8	0.8	0.8	0.9	0.9	0.9
Textile & Clothing	7.1	7.2	7.5	8	8.4	8.7
Chemical Fertilizer	1.9	1.8	1.9	1.9	1.9	1.9
Machinery	4.8	5.2	5.4	5.3	5.5	5.5
Petroleum products	0.8	0.8	0.8	0.9	0.9	0.9
Other Manufacturing	0.8	0.9	0.8	0.9	1.0	1.1
Sources of Growth in %						
Manufacturing	100.00	100.00	100.00	100.00	100.00	100.00
Food Manufacturing	13.15	10.3	11.73	11.9	13.42	14.7
Leather Products	5.29	3.89	4.04	4.75	4.60	4.47
Textile & Clothing	46.38	59.31	54.38	55.49	54.38	53.47
Chemical Fertilizer	8.65	6.28	6.84	6.49	6.06	5.72
Machinery	24.34	18.44	19.14	17.85	18.05	17.68
Total of 5 Products	97.82	98.2	96.12	96.48	96.51	96.03
Other Manufacturing	2.18	1.8	3.88	3.52	3.49	3.97

Source: Calculated from BBS data and SFYP Projections

5. Manufacturing Employment as New conduit of Job creation

With labour force growing by 3.2% per year and the very high level of underemployment (around 24%) in the farm and informal services sectors, creation of new jobs in the productive formal sectors of the economy will be a major challenge under the Plan. The growth strategy and the underlying sectoral

Table 10 : Sixth Five Year Public Investment Allocation and Place of Manufacturing Sector (Crore Taka in 2011 Prices)

Broad Sectors	FY11	FY12	FY13	FY14	FY15	Total SFYP	% Total
Agriculture, water and rural development	3623	4121	4535	5184	5756	23220	8.7
Manufacturing and Trade	702	755	776	857	919	4009	1.5
Energy	6075	7983	8932	10539	12127	45656	17.3
Transport	5370	7153	8147	9670	11172	41512	15.7
Urban	8578	9381	9950	10972	11776	50656	19.1
Knowledge economy	434	483	517	575	621	2631	1
Education, Training and Sports	5544	6659	7578	8918	10240	38940	14.7
Population, Health and Nutrition	3473	4185	4698	5570	6439	24364	9.2
Social Inclusion and Protection	444	462	500	564	615	2586	1
Environment, Climate Change and Disaster management	1667	2013	2070	2322	2516	10588	4
Public Administration	3704	3913	4129	4487	4779	21012	7.9
Grand Total	39615	47108	51832	59659	66960	265174	100

Source: Sixth Five Year Plan Projections.

Table 11 : Allocation of Development Resources for Manufacturing in the Sixth Five Year Plan
(Million Taka, 2011 Prices)

Ministry/Activities	2011	2012	2013	2014	2015	Total of all years	% Share
Ministry of Commerce	1230	1170	1000	1090	1170	5660	14.12
Ministry of Industry	4750	5160	5470	6050	6490	27920	69.64
Ministry of Textiles and Jute	1030	1220	1290	1430	1530	6500	16.21
Total	7020	7550	7760	8570	9190	40090	100.00

Source: Adapted and Calculated from Sixth Five Year Plan FY2011-FY2015

shift projected in the Plan aim to address the employment issue by creating new jobs in the nonfarm sector and by a rebalancing of the composition of employment away from agriculture and into more productive sectors of the economy.

Historically, over the period 1974-2010, there has been structural shift of employment from agriculture to service activities with industry slowly treading to absorb some surplus labour force. The share of agriculture during the period has declined by 33.8% while the share of services has increased by 26.5% and that of industry increased by 7.3% (Fig.3). This trend is also visible in the data of recent Bangladesh Bureau of Statistics (BBS) survey of farm and nonfarm employment, which shows that in the four year period through 2010, more than 600,000 workers switched from agriculture to nonfarm sectors, in addition to another 3.6 million workers who joined various nonfarm activities during the same period. The share of the agricultural sector in the labor force has accordingly dropped by 4.6 percentage points during the 4-year period to 43.7% by 2010 (Table 12). Corresponding services, the share of manufacturing and construction in employment increased by 3.0%, 0.7% and 0.9%, respectively, during 2006-10. Major absorbers of manufacturing employment are textile, garments, agro-processing, food and beverage, and light engineering. These five products constitute 97.3% of total manufacturing employment in Bangladesh (Table-13).

It can also be seen in table 13 that only nine products constitute 95% of Gross Value Added. Among them, four products- textile, RMG, food processing and agro processing absorb 91% of employment and constitute 92% Gross value added and 94% exports. All these belong to low technology products. Thus manufacturing sector is narrowly concentrated in low technology based products. Jute textiles, garments, light engineering, leather and footwear and food and beverage have relatively higher export intensiveness. Emerging export industries are pharmaceuticals and textiles. Among the labour intensive industries, light engineering, textiles, food and beverage stand prominent. Labour productivity is relatively higher in leather and footwear, pharmaceuticals, jute textiles, RMG and agro-processing.

Accelerated growth in manufacturing, construction and services sectors projected under the Plan should help the creation of 10.4 million new jobs in these sectors of the economy, which should be sufficient to absorb all new entrants in the job market (about 9.2 million) and also enable a sizable number of workers to find jobs away from the agriculture sector (about 1.2 million). The changing pattern of projected employment is shown in Table 5.3. Total manufacturing employment as percentage of total employment is projected to increase from 11.6% in 2010 to 18.5% by 2015 with average of 15.5% of the total. Average growth of labour force

is projected at 3.2% which is about the same for employment growth during plan period. Still there would be on average 2.3 million unemployed people per year in the country meaning on unemployment rate of 4%. Manufacturing employment growth rate has been projected at 9.73% on average which is near to reality. The elasticity of manufacturing employment is around 0.32, which needs to be increased considerably with increased employment intensive and higher productive manufacturing activity in the country.

Employment expansion is going to be a major challenge, but with the accelerated growth in nonfarm sectors projected under the Plan, the economy should be able to create the targeted level of new jobs in the nonfarm sector. With the continued migration of labor force away from agriculture to more productive sectors of the economy, underemployment will diminish significantly. The recent migration of workers from the agriculture sector has already started to push up agricultural wages leading to higher income levels for the rural workers. If the Plan succeeds in its employment strategy and achievement of the projections as envisaged, there will be a visible reduction in the level of underemployment and a steady increase in real wages of the workers, which are essential for poverty reduction in the country. Productivity enhancement, employment expansion and raising real wages are the three intertwined critical elements of employment strategy that will act simultaneously for addressing the growth acceleration and poverty reduction.

6. Manufactured Exports and Balance of Payment in the Sixth Five Year Plan

For the success of the plan, it is necessary to ensure buoyant growth in export earnings and a comfortable balance of payments as well as external reserves

Fig.3 : Shift in the Structure of employment in the economy

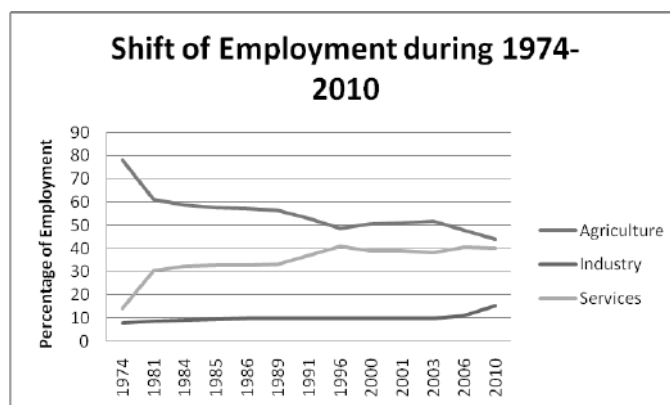


Table 12 : Shift in the Structure of Employment, 2005/6-09

	FY06	FY10
Sectors (In Millions)		
Agriculture	22.9	22.3
Manufacturing	5.3	6.0
Construction	1.5	2.0
Service	17.8	19.7
Total	47.4	50.0
Employment by Sector (In Percent)		
Agriculture	48.3	43.7
Manufacturing	11.2	11.9
Construction	3.0	3.9
Services	37.5	40.5

Source: Adapted and Calculated from the data of Bangladesh Bureau of Statistics, Labor Force Surveys.

Table 13 : Employment, Value Added and Exports of Key Manufacturing Subsectors

Mfg. Employment in 2010 (Thousand)	% Employment	Gross Value Added in % total Manu- facturing	Exports in Million Dollars in 2010	% Expor ts to total	Labour intensiv eness	Relative Productivi ty level	Export per labour in Dollars	
							1.63	12295.2
16.6	0.13	0.8	204.1	1.3	0.16	6.15		
1340.1	10.27	4.1	687.5	4.38	2.50	0.40	1.07	513.0
718.4	5.51	0.5	190	1.21	11.02	0.09	2.42	264.5
69	0.53	1	40.97	0.26	0.53	1.89	0.26	593.8
3100	23.76	36.7	12497	79.65	0.65	1.54	2.17	4031.3
18.2	0.14	0.8	540	3.44	0.18	5.71	4.30	29670.3
250	1.92		9.34	0.06				37.4
6007.7	46.04	13.1	598.1	3.81	3.51	0.28	0.29	99.6
1529.1	11.72	38.2	921.9	5.88	0.31	3.26	0.15	602.9
13049.1	100	95.2	15688.9	100	1.05	0.95	1.05	1202.3

Source: Adapted and Calculated from the Data of Bangladesh Planning Commission

Table 14 : Projected Pattern of Employment in the SFYP (Millions)

Sector	FY10	FY11	FY12	FY 13	FY14	FY15	Average for SFYP
Agriculture	23.2	23	22.8	22.6	22.3	22	22.54
Manufacturing	6.1	6.7	7.4	8.0	8.7	9.7	8.10
Construction	1.9	2.1	2.3	2.5	2.7	2.9	2.50
Services	21.2	22.3	23.2	24.6	25.8	27	24.58
Total Employment	52.4	54.1	55.8	57.7	59.5	61.6	57.74
Manufacturing Employment as percent of total Employment	11.64	12.79	14.12	15.27	16.60	18.51	15.46
Employment Growth (%)	4	3.2	3.1	3.3	3.2	3.2	3.20
Manufacturing Employment growth (%)		9.84	10.45	8.11	8.75	11.49	9.73
Additional Employment in Million			1.7	1.7	1.8	1.9	1.78
Unemployment Rate (%)	4	4.1	4	4	4	3.7	3.96
Labor Force (million)	54.5	56.2	58	59.9	61.8	63.7	59.92
Growth of Labour Force		3.12	3.20	3.28	3.17	3.07	3.17

Source: Adapted and calculated from the data of SFYP Projections, BPC, GOB

position. The Plan document emphasizes that the main driver of manufacturing growth will be the export markets, although growing domestic demand from higher income generation will also provide an impetus. Import substitution also needs serious attention in view of the uncertainty of the global market and the scope of saving foreign exchange by replacing imports of goods which are possible to produce inside the country. Very astoundingly, about 95% Bangladesh exports are manufactured goods^{xvi}. High manufacturing growth during the plan will hinge upon the continuation and improvement of the superb export performance of the past two decades.

Based on the recent performance, export sector under the Plan is projected to grow by 19.4%

per annum in US dollar terms (Table 15). Excluding the strong performance of FY11, export growth during the remainder of the Plan period is projected to be about the same 14-15% as in recent pre-global crisis years. The projection entails an increase in the share of exports in relation to GDP to rise by 7.7 percentage points to 23.9% of GDP by the end of the SFYP reflecting a leading role that export sector is envisaged to play in increasing domestic activity. While clothing exports would continue to dominate, some important non-traditional exports like footwear, other leather products and light engineering products (bicycle and

electronic products), pharmaceuticals, and ship building are likely to grow at a much faster rate.

Import payments are also likely to grow at a buoyant pace of 20.4% on average during the Plan period on account of an unusually strong growth in the first year of the Plan. Imports are, however, projected to come down to a more sustainable pace of 14.0% over the rest of the Plan period. The projected import growth will address critical capacity constraints in the power and other infrastructure sectors along with capital machineries and raw materials for the industrial sector expansion.

Trade account deficit will increase significantly due to higher imports associated with increased domestic and export activity. Services and income account deficits are also projected to grow over the years in line with their recent trends. However, these deficits will continue to be largely offset by the surplus position on current transfers (mainly on account of workers' remittances). The widening of the trade account deficit is not a matter of much concern because the increased demand for imports is related to the targeted increase in investment and exports and will be largely financed through growing inflows of export earnings and remittances. The external current account deficits hovering at less than one percent of GDP would be sustainable and justifiable for a developing country like Bangladesh given the growing import demand associated with the higher real economic growth objectives.

One important structural change in manufacturing exports that has happened in Bangladesh is the emergence of a dynamic export-oriented readymade garments (RMG) sector, favored by the global Multifibre Arrangement (MFA) regime as well as by conducive government policies of allowing tariff free imports of raw materials to ensure global competitiveness of the industry. A few other selected exports, such as leather products, and, recently, shipbuilding, also enjoy certain facilities from the government. For the rest of exports and potential exports, getting world-priced imported inputs is a challenge. As a consequence, export diversification has not made much headway. According to EPB data, only five products, including woven and knit garments, constitute 87% of the country's total exports. Manufacturing industries such as jute goods, leather and frozen foods, engineering products and pharmaceuticals have strong export potentials but, unlike RMG, these industries are yet to become major contributors to export growth. Thus export concentration in a single product group – RMG infuses an element of vulnerability to the country's export performance.

Table 15 : Export, Import and Balance of Payment
Projections in the Sixth Five Year Plan Period

Components:	FY10	FY11	FY12	FY13	FY14	FY15	Average
Real GDP Growth	6.1	6.7	7	7.2	7.6	8	7.3
Exports in Billion Dollars	16.2	22.4	25.7	29.4	33.8	38.8	30
(annual Percent Change)	4.2	38	14.5	14.5	14.5	15	19.4
Export as %GDP	16.2	20.3	21.2	22.1	23	23.9	22.1
Import in Billion Dollars	21.4	31	35.4	40.3	46.1	52.8	41.1
(annual Percent Change)	5.4	45	14	14	14.5	14.5	20.4
Import as % GDP	21.3	28.2	29.2	30.3	31.4	32.5	30.3
Current Account Balance in Billion Dollars	3.7	-0.3	-0.2	-0.2	-0.5	-0.7	-0.4
(percent of GDP)	3.7	-0.3	-0.2	-0.2	-0.3	-0.4	-0.3
Capital Account Balance in Billion Dollars	-0.9	0.2	1.1	1.5	2.1	2.3	1.4
Overall Balance	2.8	-0.2	0.9	1.3	1.6	1.6	1.0
Gross Official Reserves in Billion Dollars	10.7	10.7	11.6	12.9	14.5	16.1	13.2
In Months of Imports	5.1	3.6	3.4	3.4	3.4	3.3	3.5

Source: BBS, Bangladesh Bank, Ministry of Finance and SFYP

To promote export diversification, as the Plan document mentions that Government has adopted a strategy of according the highest priority to several emerging exports that demonstrate high potential the items are:

- 1) Agro-products and agro-processing products;
- 2) Light engineering products (including auto-parts and bicycles);
- 3) Footwear and leather products;
- 4) Pharmaceutical products;
- 5) Software and ICT products;
- 6) Home textile;
- 7) Ocean-going Ship Building Industries; and
- 8) Toiletry Products.

In addition, the Government is selectively according bonded import facilities to more emerging exports (e.g. agro-processing, ship building). In future, this facility may not be limited to 100% export-oriented industries only but extended to industries producing for both domestic and export markets as well. Further, the Duty Drawback Scheme will be revamped to ensure world-priced inputs to

exporting firms without long lags. It is notable that RMG is yet to expand and diversify in several sub-product lines and market destinations, and the global competitiveness in these products need to be used effectively. One should not ignore the fact that RMG constituted 98% of Bangladesh export during the global financial crisis year of 2009.

7. Competitive Industrial Sector Performance in Bangladesh

7.1. Longitudinal Status of Indicators of Industrial Performance of Bangladesh

Industrial capacity and manufactured export capacity (as shown in fig.4) have increased tremendously (19.3 times and 29.9 times, respectively in 2006-10 as compared to 1973-78). Astoundingly, export quality in terms of percentage of manufacture as % exports has increased considerably (from 61% in 1973-78 to 95% in 2006-10). However, industrialization intensity in Bangladesh have increased over the years albeit at a snail pace (1.6 times in 2006-10 as compared to 1973-78).

8. The Constraints and Challenges of Industrialisation

8.1 Constraints and Challenges of manufacturing as identified by different studies

The basic challenge of industrialization as remarked in the Perspective Plan document is related to the narrow based industrial sector of the economy with locational concentration and low technological level. The constraints to industrial development in Bangladesh have been variously identified by different studies done by Moshir Rahman and Zaid Bakht (1997)^{xvii}, Narayan C. Nath (2010)^{xviii}, Mozammel Huq (1996)^{xix} and Bhattacharya (1996)^{xx}. During on the studies, this polar identified problems of manufacturing as follows.

Irregular and Inadequate Supply of Power and Energy Marketing Problem specifically related to global market uncertainty and financial crisis Difficulty of access to finance specially for the Small enterprises High Interest Rate Backward Infrastructure High cost of doing business and high transaction cost Environmental Hazards and adverse effect of climate change Poor testing facilities and of certification High Cost of Raw materials Scarcity of Skilled Manpower Technological Problem Poor Labour management relation Low level of research and development hampering product development and product quality Locational Problems Lack of Confidence of the investors Security Problem and

Problem of extortion Poor quality governance and inadequate institutional facilities in the delivery of utility services Competition from imports and domestic producers at home and suppliers in global market Limited domestic demand because of low purchasing power of the People We have pinpointed the emerging challenges of manufacturing investment as

- i. Problem of protecting domestic industries from import pressure in the context of global economic crisis;
- ii. Challenges of import substitution;
- iii. Facing tougher competition in the global market amidst more protected trade regimes and greater stimulus package in the buying countries and competing exporting countries;
- iv. Coping with crisis in power and energy sectors;
- v. Coping with hazards of climate change;
- vi. Strengthening competitiveness by increasing productivity that reduces the cost of production, reducing the delivery time and trade transaction cost, and increasing quality of the products;
- vii. Ensuring easier market access in buying countries;
- viii. Increasing quality of public spending and implementation of ADP;
- ix. Liquidity problem in money market and capital market;
- x. Productive use of remittance money to translate them into productive investment;
- xi. Diversification of markets and products for exports; and
- xii. Compliance with WTO rules and Uncertainty of WTO Negotiations and regulations.

8.2 General Constraints of Manufacturing identified by the Plan Document

Constraints to the growth of manufacturing identified by the Sixth Five Year Plan document are, among others, weak investment climate, power shortages, anti-export bias of the trade regime, difficulty having access to suitable land for manufacturing, inadequate credit access, low labour productivity and low level of technology, gender bias in giving to the female workers, weak research and development. Among the constraints of government regulations and enforcements, problems of complex taxation rules, red tape, delay in getting verdict of the court are considered important. The Plan document also pinpoints the problem of the slow privatization process due to incomplete and complicated procedures^{xxi}. The SMEF survey of six sectors, 2006/07, reveals some general constraints, which are related to inability to market products, inability to maintain

product quality, poor fixed and working capital, lack of skilled technicians and workers, poor management skill of entrepreneurs, lack of information, non-tariff barriers in world trade regimes, poor enabling environment, insufficient infrastructure support, widespread tariff anomalies, low level of technology, low productivity, lack of Research and Development, and low level of education of entrepreneurs.

8.3 Sector Specific Constraints and Challenges for manufacturing development identified by the Plan document

The plan document selected ten medium and large industries (RMG, non-RMG textiles, Jute industry, footwear and leather, light engineering, agro-processing, ship building, pharmaceuticals, steel and engineering, electronics and chemical industries) for analysis and attempted to identify their constraints and emerging challenges.

As per the Plan document, RMG faces four major challenges, linkage expansion for speedy supply, ensuring social compliance and bettering working conditions, shift to qualitative improvement and product upgradation and product and market diversification. The challenges faced by the textile industry are related to inadequate infrastructure and logistic support service, shortage of skilled manpower, dependence on imported raw-materials, fast changing costly technology, competition with low cost countries like Vietnam, Cambodia, Indonesia etc and weak forward linkage with RMG. Challenges faced by the jute industry are: inadequate quality seeds and rotting facilities hampering productivity of raw-jute cultivation, high cost of production due to excess labour in public enterprises, power shortage, lack of aggressive marketing drive for entering into overseas market, lack of legal compulsion to use jute in the domestic economy.

The challenges faced by the footwear and leather industry are the lack of a comprehensive policy with proper inputs, shortage of adequately trained and skilled human resources, lack of training institute and inadequate facilities for skill development, absence of supportive linkage industries, low awareness of international buyers about the capability to produce quality shoes in this country, absence of sufficient number of reputed factories, poor representation in international fairs, inadequate facilities for design and product development, low awareness of international quality standards such as eco-labeling and packaging, lack of suitable enabling environment in the customs facilities, inadequate working capital finance, and lack of access to local market making the enterprises vulnerable to the perils of stock lot or order cancellations and political instability.

The challenges faced by light engineering are occasional price hike of raw-materials, high duties on quality raw-materials needed for specialized products, lack of education and training of the entrepreneurs for high quality products, low level R&D works, inadequate access to working capital, cumbersome bank loan procedure, limited financial support for technological upgradation, lack of metal and heat testing facility, lack of skilled manpower for quality products, power cuts, poor marketing techniques and poor designing ability.

The key challenges of pharmaceutical industry are related to poor image of the country affecting the image of enterprises, lack of promotion capacity of Bangladesh Missions abroad, negligence of new drug policy to deal with export of medicine, poor quality of government documents, restriction on sending samples to importers, lack of local testing facilities, cumbersome documentation procedure for certain export destinations, and limitations in foreign currency transactions to maintain marketing offices abroad.

The key challenges of agro-processing industry are related to improving the quality of inputs, products, technology, business services and environment, increasing production efficiency and product quality to better meet consumer and export demands, limited number of products, lack of information about compliance requirements for export items at various destinations, improve food safety and agricultural food standards, weak supply chains, and lack of information about Bangladeshi agro-processing produce in countries where Bangladesh is not currently exporting to.

The ship building industry is reported to face challenges of import dependence for almost all raw materials ranging from engines to steel, electronics, furnishings, cabling and piping, low standard of local component and service suppliers and low volume of local components (10%), higher interest rate and service charges from local banks, poor quality of public utilities, problem of red tape, especially when trying to obtain licenses and exporting and importing goods, shortage of qualified mid management workers, and high cost of doing business that discourages joint venture with foreign companies. Other factors that act as barriers to the ship building industry are related to non-availability of large tracts of land adjacent to deep water, lack of skilled manpower, and the requirement of certification of meeting international standard.

8.4 Strategic Options for Industrial Development of Bangladesh

In the Plan document envisages a which ranges of general and sector specific strategies for manufacturing sector. The main thrust of those strategies are towards:

- i. Nurturing agro-processing and labour intensive industries.
- ii. Facilitating role of government in making an enabling environment for increased private investment in areas of dynamic comparative advantage.
- iii. Government investment to complement private investment for creating alternative employment.
- iv. Priority to infrastructural facilities like electricity, gas, port facilities, transport and communication.
- v. Encouragement and support to the private sector, research organizations and NGO initiative towards skill and management development.
- vi. Fostering exports and giving special emphasis to import substitution and agro-processing industries.
- vii. Taking measures to attract foreign investment in both export oriented and domestic market industries.
- viii. Resolute move to rid the country of the blight of sick industries.
- ix. Encouraging modernization and backward linkages in the textile sector in order to meet growing demands locally and internationally.
- x. Trade policy reforms to reduce the bias against exports by lowering trade protection arising from quantitative restrictions, tariff rates and supplementary duties.
- xi. Special Economic zones and Industrial Parks for both export oriented and domestic market oriented industries following cluster principle of collection of industries for additional economic activity and generation of employment opportunities.
- xi. The Sixth plan has also announced sector specific strategies for nice categories manufacturing industries, 0.2% RMG, textile, jute and jute goods, footwear and leather, hight engineering, pharmaceuticals, agro-processing industry, ship-building and the steel and engineering sub-sector to overcome problem specific to these manufacturing industries and boost their growth.

9. Review of Sixth Five Year Plan Strategies for development of Manufacturing sector

- 9.1 There are no clear cut Strategic options in the plan for industrial development. At least four observations can be made in this regard. First of all, the strategy of import substitution or manufacturing for domestic

market is not duly addressed Secondly, the recent and on going recession in the world market is not seriously reckoned with. Thirdly, the technology for industrial development is not adequately addressed. Fourthly, the trajectory of diversification of industrial structure for long term growth to achieve the visionary goal of the perspective plan, though mentioned, is very poor and not clear-cut.

- 9.2 Sub-sectoral plan and strategies have not been detailed out in consonance with the problems they face and the potentials they here. Strategies for subsectoral development are yet to be streamlined and to be linked with technology upgradation, human resource development and market - at home and abroad.
- 9.3 Inadequate consultation with relevant stakeholders has weakened the policies for institutional development. Consultation with stakeholders need to be strengthened for formulating appropriate policy and for appropriate institutional development.
- 9.4 There are inadequate steps in the plan for translating of industrial policy into action plan.
- 9.5 Global trade regimes are not adequately addressed to use opportunities of global environment. There are enough global opportunities for using the surplus labour of the country to increase its competitiveness in the global market. Further efforts are needed to find out areas where Bangladesh has competitive advantage and can make massive efforts for the successful entry into the global market.
- 9.6 The Plan was skeptic of the current problems of the enterprises. The plan could not develop modalities to capture and deal with many crucial micro level problems of the enterprises. There is no indication how short term and medium term problems could be solved for smooth running of the existing enterprises and their investment expansion.
- 9.7 Poor Address of Problems of privatized units and sick units are not properly addressed by the plan. The plan remained silent to deal with the problems of the privatized units which remain either sick or closed and which require to be addressed on a case by case basis to salvage huge productive resources through proactive government intervention.
- 9.8 There is a total absence of clear cut modus operandi for strengthening private-public partnership in the development of manufacturing in the country.

- 9.9 There is a very weak focus on complementarity and balance between export oriented and import substituting manufacturing industries.
- 9.10 The issue of strategic integration with global economy for national economic development.
- 9.11 The number of thrust sectors is too large (26) to give prompt and due attention to their problems.
- 9.12 Micro, small, medium and large enterprises should be well demarcated for separate treatment to each, considering their individual characteristics and problems across sectors. There are also concerns about the definition of large and small size of enterprises. Both size categories deserve attention for accelerating manufacturing growth in the economy. Small manufacturing units need special attention because of more flexibility and labour absorptive capacity and also because they have highly labour and capital productivity and profitability than large industries. All the sizes should be taken care of simultaneously in giving incentive package considering their respective importance in different locations and communities.
- 9.13 Another area of strategic option relates to factor intensity of production. Though labour intensiveness as a strategy needs to be emphasized in Bangladesh because of the abundance of cheap labour in the economy, capital and skill intensiveness may be needed in some sectors and be allowed to pursue to achieve global competitiveness. The appropriateness of factor intensity thus depends upon the characteristics of individual sector and demand of the competitive market. Manufacturing growth requires a dynamic shift from lower to higher technology in pursuance of raising productivity and competitive edge of the sector and the enterprise. There should be an appropriate mix of labour intensive and capital intensive technology to be pursued simultaneously for dynamic development of manufacturing enterprise.
- 9.14 Both export expansion, domestic demand expansion and import substitution need to be given simultaneous emphasis for broad based and sustainable development of manufacturing. The ideal industrial strategy should be to enhance industrial competitiveness to strengthen the ability of both export and import substituting industries to compete in the global market.

10. Conclusion

The industrial sector has a critical role in the economic transformation of Bangladesh. The Sixth five year plan and the Perspective Plan of Bangladesh 2010-21 explicitly expressed the need for gearing industrialization to achieve the GDP growth target of 8% by 2015 and 10% by 2021. The overarching goal for the country's industrialization is to significantly enhance the industry sector contribution to in the next decade. Structural change in the economy has been cited as one of the important strategic goals of the Perspective Plan whereby agriculture's share will decline from 22% in 2009 to 16% at the end of the Sixth Five Year Plan and 15% by the end of Seventh five year Plan. As per perspective plan, in the transformation process of the economy, share of industry will increase from 28.5% in 2010 to 32% by the end of the Sixth FY Plan and 40% by the end of the Seventh Five Year Plan. The share of manufacturing will increase from 18.5% in 2010 to 22% in 2015 and 30% in 2021. The Strategic transformation goal is important for achievement of Vision 2021. The target of the Perspective plan, however, seems to be over-ambitious and need to be revised a bit downward. Past experiences of Bangladesh indicate that while the share of agriculture has sharply declined from 44% in 1972-80 to 20% in 2006-10, the increase in the share of manufacturing has been less sharp in from 10% in 1970s to only 17% in 2006-10. The share of industry has increased from 15% to 29% during the same period. Thus the five year plan target of manufacturing share of 21% (see table 1), though challenging is achievable and more realistic than the targeted share of manufacturing under Perspective Plan which is as high as 26%. The same is true for the increase of industry's share to 32% by 2015 against 36% under the Perspective Plan. The Sixth Five year plan has recognized the importance of manufacturing as a vehicle for poor productivity enhancement and employment expansion. It is projected that during the period of Sixth Five Year Plan, the manufacturing sector will have to outpace both the agricultural and service sectors and follow a smooth upward trajectory. In order to achieve the planned target, the manufacturing sector is planned to perform consistently and follow an upward trend from 6.5% annual growth in FY 2010 to 11.5% in FY 2015 with average annual growth of 10% during the plan period. There is evidence to show that the elasticity of manufacturing to GDP growth is around 0.78 which means that 10% manufacturing growth is a must for achieving economic growth of 7.5% p.a. during the plan period. The Sixth Five Year Plan has targeted alleviating poverty to 26 per cent from the present 31.5 per cent, and upgrading the industrial employment to 25 per cent of the population from the current 17 per cent by June 2015, its final implementation time. Export elasticity of manufacturing is around 0.55 implying that for achieving targeted average manufacturing growth of 10.0

% export must grow by 18.0% p.a. on average during 2011-15, which is achievable.

Double digit growth in manufacturing is a long cherished goal for the country though it did not yet reach the goal. Nevertheless the share of manufacturing in the growth process has increased from 15% in the early eighties to 22.5% in 2006-10. The manufacturing sector is however, narrowly based; only five industries, namely garments and textiles, fish and sea food, leather, fertilizer and pharmaceuticals account for over 80% growth achieved in the manufacturing sector. Concentration of growth in a few sectors has increased after income liberalization in the 1990s. Two broad sectors, food processing and textiles, have dominated the overall manufacturing sector. The basic challenge of industrialization emerges from the too narrow industrial base with product and locational concentration and low level of technology. Accelerated industrialization will be necessary to absorb the incremental labour force, strengthen backward and forward linkages with agriculture and services sectors and within industry sector itself, cater to the growing domestic demand for industrial goods, and take advantage of emerging opportunities in the global market. Initiatives will be needed to strengthen small and medium scale enterprises as well as to identify large scale manufacturing industries that can compete in the global market and compete with imports in the domestic market. Rationalisation and restructuring of SOEs will need to be continued so that the strategically placed SOEs can run profitably on a commercial basis, and others are handed over to the private sector. The privatized units will require to be prudently monitored and necessary support should be given to them so that resources are effectively used.

It has been in section VII above that the Sixth Five Year Plan envisages detailed strategies in generic and specific terms and for important subsectors. Yet it is felt that more work is needed to make clear cut and definite strategic options for sustainable development of specific manifesting sectors. Import substitution and domestic market orientation is poorly addressed and of export orientation is considered as the a prime mover of industrial development. Technology capacity building for industrial development is not adequately addressed either. The trajectory of diversification of the industrial structure for long term growth to achieve the visionary goal of the perspective plan will need to be prudently worked out. Subsectoral plan and strategies are yet to be more clear cut in consonance with the problems they face and the potentials they have. Further consultation with relevant stakeholders might be needed to strengthen the policies for industrial development and enhancement of external competitiveness of

manufacturing. There need to be adequate steps for translating industrial policy into action plan. Problems of privatized units and sick units sum to have been inadequately addressed in the plan. There should be a massive drive for solving the power problem shortly for smooth running of the existing enterprises and for encouraging new investment in the manufacturing sector. Clear cut modus operandi is yet to be developed for private-public partnership in manufacturing.

Key areas of desirable interventions relate to access to reliable power and energy supply and advanced technology, productivity enhancement and product development, assistance in aggressive marketing and economic diplomacy in the global arena, access to finance on easier terms, improved infrastructural facilities, cluster development and economic zoning and further fiscal incentives for manufacturing sector development, land availability for industrial investment, skill development, healthy labour management relations, raising real wages, trade facilitation measures and reduction of trade transaction costs, and exploring market potentials in different countries and negotiations for easier market access. There is also the need for increased attention to investment in research and development in manufacturing, economic cooperation with regional powers and multinationals for technological capacity building and appropriate institutional development for implementing policies and strategies.

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