

Dynamics of Trade Pattern and Competitiveness of Bangladesh: Implications for Future Development

Narayan Chandra Nath*

Abstract *The paper highlights the trade intensities and extent of global trade integration and analyses the dynamics of structure and growth of exports and imports of Bangladesh with their sources by commodities and markets. The study tries to analyse revealed comparative advantage of product categories with respect to partner countries and international competitors. It shows trade specialization index and net relative revealed comparative advantage covering both exports and imports together. The paper tries to give detailed analysis of not only of inter industrial trade but also of intra industry trade specialization of the country. The study focuses on quality of trade pattern and matching of country's trade pattern with the development requirements of the country and demand pattern of the world in analyzing its position in the global context. Having focused on trade pattern in regional context, it tries to highlight areas of similarity and complementarity with the regional countries of South Asia. It gives indications for desirable change in trade pattern for accelerating development of the country. It analyses the extent of concentration of exports and imports to judge vulnerability of external trade. It gives account of the status of competitiveness of Bangladesh in the global context and focuses on global market share of exports and imports and its sources of changes at aggregate and product level.*

* Research Fellow, Bangladesh Institute of Development Studies, E-17, Agargaon, Shere Bangla Nagar, Dhaka

The Author is grateful to the Referee for valuable comments and suggestions on the earlier draft of the paper. However, responsibility for any error rests with the author.

1. Introduction

1.1 Rationale and Motivation of the Study

Trade is well recognized as engine of economic growth and integral part of development of a country. It is more so for a small country like Bangladesh and in the era of global integration. Eventually mainstreaming trade into developmental agenda has assumed an important space in the policy and plan documents of the country over the years. But aggregate level of analysis hides the dynamics of structural change of trade and policy orientation of trade and development of the country. Analysis of dynamics of trade pattern has become now important research area for facilitating informed policy for trade related development. Motivation of the study is to see the evolving pattern of trade where there is a dearth of empirical work in Bangladesh. Here we shall see how the trade pattern has evolved over time and identify the peculiar characteristics of structure of exports and imports. We shall try to assess the trade pattern and specialization of Bangladesh in terms of seeing whether trade pattern corresponds to the development needs of the country and changing world economic situation and demand pattern and see whether trade pattern could capture the evolving global trade opportunities and could bring about necessary structural change of trade for accelerating development of the country. We require to see the status of comparative advantage of commodities of Bangladesh. Along with inter industry trade, the study will see the status of intra industry trade of Bangladesh to discern benefits of economies of scale in trade. The study of dynamics of trade pattern is expected to hint on implications for future development strategies and help facilitating formulation of appropriate trade policy of the country.

The Author is grateful to the Referee for valuable comments and suggestions on the earlier draft of the paper. However, responsibility for any error rests with the author.

1.2 Objectives and Methodology of the Study

General objectives of the study are to discern dynamics of pattern of trade of Bangladesh on the basis of historical analysis of its exports and imports and to give thrust on concordance of trade with comparative advantage and external demand pattern and needs of development of the country.

The Concrete Objectives of the Study are twine as follows:

- i. To analyse the structure and growth of exports and imports by commodities and markets

- ii. To analyse status of competitiveness and trade specialization by commodities and markets

The study will be based on analysis of data of secondary sources and will cover the period of 1972-2010, i.e. 38 years of Bangladesh. Secondary sources will be data base of Bureau of Statistics, NBR, Bangladesh Bank, EPB, BSTI, National Research Bodies, data base of UNCTAD, UNESCAP, COMTRADE, ADB, World Bank, IMF and WTO and data of individual surveys. Official Documents of different Ministries, government departments and authorities will also be used for review of trade policies.

Methods of Analysis will include

- a. Estimation of Indicators of Trade Pattern and sources of Growth of Trade in the context of Bangladesh
- b. Calculation of Revealed Comparative Advantage and Trade Specialisation Index of Commodities of Bangladesh
- c. Tabular analysis and Graphic Presentation of dynamics of Trade Pattern and Competitiveness of Bangladesh

1.3 Structure of the Report

The report is organized to address the following themes.

- i. Trade Intensities and Coverage of Imports by Exports
- ii. Export Composition and Growth by Commodities and Market Destinations
- iii. Import Composition and Growth by Commodities and Sources of Supply
- iv. Concentration Ratio of Exports and Imports
- v. Revealed Comparative Advantage and trade specialization Pattern of Commodities and Markets
- vi. Analysis of Market share and its sources and Status of global Competitiveness of Bangladesh

2. Trade Intensities and Coverage of Imports by Exports

2.1 Trade Intensities of Bangladesh

Trade intensities are the prime indicators of trade pattern of integration of the country with the global economy. If trade is proved crucial mover of the country, longitudinal development of trade intensities are the vital focal points of analysis of trade pattern. Our data analysis (Table-2.1) suggests that trade intensity has reached 45% of country's GDP and its average figure is around 44% in the last

five years. It is striking to note that in the two phases of structural adjustment programme and privatization programme under New Industrial policy of 1982 and 1986, trade intensities remain stagnated at only 16.7% in the two periods of 1981-85 and 1986-90. Gradually, trade intensities have increased only to 23% in 1991-95 despite substantial liberalization move. During 1996-2000, trade intensity reached a high level and got stabilised in 2001-05 with 34%. In the last five years, trade intensity of Bangladesh made a phenomenal growth despite global economic crisis during the period. It is notable that during the last thirty years of 1981-2010, export intensity has made a steady progress from 4% to GDP in 1981 to 17% in 2010. At the same time, it is established that its difference with import intensity has also increased. One of the explanations for widening the difference between export intensity and import intensity is increased import dependence and increased global price of imports relative to its exports, as we shall see it later on.

Another explanation is the increased import dependent exports out of shift from indigenous raw materials based export product of jute textiles to imported raw material based garments products. Import intensity has increased magnanimously from 13% in 1981-85 to 26% in 2006-10. Its capacity to import seemed to have increased not only because of increased export intensity but also because of increased inflow of remittance income of migrant workers. One of the important indicators of global integration is the import penetration ratio. This has increased from 11.8% in 1981-85 to 24% in 2006-2010 period. This has been because of import liberalization and increased domestic demand for better quality imported items. This has several aspects. Firstly, consumers' welfare might have increased. Secondly, domestic industries face tougher competition and have experienced eventually persistent sickness affecting investment climate. There have been gainers as well as losers. Thirdly, traditional sectors have incurred losses and non traditional sectors have benefitted. Consequently, underemployment of unskilled workforce coexists with scarcity of high skilled labour force for modern and non traditional sectors. Fourthly, inequality has rather increased with increased trade intensity and import penetration ratio. Fifthly, GDP growth has increased along with increased trade intensity. Finally, demand for high skilled labour and improved infrastructure would tend to increase in course of time and trade policy actions of the state cognisant of the need for sustained development of the economy. Trade openness though increases over time for Bangladesh remains below other South Asian countries except Pakistanⁱ. As per I-O Table, 2006-07ⁱⁱ, around 91% of output is sold in the domestic market and rest 9% is sold in the export market. In industry sector, 81% product is sold in the domestic market and

the rest 19% is sold in the export market. Total imports constitute 38% of total supply of the country ranging from 6.5% in agriculture sector to 56% in industry.. Thus on the one hand, production system of the country is more oriented to domestic market despite pursuance of export led development strategy and on the

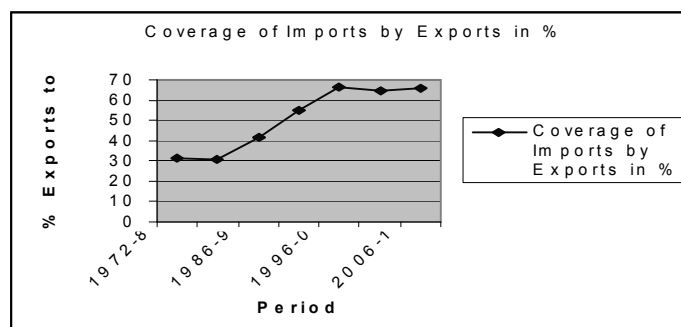
**Table 2.1 : Aggregate Indicators of Trade Intensities of Commodities
(Average Figures of Economic Phases)**

Economic Phases	Trade Intensity	Export Intensity	Import GDP Ratio in %	Import Penetration Ratio in %
1972-80	14.069	3.4541	10.6152	9.8704
1981-85	16.848	3.9582	12.8895	11.8248
1986-90	16.780	4.9068	11.8734	11.0952
1991-95	22.551	7.9877	14.5632	13.6400
1996-00	30.042	11.9514	18.0910	17.0451
2001-05	34.600	13.5835	21.0169	19.5350
2006-10	43.937	17.6908	26.2458	24.1521
Average during 1972-2010	24.370	8.4994	15.8702	14.7512

Source: Estimated from the data of BBS

other, domestic demand is majorly satiated by domestic production rather than imports though share of imports increased the over time.

Fig.2 Coverage of Imports by export earnings in Bangladesh



2.2 Trade Balance and Coverage of Imports by Exports

One of the important trade pattern indicators is trade balance. Its ratio with GDP would give reflection about dependence for development on foreign aid or external income other than exports of goods. Our data suggest that every year the government has been incurring trade deficit of around 7500 Million Dollars. Trade deficit has escalated from 1733 Million Dollars in 1981-85 to 7486 Million Dollars in 2006-2010 i.e. escalated by 27.5% per period. Average annual growth of trade deficit has increased highly in the period 2001-05 and 2006-10 as compared to negative growth rate in the period of 1996-2000. It is observed that proportion of trade deficit to GDP has got stabilized at high figure of 8% in all the periods. However,, import coverage ratio has increased significantly from 32% in 1972-80 to 66% in 2006-2010, i.e. more than double (Fig.2). Import coverage level of Bangladesh is far behind India and Bhutan but comparable with Pakistan and Srilanka.

3. Composition Pattern and Growth of Exports of Bangladesh by Commodities and Countries

3.1 Structure of Exports of Commodities of Bangladesh

Structure of exports by end use of Commodities shows that over the whole period under review, consumer goods dominated the export basket (Table-3.1) . Consumer goods along with materials for consumer goods constitute over 95% of exports. The picture did not get changed since the beginning of eighties. In the 1996-00 and 2001-2005, consumer goods constituted around 90% of exports basket. Share of intermediate materials for consumer goods has decreased from 38% in the 70s to only 13% in 2006-10. Share of capital goods in exports has declined from 1.8% in 70s to 0.6% only in 2006-10. Even materials for capital goods also declined from 0.8% to 0.5% during the same period. As per stages of processing, though proportion of exports of primary products decreased, proportion of intermediate products or capital equipment or high tech products did not increase. Share of high tech products and capital equipment are stagnated at 0.2% and 0.3% respectively while share of intermediate products along with primary products has fallen considerably. The result is that around 88% of export is composed of consumer goods in 2009 increased from 78% just five years back.(Table-3.2a). This may not be inconsistent with the low technological background of the entrepreneurs and structure of the economy biased against technology oriented production.

As detailed export structure by commodities (Appendix Table-3.1) shows, share of the traditional exports has fallen and share of non-trationals has substantially

increased. Though Bangladesh has lost its importance in supply of jute and jute goods, it could show tremendous success in knitted and woven garments. It is ironic that in the seventies, jute and jute goods constituted 77% and in the period of 2006-2010, jute and jute goods garments constituted 4% of total exports. On the other hand, garments constitute 77% in 2006-10 rising from the very insignificant proportion of 7% in 1981-85 reflecting its tremendous growth (as against sharp decline of share of jute and jute goods).

Knitted garments superseded woven garments in the recent years and share of woven garments has virtually declined from 50% in 1991-95 to 38% in 2006-10. Historical data analysis shows that Bangladesh has gained a lot in increasing proportion of manufactured exports. However, in the process, it could not retain its traditional and indigenous resource based jute products. The role of Jute exports has decreased not only relatively but also absolutely though Bangladesh was the main supplier of jute products in the global market. Demand for jute products is likely to increase with increased demand for environment friendly products. Diversification of jute products is the point of desirable focus.

Data suggest that Bangladesh made remarkable success in both knitted and woven garments, though its main categories are not more than five. In knitted garments, T-shirts and pullovers (80%) and in woven garments, shirts, jackets and trousers are the major products (86%). Here its potentials have not yet got exhausted, rather the sector can move forward comfortably with background experiences for a number of years with accumulated skill of 5000 entrepreneurs and 26 lakhs garment workers and thousands of accounting and managerial professionals. There are many products yet to be developed. Again in the same category of

Table 3.1: Dynamics of Structure of Exports by End-use of Commodities (% Share in Exports)

<u>Economic Phases</u>	% Share of consumers goods in exports	% share of material for consumer goods in exports	% share of capital goods in exports	% share of materials for capital goods	Total
1972-80	59.2	38.2	1.8	0.8	100.00
1981-85	68.5	29.4	1.0	1.1	100.00
1986-90	74.4	23.4	1.5	0.7	100.00
1991-95	81.2	16.4	1.7	0.6	100.00
1996-00	90.2	8.5	0.7	0.6	100.00
2001-05	89.3	10.0	0.4	0.3	100.00
2006-10	84.3	13.6	0.6	0.5	100.00

Source: Calculated from the data of BBS

products, it can go for higher quality products. Aggressive marketing drive with brand name of Bangladeshi Companies is a feasible option. For that economic

Table 3.2: Structure of Exports of Bangladesh by Major commodities in % to Total Exports

Economic Phases	% Primary Products	% Mfg exports	% garment l exports	% of Jute and Jute Goods	% of raw jute	% of Jute textiles
1972-80	37.0867	62.9133	0.0681	77.0733	26.44	50.6311
1981-85	34.846	65.154	7.0146	58.508	15.586	42.92
1986-90	22.66	77.34	38.193	30.22	7.602	22.618
1991-95	13.118	86.882	62.2254	14.108	2.858	11.25
1996-00	9.044	90.956	73.5326	6.982	1.672	5.308
2001-05	7.138	92.862	75.1168	4.812	1.168	3.642
2006-10	6.186	93.814	77.0946	3.928	1.238	2.692
Total	20.4805	79.5195	42.7307	32.9859	9.9636	23.0213

Source: Calculated from Data of EPB

Table 3.2a: Structure of Exports By Stages of Processing

Indicators	2005	2006	2007	2008	2009
Exports in value in 000					
Dollars	9331406	11696539	13142843	16773287	17074095
Share of primary goods(%)	7.5	7.3	9.4	5.1	4.8
Share of intermediates (%)	13.4	17.1	13	7.8	5.9
Share of capital (equipment) (%)	0.7	0.6	1.7	0.5	0.3
Share of high-tech products (%)	0.3	0.2	0.1	0.2	0.2
Share of consumer goods (%)	78.1	75.3	75.8	86.4	88.8
Total	100	100	100	100	100

Source: Adapted from the Data of UNCTAD,2009.

diplomacy and investment for international marketing need to be facilitated by the government. One note of caution is that it is very risky to rely on single product and export becomes vulnerable in the situation of global market change.

3.2 Growth of Exports by Commodities

Though proportion of traditional exports has declined tremendously, they are growing rapidly in the recent years. For example, jute and jute goods exports grew at the rate of 20% and 26% respectively in the recent period of 2006-10. Though proportion of non garments declined from 62% in 1981-85 to 32% in 2006-10, its growth was from negative to the positive 13.4% during the same period

(Appendix Table-3.1). Thus growth performance of not only of garments was substantial but also of others is appreciable amidst global economic crisis. Though knitted and woven garments contributed to the extent of 77% in the period 2006-10, other products except paper board and tea seem to be still prospective despite decline in their role in the growth of exports.

In respect of end use, though capital goods and materials for capital goods have small share in exports grew very highly in the recent period. Consumer goods grew steadily throughout the whole period of 1972-2010 (Table-3.3). High export growth of all the commodities groupings talks of prospect of diversified export in future.

Table 3.3: Growth of Exports by End-use of Commodities

Phases	Average Annual Growth				
	Growth of consumers goods	Growth of materials of consumers goods	Growth of capital goods	Growth of materials for capital goods	Export growth
1972-80	31.2	22.6	0.4	35.0	26.2
1981-85	9.2	6.8	138.3	127.3	8.3
1986-90	12.4	4.6	60.4	81.1	10.0
1991-95	20.2	8.0	62.3	93.9	17.6
1996-00	11.3	-7.1	156.4	19.1	9.1
2001-05	11.1	32.6	191.3	-19.1	12.7
2006-10	15.5	14.4	14.8	1011.2	15.0
Average	16.3	11.9	88.7	164.7	14.5

Source: Calculated from Data of EPB

3.3 Sources of Export Growth by Commodities

The predominant source of export growth in Bangladesh in terms of end-use of commodities, as indicated in Table-3.4, is consumers goods (73% on average for 1972-2010). If we add materials for consumer goods of 18%, the figure would be 91% of export growth. High share and high growth of consumer goods as indicated before resulted in predominant contribution of consumer goods to exports growth over the years. During 1996-2000, the share of consumer goods as a source of export growth was as high as 96%. Afterwards, it started declining though remains very high as source of export growth. During 2006-10, contribution of consumer goods and materials goods to export growth constituted 74.5% of total exports. This indicates weak technological content of exports as source of its growth and reflects poor quality of export structure of Bangladesh.

Detailed commodity wise sources of export growth (as indicated in Table-3.5) shows that predominant contribution to export growth in the 70s and first half of eighties came from jute and jute goods. In the late eighties, contribution of jute and jute goods was though positive was small (21%). Afterwards, contribution of jute and jute goods was negative during 1990-2000. However, during 2006-2010, contribution of jute and jute goods to export growth again became positive (16%). From the eighties onwards, readymade-made garments became main source of export growth.

In the last economic phase (2006-10), ready-made garments contributed to the extent of 77% to export growth. Positive contribution to export growth, during the same period, came from leather (1.72%), frozen food (0.54%), engineering products (7.1%), footwear (0.80%) and other manufacturing products (6.55%). Contribution of tea was very high in the 70s, but later on declined, and in the recent period it became negative because of its excess domestic consumption over production. Contribution of paper, chemical products and fertilizer was

Table 3.4: Sources of Growth of Exports by End-use of Commodities

<u>Economic Phases</u>	Growth of consumers goods	Growth of materials of consumers goods	Growth of capital goods	Growth of materials for capital goods	Total
1972-80	67.43	31.52	0.03	1.02	100.00
1981-85	56.85	18.04	12.48	12.63	100.00
1986-90	78.34	9.14	7.69	4.82	100.00
1991-95	84.82	6.78	5.48	2.91	100.00
1996-00	94.39	-5.59	10.14	1.06	100.00
2001-05	71.41	23.49	5.51	-0.41	100.00
2006-10	64.78	9.71	0.44	25.07	100.00
Average	72.99	14.62	5.68	6.71	100.00

Source: Calculated from the Data of Table-3.1 and 3.3.

substantial in some years but negative in recent time. Handicrafts, leather goods and pharmaceuticals are insignificant though are prospective in contribution to export growth in future.

Table 3.5: Sources of Export Growth by Commodities
(% Contribution of Individual Items to export Growth)

Export Items	1972-80	1981-85	1986-90	1991-1995	1996-00	2001-05	2006-10	Observation
Raw jute	346.42	26.32	10.31	-4.10	-1.62	1.34	2.94	Declined but prospective
Tea	67.84	3.15	4.43	-0.05	-0.80	0.26	-0.02	No prospect
Frozen Food	179.07	4.66	-4.35	10.91	1.35	7.12	0.54	Declined but prospective
Agri products	-30.21	-9.93	-6.52	0.36	-0.03	1.58	2.29	Declined but prospective
Other primary commodities	3.60	0.01	0.32	1.81	0.20	0.54	0.79	Declined but prospective
Total primary commodities	340.27	32.69	8.36	5.43	-4.04	10.20	3.85	Declined but prospective
Jute goods	308.27	54.62	13.15	-3.37	1.07	0.15	14.05	Declined but prospective
Total jute and Jute goods	75.07	81.14	21.33	-8.10	-2.57	1.41	15.71	Declined but prospective
Leather	2.89	5.27	13.92	1.27	-1.35	3.66	1.72	Declined but prospective
Leather goods	0.11	0.00	0.00	4.44	2.20	0.00	0.00	Declined but prospective
Footwear	0.11	0.00	0.00	3.16	2.27	1.61	0.79	Increased and prospective
Woven Garments	0.43	45.02	66.92	71.06	57.16	28.10	31.16	Increased and prospective
Knitwear	0.05	0.00	0.00	112.39	50.88	40.62	46.03	Substantial and prospective
Total garments	0.49	44.62	68.67	101.32	103.32	65.62	76.37	Substantial & prospective
Chemical products	3.51	246.46	32.50	6.49	0.16	5.55	-0.66	Declined but prospective
Fertilizer	0.00	-0.42	32.48	310.76	-4.00	0.00	0.00	Declined
Pharmaceuticals	7.25	0.47	-0.06	0.58	0.34	0.11	0.00	Declined but Prospective
Paper prod	10.70	3.17	-0.09	0.19	0.01	0.00	0.00	Declined & not Prospective
Handicraft	1.59	-0.08	0.40	0.59	0.34	-0.01	0.03	Declined but prospective
Engineering products	5.39	30.79	3.59	0.59	-0.14		7.12	Stable and prospective
Specific textiles	-0.01	-1.74	1.75	10.33	4.11			Declined but prospective
Other mfg. Total mfg exports	7.80	0.42	1.37	6.62	7.68	20.89	6.55	Stable and prospective
Total Export	345.86	66.15	95.88	97.77	107.30	89.65	96.83	Prospective
Total Exports except Garments	100.00	100.00	100.00	100.00	100.00	100.00	100.00	Declined but Prospective
Total Mfg exports except Garments	99.73	82.65	44.02	10.22	1.03	34.43	26.17	Declined but Prospective
	345.63	49.06	35.39	5.20	6.12	24.31	23.08	

Source: Calculated from the data of EPB of Different Periods

3.4 Structure and Growth of Exports by Market Destinations

3.4.1 Structure of Exports by Market Destinations

Only nine countries constitute stably 75% of total exports of Bangladesh during 1991-2010 increased from 38% in 1981-85 (Table-3.6). Share of other countries than these nine countries have declined from 62% in 1981-85 to 25% in 2006-10. In the period of 1996-2005, share of other countries was abysmally lower at 19% only. The country like USA alone accounts for 25% of total exports. Three European Countries- UK, Germany and France taken together buy 25% of our total export products. Thus 50% of our exports are for just four market destinations. All these suggest that Bangladesh export is concentrated not only in very few commodities but also in very few markets, and the country is too much dependent on very few countries to increase its export earnings. This suggests the need for massive drive for market diversification to avoid instability and vulnerability of exports along with consolidation of existing ones. Diversification of export commodities in these developed markets is definitely a possible option to pursue. Their import demand need to be studied closely at detailed product categories. The country can think in increasing exports in emerging economies of China, India, Brazil, Russia and Korea. Expansion of demand of the market destinations must be product specific as per their unmet demand and low level of competition from within and outside. Since exports are concentrated in only nine markets, there is a huge potential for taking the benefits from market expansion.

3.4.2 Growth of Exports to Individual Market Destinations

It is notable that though Bangladesh export market is concentrated in nine developed economies, growth of exports to other market destinations has been remarkably high in the recent period of 2006-10 (Table-3.7). They account for 24% which is much higher than the growth rate of 16% of exports to top nine countries.

3.4.3 Sources of Growth of Exports to Individual Market Destinations

Data analysis suggests that contribution of top nine countries to export growth of Bangladesh has been predominantly high since the beginning of eighties. In the recent period, its contribution has decreased to 67% in 2006-10 from 97% in 1981-85. Contribution of five economies USA, UK, Germany, France and Netherlands taken together have been to the extent of more than 54% of export growth of Bangladesh (Table-3.8). This indicates that trade cooperation with developed economies has still potentials to be realized. Since 2000, role of

Table 3.6: % Share of Individual Market Destinations to Total Exports (Average % Exports)

Period	USA	UK	Germany	France	Belgium	Italy	Nether lands	Canada	Japan	Others	Total exports	% exports to Top 9 importers
1972-80	14.9	7.5	2.1	1.7	4.0	4.6	2.1	1.5	3.2	58.4	100.0	41.6
1981-85	12.6	4.5	1.4	1.1	4.5	5.5	1.9	0.9	5.2	62.4	100.0	37.6
1986-90	27.2	5.9	4.4	2.1	3.9	8.0	2.2	1.6	5.2	39.4	100.0	60.6
1991-95	32.2	8.3	9.4	5.6	4.0	6.5	3.9	1.9	2.4	25.8	100.0	74.2
1996-00	35.4	9.4	10.5	6.8	4.4	4.9	4.7	1.9	2.3	19.7	100.0	80.3
2001-05	32.5	10.9	13.8	6.7	4.0	4.3	4.2	2.8	1.6	19.2	100.0	80.8
2006-10	25.9	9.6	15.2	6.5	3.1	4.0	4.8	4.0	1.5	25.5	100.0	74.5
Average	25.0	8.0	7.8	4.2	4.0	5.3	3.3	2.1	3.0	37.2	100.0	62.8

Source: Calculated from the data of BBS

Table 3.7: Average Annual Growth of exports to Individual Market Destinations

Period	USA	UK	Germany	France	Belgium	Italy	Netherlands	Canada	Japan	Others	Total exports	Top 9
1972-80	4.1	10.1	12.7	4.5	5.7	23.3	11.1	4.6	42.0	16.7	11.9	7.9
1981-85	20.5	3.0	186.4	12.2	33.3	18. 7	3.3	16.8	21.9	0.5	5.2	14.5
1986-90	25.3	17.8	38.0	55.8	2.8	35. 3	19.6	16.9	-2.9	2.5	11.3	19.5
1991-95	23.9	28.2	32.6	25.8	16.4	11. 3	30.4	27.6	16.3	10.7	18.3	21.8
1996-00	14.6	10.0	17.2	14.8	13.1	4.2	16.0	11.6	0.4	3.8	10.7	12.7
2001-05	2.0	13.7	17.8	11.8	9.2	9.1	1.0	28.2	5.0	14.1	8.9	7.7
2006-10	13.8	14.5	18.4	17.4	15.5	15. 8	26.2	21.0	24.7	24.3	18.2	16.2
All Years average	14.3	13.7	43.7	19.4	13.3	17. 2	15.4	17.5	17.0	11.0	12.2	14.0

Source: Calculated from the data of BBS

Table 3.8: Sources of Export Growth by Market Destinations

Period	USA	UK	Germany	France	Belgium	Italy	Netherlands	Canada	Japan	Others	Total exports	Top 9
1972-80	4	5	2	1	2	7	2	0	9	68	100	32
1981-85	27	1	27	1	16	11	1	2	12	3	100	97
1986-90	45	7	11	8	1	19	3	2	-1	6	100	94
1991-95	37	11	15	7	3	4	6	3	2	13	100	87
1996-00	45	8	16	9	5	2	7	2	0	7	100	93
2001-05	7	15	25	8	4	4	0	8	1	28	100	72
2006-10	19	7	15	6	3	3	7	4	2	33	100	67
All Years average	23	7	22	5	3	6	3	2	3	26	100	74

Source: Calculated from the data of Tables-3.5 and 3.6

emerging market destinations has been steadily increasing for export growth of Bangladesh. It increased from 7% in 1996-2000 to 28% in 2001-2005 and 28% in 2006-10. This is an encouraging sign for export market diversification of Bangladesh.

4. Composition and Growth of Imports by Commodities and Countries

4.1 Composition of Imports by Commodities

Overwhelming imports, as data analysis suggests, are for consumption. Share of consumption goods increased from 31% in 1981-85 to 57% in 2006-10. Next

Table 4.1: Structure of Imports By Commodities (% Total Imports)

Economic Phases	% primary goods Import	% Intermediate Goods	% Capital Machinery Import	% Consumer goods imports
1972-80	31.8	22.4	9.6	36
1981-85	27.9	23.3	29.6	19
1986-90	19.0	16.2	34.2	31
1991-95	12.1	16.4	29.7	42
1996-00	12.3	14.5	9.3	64
2001-05	12.3	19.0	8.4	60
2006-10	13.8	21.9	6.9	57
Average	20.1	19.3	17.9	43

Source: Estimated From Data of BBS

important item of import is intermediate goods constituting 22% in the recent period. Its share has slightly declined to 22% from 23% in 1981-85. Share of primary goods has substantially declined from 28% in 1981-85 to 14% in 2006-10 (Table-4.1). Share of capital goods has also substantially declined to 7% in 2006-10 from 30% in 1981-85.

4.2 Growth of Imports by Commodities

In terms of growth, there is no stability of growth of capital machinery and primary goods. Growth of Consumption goods is stably high followed by intermediate goods. Growth of all categories of imports was high in the period of 2001-05. Growth rate of consumer goods has declined from 40% in 1972-80 to 11% in 2006-10 (Table-4.2). Growth rate of intermediate goods has improved while of capital machinery has deteriorated in the same period.

Table 4.2: Growth of Imports By Commodities

Economic Phases	Primary goods Import	Intermediate Goods	Capital Import	Consumer goods imports
1972-80	61	48	57	40
1981-85	-9	-13	4	33
1986-90	4	13	10	21
1991-95	19	13	10	17
1996-00	14	7	-2	14
2001-05	27	26	27	13
2006-10	-7	1	-1	11

Source: Estimated From Data of BBS

4.3 Sources of Import Growth by End-use of Commodities

In terms of end-use of products, consumer goods is the main source of growth of imports (50.06%). High positive contribution of consumer goods to import growth is highly manifested in all the economic phases. In the eighties and first half of nineties, contribution of capital goods import to import growth was considerable. During 1986-2005, contribution of primary and intermediate products was substantial. During 2006-2010, contribution of consumer goods was as high as 115% to import growth. This reflects poorer quality of imports in the recent years as well as negligence to import substitution of consumer goods.

Table 4.3: Sources of Growth of Imports By End-use of Commodities during 1972-2010

Economic Phases	Primary goods Import	Intermediate Goods	Capital Goods Import	Consumer goods imports	Total
1972-80	38.78	21.49	10.94	28.79	100.00
1981-85	-131.19	-158.25	61.86	327.59	100.00
1986-90	5.94	16.46	26.73	50.88	100.00
1991-95	15.81	14.66	20.43	49.10	100.00
1996-00	14.96	8.82	-1.62	77.84	100.00
2001-05	18.12	26.95	12.37	42.56	100.00
2006-10	-17.71	4.02	-1.27	114.96	100.00
Average	20.97	15.83	13.14	50.06	100.00

Source: Calculated by the Author from the Tables 4.1 and 4.2.

Table 4.4: Structure of Imports by Sources of Supply in %

FY	India	China	Singapore	Japan	Hongkong	Taiwan	S. Korea	USA	Malaysia	Others	Total	Top 9
1986-90	3.0	3.2	6.7	13.3	3.3	0.0	2.9	7.2	1.2	59.1	100	40.9
1991-95	8.8	5.6	6.1	9.8	6.9	2.8	5.8	5.2	1.1	50.2	100	49.8
1996-00	13.2	7.9	5.8	7.9	5.7	4.3	4.5	4.1	1.8	44.8	100	55.2
2001-05	13.9	10.4	8.7	6.2	4.6	3.6	3.8	2.5	1.9	44.4	100	55.6
2006-10	13.8	15.9	5.9	4.1	3.6	2.3	3.3	2.1	3.5	37.5	100	62.5
All years	12.7	12.0	6.5	6.1	4.3	3.9	3.8	3.0	2.6	42.3	100	57.7

Source: Estimated From Data of BBS

4.4 Structure of Imports by Sources of Supply

Imports of Bangladesh are concentrated in nine countries constituting 63% of total imports. Two suppliers are India and China constituting together one third of imports of Bangladesh. India and China constituted only 6% in 1996-90 but have come up increasingly to outbid other suppliers in the market of Bangladesh. Share of top nine countries has increased from 40% in 1986-90 to 63% in the recent period (Table-4.4). Share of imports from Japan has sharply declined during the period under review. Share of other countries than these countries has sharply declined from 59% to 37% during the period.

4.5 Growth of Imports by Sources of their Supply and sources of Import Growth

There has been steady growth of imports during 1972-2010 @11% p.a. except in 1996-2000 (Table-4.5). There has been impressive growth of imports from India, China, Malaysia and Korea Republic. Growth of imports from USA is also stably high. While share of nine countries has increased, growth of supply of other countries has also increased stably @ 9% p.a. and considerably in the recent period. Imports from like Malaysia, South Korea and Japan have considerably increased along with predominant supply from India and China.

Around 67% of import growth was contributed by nine countries. Around 43% of import growth was from two countries-India and China. Share of major nine countries in import growth has considerably increased in the recent period. Contribution of China and India to import growth has increased remarkably in the recent period to the extent of 48% in 2001-05 and 44% in 2006-10.

Around 67% of import growth was contributed by nine countries in 2006-10 (Table-4.5). Around 43% of import growth was from two countries-India and China. Share of major nine countries in import growth has considerably increased in the recent period. Contribution of China and India to import growth has increased remarkably in the recent period to the extent of 48% in 2001-05 and 44% in 2006-10.

5. Concentration Ratios of Exports and Imports

Bangladesh export as indicted in Fig.5, has high concentration ratio (0.37 in 2006-10 increased from 0.33 in 1972-80). Its concentration ratio is the highest among the seven important comparator nations (Fig.6). This reflects relative vulnerability of its export sector. This indicates the need for product diversification in the export basket. Concentration ratio of comparator countries ranges from 0.22 in case of Pakistan and Srilanka to 0.14 in case of India and Vietnam, 0.11 in case of China and 0.08 in case of USA(Fig.6). Import concentration ratio of Bangladesh

Table 4.5: Compound Growth of Imports by Sources of Supply in %

FY	India	China	Singapore	Japan	Hongkong	Taiwan	Korea	US	Malaysia	Others	Total	Top Nine
1986-90	24.7	15.6	11.5	16.8	35.9		18.5	6.1	11.0	10.1	12.3	15.6
1991-95	39.7	33.3	-4.7	15.0	21.3		19.8	10.9	6.4	8.2	13.5	11.1
1996-00	-6.7	-5.3	19.6	-0.4	3.9	15.6	-3.4	-0.4	11.9	10.1	4.8	7.6
2001-05	14.4	23.4	1.9	-9.8	4.3	1.6	0.9	7.3	16.9	10.1	8.9	8.3
2006-10	19.4	22.9	8.3	12.4	6.4	3.4	14.9	10.2	35.2	12.7	16.4	8.3
Average	18.9	19.1	7.5	6.3	12.4		11.5	5.0	17.4	9.1	10.9	12.4

Source: Estimated From Data of BBS

Table 4.6: Sources of Import Growth By Sources of Supply

FY	India	China	Singapore	Japan	Hongkong	Taiwan	Korea	US	Malaysia	Others	Total	Top 9
1986-90	6	4	6	18	9	0	4	4	1	48	100	52
1991-95	25	13	-2	11	11	0	8	4	1	30	100	70
1996-00	-17	-8	22	-1	4	13	-3	0	4	86	100	14
2001-05	22	26	2	-7	2	1	0	2	3	48	100	52
2006-10	19	25	3	4	2	1	3	1	9	33	100	67
Average	22	21	4	3	5	0	4	1	4	35	100	65

Source: Estimated From Data of Tables-4.3 and 4.4.

Fig.5 Concentration Ratio of Exports and Imports of Bangladesh

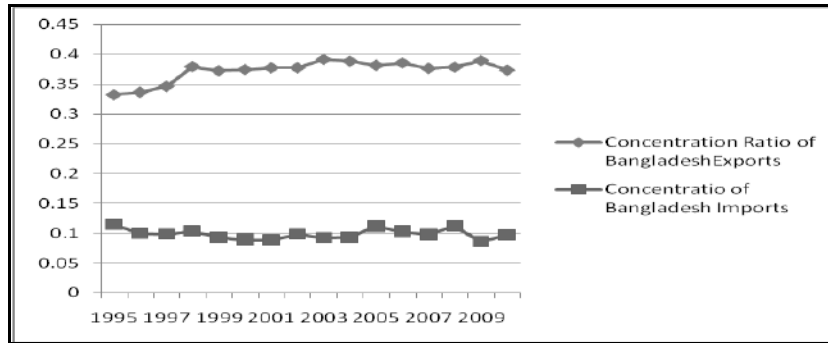


Fig.6 Concentration ratio of Exports-(Comparative Cross Country Picture)

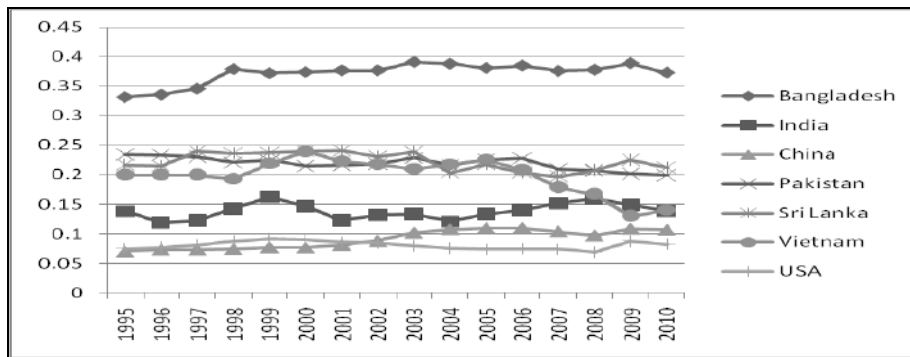
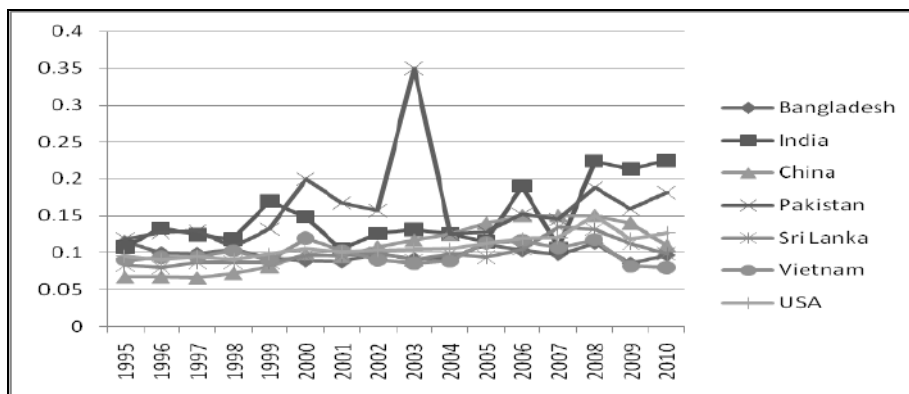


Fig.7 Concentration ratio of Imports - Cross Country Picture



is relatively low and as low as 0.09 in 2006-10 decreased from 0.12 in 1972-80 and comparable with almost all countries of South Asia. Thus import is relatively diversified in Bangladesh (Fig.7).

6. Intra-industry Trade Index and Intra Regional Trade

Evidence suggests that international specialization has been shifting more towards intra industry trade with the increase in international trade. It has been established that intra industry trade is driven by product differentiation and economies of scale, resulting in increased consumer welfare from the availability of wider basket of products within each industry. Bela Balassa (1987)ⁱⁱⁱ showed that intra industry trade is positively related with trade openness and negatively correlated with income inequality. Economic integration and intra industry trade is linked to a considerable extent. It is important to investigate as to what extent Bangladesh trade is of intra industry nature. As Tabular data shows, with the advent of trade liberalization, intra industrial trade i.e., export (Xi) and import (Mi) in the same industry in Bangladesh has increased sharply over the years in Bangladesh. But the level of intra industrial trade is lower than India, Pakistan and Srilanka.

7.1 Intra Industry Trade Intensity Index Of Grubel and Liod (GL)[1975]

For measuring intra industry trade, most commonly used instrument is Grubel and Liod (GL) index^{iv}. This index provides intra industry intensity of each product. At aggregate level, intra industry trade intensity is often evaluated by calculating the average of GL index for each product weighted with the ratio of each product to country's total trade.

$$GL = \frac{\sum_{i=1}^n (X_i + M_i) - \sum_{i=1}^n |X_i - M_i|}{\sum_{i=1}^n (X_i + M_i)}$$

The intra industry GL index ranges between 0 and 1 with larger values indicating a greater degree of intra industry trade. Main criticism against GL index is that it tends to underestimate the intensity of inter industry trade. As Tabular data (Table-7.1) show, over time, intra industry trade of Bangladesh has increased though lags behind India and Srilanka.

Table 7.1: Intra-Industry Trade of Bangladesh as compared to Other SAARC Countries

Year	Items	BD	IND	MALD	PAK	SRL
1995	No. of Industry Groups					
	> G-L Index 50	8	35	1	...	...
	Weighted G-L IIT	11	38.2	3.9	...	...
2004	No. of Industry Groups					
	> G-L Index 50	17	40	4	22	30
	Weighted G-L IIT	47.6	62.7	20.5	52.5	52

Source: Adapted from Rajeeb jain and J.B. Singh, " Trade pattern in SAARC countries: Emerging Trends and Issues",RBI.,2009

N.B.G-L Index 50 indicates intra industrial Trade no of industries (out of 99 in 2 digit level industry groups) with more than intra regional index of 50.

7.2 Vona Index of Intra Industry Trade

In view of several problems with GL index, Vona,S (1990)^V constructed an index for measurement of aggregate intra industry trade across all the industries, which includes only two way flows of goods produced by the same industry , independently of their balance. It is defined as the proportion of trade values of

Table 7.2: Vona Intra Industry Index for Traded Commodities of Bangladesh

Economic Phases	Vona intra industry Trade index of consumer goods= consumer goods trade total/total trade	Vona Index-Intra Industry Trade for Materials of Consumer goods	Vona Index-Intra Industry Trade for capital goods	Vona Index-Intra Industry Trade for materials of capital goods	Total Vona Index of intra industry trade for all commodities
1972-80	0.26	0.32	0.15	0.10	0.24
1981-85	0.36	0.34	0.17	0.10	0.29
1986-90	0.47	0.29	0.09	0.14	0.32
1991-95	0.52	0.23	0.09	0.11	0.35
1996-00	0.43	0.21	0.09	0.12	0.31
2001-05	0.22	0.39	0.10	0.03	0.28
2006-10	0.12	0.48	0.09	0.01	0.28
Average	0.34	0.32	0.11	0.09	0.29

Source: Calculated from the Data of BBS

commodities having simultaneous exports and imports within an industry to total trade values. The Vona Index is expressed as:

$$V = \frac{\sum_{i=1}^m (X_i + M_i)}{\sum_{i=1}^n (X_i + M_i)}$$

Where ‘m’ is number of industries having simultaneous exports and imports ,and

Where ‘n’ is number of industries either with exports or imports or simultaneous exports and imports.

As our results of calculation of Vona index show, intra industry trade of Bangladesh is at a very low level of 28%.in the recent period and there is no sign of increase (Table-7.2). Intra industry trade happened here in consumer goods and materials for consumer goods. In capital goods and materials for capital goods, intra industry trade is abysmally low and ironically declined gradually. This is a symptom of technologically backward trade specialization and trade pattern of Bangladesh.

8. Intra Regional Trade and Similarity of exports and Imports of Bangladesh in the SAARC region

8.1 Intra Regional Trade and Bangladesh Role

Intra regional trade is relatively meagre, and Bangladesh’s role in intra regional trade is also low though has been increasing. India and Pakistan are having lower role. Bangladesh imports more than it exports to the region, India and Pakistan are net exporters and need to import more from the regional countries. Srilanka, Nepal and Afganistan are playing greater role in intra regional trade but these countries are net importers (Table-8.1). Bangladesh need to explore more export

Table 8.1: Intra-regional Trade Share of South Asia’s Total Trade (Per cent)

Country	1985	1990	1995	2000	2004	2007
Afghanistan	11.4	14.5	11.1	29.7	35.3	43.1
Bangladesh	4.7	6	12.8	7.9	10.5	9.4
India	1.7	1.6	2.7	2.5	3	2.7
Maldives	12.5	12.7	14.3	22.2	19.8	12.2
Nepal	34.3	11.9	14.8	22.3	47.2	60.5
Pakistan	3.1	2.7	2.3	3.6	5	6.6
Sri Lanka	5.5	5.6	7.8	7.4	15	18.9
Total SAARC	3.7	2.7	4.3	4.5	5.0	4.8

Source: Regional Co-operation Strategy and Programme, South Asia (2006-2008), ADB

opportunities in the region. Intra regional trade is beneficial for Bangladesh because of low trade transaction cost involved at minimum time of delivery with greater contact of the parties. Regional market and its changes are easier and quicker to know and forecast with more friendly behavior of regional firms. Moreover, it will help enjoying economies of scale.

8.2 Similarity of exports and Imports of Bangladesh in the SAARC region

One of the questions regarding trade pattern in regional context is whether Bangladesh exports and imports similar products in the context of similar tastes and development level. The similarity of export pattern may be gauged from the Export Similarity Index developed by Finger and Kreinin (1979)^{vi} Rank correlations and Similarity indices show that in both exports and imports Bangladesh has high similarity correlation with SAARC countries (Table-8.2). Highest similarity of Bangladesh exports exists with Srilanka indicating high competing situation with it. Similar is the case with Pakistan in export market. In import, Bangladesh has highest similarity with Srilanka. India's export is practically complementary to imports of Bangladesh and Srilanka and latter countries would compete with each other for similar imports from India. All these explain low intra regional trade performance of Bangladesh in South Asian region as the member countries of the South Asian region tend to specialize in broadly similar types of items for exports and for similar types of imports. Common exporting items of Bangladesh with South Asian countries are identified as 11 and belong to two broad categories-fish and garments (Table-8.3). We are to identify areas of intra industrial trade with these countries in future. We have high similarity index with Cambodia also revealing its competitive character with Bangladesh. Though export complementarities of Bangladesh may be weak with Srilanka, would be strong with India and Pakistan for import of raw materials, intermediate and capital goods. Import from these two regional countries will be complementary to the Bangladesh exports to the region and rest of the world. Low trade transaction cost advantage with neighbouring India will help increased imports of Bangladesh at lower price to help increased export to the world at competitive price. Bangladesh as a geographically small country with huge population has to rely on its exports for development increasingly by using resources and market of South Asian region and its own surplus labour. As bilateral correlation coefficient of GDP of Bangladesh with India, Pakistan and Srilanka during 1960-2006 shows, there exists high economic complementarities in between these countries. So potentials of high growth of these countries may boost the trade flows of Bangladesh with these regional countries. Only

Table 8.2: Rank Correlation and Similarity Index of Bangladesh Exports and Imports of Bangladesh with SAARC countries (2004)

Country	India	Maldives	Pakistan	Srilanka
Rank Correlation of Bangladesh exports Baskets	0.49*	0.32	0.53*	0.55*
Export Similarity Index of Bangladesh with SAARC countries	20.4	35.8	32.7	57.8
Rank Correlation of Bangladesh Imports Baskets	0.63*	0.59*	0.67*	0.76*
Bilateral Correlation of Bangladesh GDP with SAARC Countries (1960-2006)	0.57*	0.29	0.57*	0.47*

Source: Adapted from Rajeev Jain and J.B.Singh,RBI,

Table 8.3: Common Exporting Items Bangladesh with other SAARC countries

	Top 20	Other than top 20
030613 Shrimps and prawns, frozen	BD, IND	PAK, SL
610510 Men's, boys shirts, of cotton, knit	BD, Pak,SL	India
610910 T-shirts, singlets and oth	BD, IND,SL	Pak
610990 T-shirts, singlets etc, of materials nes	BD, SL	Ind, Pak
611020 Pullovers, cardigans etc of cotton	BD, SL	IND, PAK
620342 Men's, boys trousers & shorts of cotton non-knit	BD, MD.Pak.SI	Ind
620343 Men's, boys trousers short non-knit	BD, SL	Ind, Pak
620462 Women's, girls trousers & shorts of cotton non-knit	BD, MD,SL	Ind, Pak
620520 Men's, boys shirts, of cotton,non-knit	BD,Ind,SL	Pak
620630 Women's, girls blouses & shirts of cotton,non-knit	BD, IND,SL	Pak
620690 Women's, girls blouses & shirts of materials nes,non-knit	BD, SRL	Ind, Pak

Source: Compiled from UNDATA Base, 2004

requirement is to increase the tradability of key resources of South Asian countries to complement each other in their economic development. Recent move for special and differential treatment accorded to Bangladesh (for being LDC) by India and Pakistan will help increased trade flows of Bangladesh in the region and increased export competitiveness with rest of the world. And development of Bangladesh would boost up demand of Bangladesh for regional goods because of similarity of preferences of the people.

8.3 Sensitive List of India and Competitiveness of Bangladesh in these items

Taneja et al have made exercise to show the vulnerability of items of sensitive items of India with respect to different countries of SAARC^{vii}. The sensitive list under consideration for Bangladesh consists of 298 items (excluding 33 food security and revenue items). In addition 147 items in the apparel sector where India granted duty free access have also been classified on the basis of paired RCAs to identify items where India was most vulnerable. They have found out only eight items) in which India is not competitive in the international market but Bangladesh is. These 8 items are very meagre, and for Bangladesh also these are minor exports. Thus, India can withdraw sensitive list entirely with respect to Bangladesh.

9. Indicators of Revealed Comparative Advantage and Specialisation pattern of Bangladesh

9.1 Revealed Comparative Advantage

A statistical indicator that reflects a country's comparative advantage or disadvantages of different products can be employed for evaluating the performance and specialization of a country. Here quantitative comparison would be made between different products in the same country vis-a-vis rest of the world. Changes in the indicator of comparative advantage may be due to both a shift in specialization and a variation in trade performance. We have used Balassa index of revealed comparative advantage and came up to use standardized revealed comparative advantage as analytical technique to uncover changes in comparative advantage patterns over time and make comparisons between the products. Along with it, we have tried to use trade specialization index to see whether the products are specialized in the lines of their comparative advantage. Our study focus is on time series data of a wider range of commodity groups and market destinations to make dynamic assessment of comparative advantage of Bangladesh in the global market.

9.1.1 Balassa Revealed Comparative Advantage (RCA) for Commodities.

Balassa (1965) suggested an index measuring comparative advantages^{viii} and it is common in the literature^{ix} to measure comparative advantage with the help of the Balassa revealed comparative advantage index (RCA). However, as Siggel (2007)^x pointed out, Balassa's index measures competitiveness rather than comparative advantage, since cost measured in terms of market prices reflects competitive advantage rather than comparative advantage which requires

equilibrium prices. The use of RCA hence captures competitiveness of a country's export products vis-à-vis each other in the international market. This is very much in line with the Ricardian concept of comparative advantage which proposes that by producing the good in which it is relatively efficient (relative not to the other country but relative to the other goods), and importing the other good, each country can gain. The concept of RCA can also be used by pairing the RCAs for products of an exporting country with the corresponding RCAs of another country. This provides an approach for classifying pairs of items for any two exporting countries on the basis of their competitiveness. This can also serve as a rationale for identifying items that are most vulnerable to competition^{xi}. Revealed Comparative Advantage (RCA) index of a country depicts the relative share of a commodity in the country's total exports with respect to that commodity's share in world exports.

The country would be considered to have a comparative advantage or disadvantage in products depending on whether the ratio of RCA is greater or less than 1. It ranges from 1 to infinity when it enjoys comparative advantage, but zero to one when it has comparative disadvantage for the products. To address asymmetric values of the index, revealed symmetric comparative advantage may be calculated (SB) as proposed by Dalum et al (1998)^{xii}. $SB = (RCA - 1) / (RCA + 1)$. The SB ranges from -1 to 1. Bangladesh has been enjoying high revealed comparative advantage in knitted garments, woven garments, jute and jute goods, other textile articles, frozen fish, leather, footwear, headgear and its parts. Our estimate shows that 24.7% products of Bangladesh out of 1571 products at 4-digit level are enjoying comparative advantage in world market and their average RCA is around 20 and their average symmetric RCA is around 0.90 i.e. very high. Trade specialization index of these products is on average around 0.75. But these products categories are facing high concentration in terms of not only of products (88% share for three products) but also of market destinations (55% for three markets). These results indicate that attention need to be made not only on revealed comparative advantage of products for specialisation, but also on diversification of export items and market destinations. This is important for ensuring sustainability of export earnings on a long term basis.

Our analysis of Revealed comparative advantage of products suggests that Bangladesh possesses strong comparative advantage in knitwear and woven garments, and gained significant comparative advantage over time (Table-9.1). At the same time, traditional export commodities including tea and leather lost their previous comparative advantage. The sectors which came into dynamism are footwear, ceramic products, household articles including tableware and

Table 9.1: Revealed Comparative Advantage (RCA), Trade Specialisation Index and Concentration Ratios of 2009 for Bangladesh exports (out of 1571 Products) by Commodities at 4 digit level

Products having comparative advantage	RCA	RCA	Exports of Bangladesh	Balance (000 Dollars)	Specialisation Index (TSI)	on ratio of products	Concentration ratio of markets
Knitted Garments	36	0.95	45.42	7,735.614	1.03	69	44
Non-Knit Garments	30	0.94	37.37	6,317.071	1.01	67	64
Other Textile Articles Made	12.2	0.85	4.03	672.706	0.99	51	41
Head Gear and Parts	14.5	0.87	0.58	94.735	0.96	100	83
Vegetable Fibres anfabrics	113.5	0.98	2.2	352.306	0.87	91	49
Leather	6.1	0.72	0.98	135.363	0.71	94	61
Fish	5.1	0.67	2.87	463.695	0.96	91	49
Footwear	2	0.33	1.33	187.913	0.74	85	51
Tobacco and Mfg substitutes	1.1	0.05	0.29	38.960	0.69	98	43
Fertilizer	1.1	0.05	0.35	-408.371	-0.74	100	81
All	20.24	0.91	95	15,592,673	0.75	86	55
Potential Products							
Ceramic Products	0.8	-0.11	0.35	-4.844	-0.03	95	50
Pharmaceuticals	0.1	-0.82	0.21	-107.099	-0.56	92	37
Plastic Products	0.1	-0.82	0.23	-622.281	-0.86	68	58
Leather goods	0.4	-0.43	0.12	6.881	0.24	59	69
Meat, fish and food	0.4	-0.43	0.12	18.616	0.88	99	50

Source: Calculated from UNCOMTRADE data

Table 9.2: Pattern of Changes of Revealed Comparative Advantage of 98 Products at 2-digit Level during 2005-09

Type of changes in Comparative Advantage	No of Products	%
Stably high and Increased Advantage Lowered	5	5.10
Shift from disadvantage to advantage	4	4.08
Disadvantage reduced	3	3.06
Increased Disadvantage	7	7.14
Shift from advantage to disadvantage	24	24.49
Total	55	56
	98	100.00

Source: Calculated from the data of UNCTAD

kitchenware, light engineering, pharmaceuticals, bicycles, tent, home textiles and vegetables. It is established that differences in productivity, price, quality and timely delivery are important determinants of bilateral trade flows. Under these circumstances, the challenges for Bangladesh are to increase both price and non-price competitiveness and find new potential industries and markets for vitalizing the exports of the country in the wake of acute global competition.

9.2. Trade Specialisation Index

Single flow indicator as Revealed Comparative Advantage Index for exports or relative export growth does not allow synthetic assessment of the country's position in international trade because of differences of country's degree of import dependence. Solution of this problem requires consideration of both export and imports. In that situation, the comparative advantage can be better measured by trade specialization index^{Xiii}.

9.2.1. Trade Specialisation Index for Commodities

Trade specialization index (TSI) is an important indicator of trade pattern and competitiveness of a country. The index is computed as the difference between normalized trade balance at product level and normalized level at country level.

$$TSI = \frac{X_i - M_i}{X_i + M_i} - \frac{X_t - M_t}{X_t + M_t}$$

= Normalised Trade Balance (NTB)-Global balance(Average NTB)

$$STSI = \frac{TSI}{1 - NTB}$$

Standardized trade specialization index (STSI) depicts both the commodity and the geographic specialization of the country in international trade. Bangladesh is

having comparative advantage in 19% of products at 2-digit level and 10% at 4 and 6-digit levels in 1998. If we analyse export performance of Bangladesh by products for 2009 as in Table 9.2, we may see that products having comparative revealed disadvantage may enjoy comparative advantage as per Trade specialization index. However, in most cases, products with revealed comparative advantage would have comparative advantage as per Trade Specialisation index.

As per geographical trade specialization is concerned, as the evidence shows, Bangladesh has been geographically specialized in two regions: European Union and North America specially USA. It does not enjoy geographic comparative advantage in Asian countries except Thailand. Bangladesh enjoys slight geographical advantage with Vietnam, Laos and Cambodia among other Asian countries. Bangladesh's disadvantage with Philippines and Middle East is small and tends to be overcome in course of time. It is notable that Bangladesh's comparative disadvantage with Asian giants like Japan, China, India and Korea Republic could not be reduced over the years. This raises the question regarding effectiveness of export promotion efforts of Bangladesh in respect of these countries. Narrowness of exports in number of items and markets talks about vulnerability of Bangladesh in international trade.

Our calculation results revealed that trade specialisation index has been increasingly positive in consumer goods in all the economic phases with average positive figure 0.31 (Table-9.3). There has not been any sign of trade specialisation in capital goods in any phases. Trade specialization in intermediate goods has been positive until 1990 after which it has been persistently negative. This is because of low technology base of the production system of Bangladesh and also of trade liberalization and increasing import dependence for raw materials and capital goods.

Table 9.3: Trade Specialisation Index by Types of Goods Traded

Economic Phases	Trade Specialisation Index of Intermediate Goods	Trade Specialisation Index of Capital goods	Trade Specialisation Index of Consumer goods
1972-80	20.61	-40.96	16.87
1981-85	14.23	-42.39	64.66
1986-90	17.43	-58.03	47.81
1991-95	-9.07	-69.68	34.09
1996-00	-27.57	-73.47	18.70
2001-05	-14.66	-73.68	16.25
2006-10	-27.32	-74.50	20.17
Average	-3.76	-61.82	31.22

Source: Estimated by the author from the data base of BBS

9.2.2 Net Revealed Comparative Advantage or relative trade Advantage

The Relative Trade Advantage Index (RTA), which was first used by Scott and Vollrath (1992)^{xiv}, shows the net trade advantage/ disadvantage. This index is computed as the difference between the Relative Export Advantage (RXA) and the Relative Import Penetration Index (RMP). Considering both exports and imports, the RTA is a more comprehensive measure of competitiveness, and expressed as:

$$RTA_{ij} = RXA_{ij} - RMP_{ij}.$$

The competitive advantage revealed by this indicator is implicitly weighted by the importance of the relative export and the relative import advantages. It can be greater or less than zero. A positive value expresses a situation of net competitive advantage, and a negative one shows a competitive disadvantage. As data analysis shows, net relative advantage index has been increasingly positive in respect of manufactured items specially textiles and clothing and other manufactured goods in case of Bangladesh^{xv}. But as compared to India, its weakness in competitiveness is evident. While India enjoys net relative trade advantage in 8 out of 10 categories, Bangladesh has positive net trade advantage only in two product categories of manufacture at 2-digit level. India has net trade disadvantage in fuels and machinery and transport equipment. Bangladesh has net relative trade disadvantage in all five categories of primary commodities and chemical products, iron and steel and machinery and equipment under manufactured items section. This clearly demonstrates shallowness of net trade competitiveness of Bangladesh relative to India.

9.3 Geographic Revealed Comparative Advantage Index

Geographic specialization index shows. He revealed comparative advantage in a particular market and geographic specialization. The most commonly used index for this is Balassa Geographic Specialisation Index (GB) as Share of Bangladesh export to the market A to the share of World Export to the market A. A country is said to have specialisation and accordingly comparative advantage in the export in region 'A', if GB is greater than 1.

A symmetric Balassa (SGB) index is assessed as: $SGB = \frac{GB - 1}{GB + 1}$

The symmetric Balassa Geographic specialisation index for Bangladesh reveals that Bangladesh has comparative advantage in export to North America and Western Europe (Table-9.4 and Fig.8). Bangladesh need to explore potential areas of its comparative advantage in other industrialized and advanced developing

countries along with consolidating the existing markets. Since garments constitute 78% of our exports, we shall see the Geographic revealed comparative advantage in knit and non-knit garments exports of Bangladesh. The results show that in knit garments, Bangladesh has been enjoying high revealed comparative advantage in these products with the main players (Table-9.5). In knit garments there has been more acute competition from China, Turkey, Cambodia, Vietnam, Pakistan, Srilanka and Tunisia. Here biggest market player is China with 33% market share of global knit exports, and Bangladesh is having only 4.85% market share. There is enough scope for Bangladesh to try to take some of the China's share in course of upward development of China with some structural change in its export basket. For China, knitwear constitutes only 4.5% of its total exports whereas for Bangladesh it constitutes 45% of total exports. Next to China, important competitors are Turkey, Vietnam, India and Cambodia. Bangladesh has to compete with them not only with low wage competitive edge but also higher productivity and fetching higher values of exports in diversified items in the category. In non-knit garments, most of the big players are facing revealed comparative disadvantage (Table-9.6), while Bangladesh has been enjoying relative advantage. China's position in recent years though awkward is having 34% market share of non-knit garments. Here lies the big potential for Bangladesh to look into. Main competitors here are Vietnam and Turkey. Other competitors with high revealed comparative advantages are Srilanka, Cambodia, Tunisia, Egypt, Morocco, Pakistan, Bulgaria, Rumania and Indonesia.

We have examined the revealed comparative advantage of Bangladesh in two markets-US and EU markets. From the calculation results (Table-9.7), it is indicated that Bangladesh has been enjoying revealed comparative advantage in general for garments products in both US and EU markets. Bangladesh has been enjoying revealed comparative advantage in garments exports in EU with respect to all countries except Turkey in all the periods. Bangladesh does not enjoy much revealed comparative advantage in US market as in EU market with respect to countries under review and is in tough competition with them. However, its share in US market has increased considerably during the period under review.

In order to analyse revealed comparative advantage in EU market with main six countries-China, India, Vietnam, Indonesia, Mexico and Turkey during 1990-2008, we have chosen five main garments: (i)T-shirts, (ii)Jersey, pullovers, (iii) Men/boys' Suits, Jackets, Blazer, (iv)Women/Girls' Suits, Jackets, Blazer and, (v) men's/boys' shirts. Calculation results (Table-9.8) show that in T-shirts, Jersey, pullovers and Men/boys' Suits, Jackets, Blazer, Bangladesh has been enjoying

overwhelming revealed comparative advantage with respect to the comparator countries except Turkey. In Women/Girls' Suits, Jackets, Blazer, Bangladesh experienced comparative disadvantage with comparator countries except Mexico. In men's/boys' shirts, Bangladesh has been enjoying comparative advantage with China and Mexico but disadvantage with other four countries. Implication of these results is that Bangladesh has to consolidate its area of advantage and must make drives to win over others in the areas of disadvantage. There is enough

Table 9.4 Geographic Revealed Comparative Advantage of Bangladesh Exports in Different Markets, 1988-2009

Geographical	Balassa RCA				Symmetric Balassa Index			
	1988	1993	1998	2009	1988	1993	1998	2009
North America	1.6255	1.9049	1.7653	2.3	0.2383	0.3115	0.2767	0.394
Western	0.7124	0.9974	1.09	2.4	-0.17	0.0013	0.0463	0.41
Europe								
Other	0.798	0.4003	0.3856	0.40	-0.1123	-0.42	-0.4434	-0.42
Industrialised Countries								
Africa	1.87	0.573	0.192	0.32	0.30	-0.27	-0.67	-0.51
Developing	1.099	0.543	0.426	0.65	0.048	-0.29	-0.402	-0.212
Asia								
Developing	0.1247	0.08	0.805	0.135	-0.7783	-0.852	-0.851	-0.074
America								
Total Export	1	1	1		0	0	0	

Source: Author's Calculations and BIDS Study, 2004.

Fig. 9: Development of Revealed Comparative Advantage of Core Importing Nations of Bangladesh Exports during 1973-2010

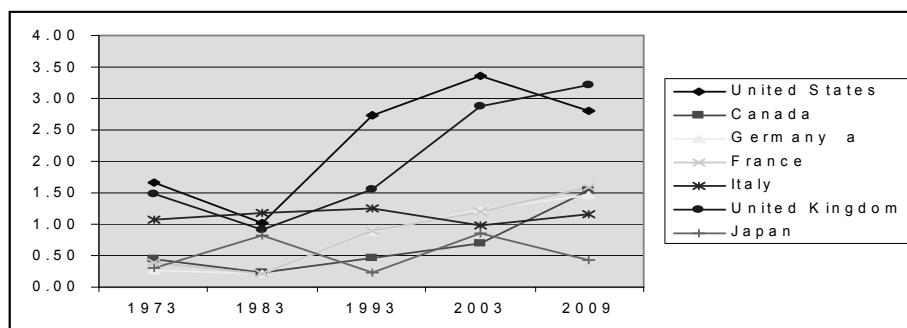


Table 9.5 Geographic Revealed Comparative Advantage of Knit Garments of Bangladesh with important suppliers, 2009

Country	Exports in value in 000 Dollars	Exports as % of total exports	Global Market share (%)	Growth of exports	Growth of share in world exports (p.a.)	Balassa RCA Index	SRCA
World	159,905,269	100	1.26	6	2		
China	53,762,941	4.47	33.62	15	9	3.5	0.56
Hong Kong	11,798,633	3.58	7.38	-3	-9	2.8	0.47
Bangladesh	7,754,376	45.4	4.85	18	12	36	0.95
Italy	7,030,625	1.74	4.4	2	-5	1.4	0.17
Turkey	6,927,384	6.78	4.33	1	-5	5.4	0.69
Germany	6,859,099	0.61	4.29	10	3	0.5	-0.33
India	5,187,279	2.93	3.24	14	7	2.3	0.39
Viet Nam	4,363,794	7.28	2.73	26	20	5.8	0.71
Belgium	4,066,064	1.1	2.54	11	5	0.9	-0.05
France	3,883,674	0.84	2.43	5	-1	0.7	-0.18
Spain	3,592,810	1.61	2.25	20	14	1.3	0.13
Netherlands	2,775,555	0.64	1.74	13	6	0.5	-0.33
Cambodia	2,568,264	56.1	1.61	13	6	45	0.96
Indonesia	2,528,006	2.17	1.58	8	2	1.7	0.26
UK	2,182,773	0.62	1.37	1	-5	0.5	-0.33
USA	1,952,903	0.18	1.22	-7	-13	0.1	-0.82
Thailand	1,858,902	1.22	1.16	-1	-7	1	0.00
Portugal	1,818,325	4.19	1.14	-2	-8	3.3	0.53
Pakistan	1,680,740	9.57	1.05	0	-6	7.6	0.77
Sri Lanka	1,580,890	22.2	0.99	9	3	18	0.89
Mexico	1,547,246	0.67	0.97	-12	-18	0.5	-0.33

Source: Calculated from the data of UNCOMTRADE

Table 9.6: Geographic Revealed Comparative Advantage of Non-Knit Garments exports of Bangladesh relative to important suppliers (2009)

Country	Exports as % of total exports	Imports as % of total imports	Exports as % of world exports	Imports as % of world imports	Growth of exports in value (% p.a.)	Growth of imports in value (% p.a.)	Net Normalised Trade (X-M)/(X+M) * 100	RC A	SRC
World			1.24	1.19	2	1	0.7		
China	3.89	0.1	29.69	0.66	7	6	95.7	0.13	-0.
Italy	2.74	1.78	7.07	4.73	1	4	20.5	0.39	-0.
Hong Kong	3.03	1.84	6.35	4.19	-5	-5	21.2	0.48	-0.
Germany	0.77	1.58	5.49	9.58	6	3	-26.4	0.14	-0.
Bangladesh	37.4	0.35	4.05	0.04	12	10	98	9.23	0.
India	3.46	0.03	3.89	0.04	5	19	97.8	0.89	-0.
France	1.17	1.93	3.45	6.71	4	3	-31.4	0.34	-0.
Viet Nam	8.51	0.49	3.24	0.22	13	34	87.4	2.63	0.
Turkey	4.21	0.82	2.73	0.75	-3	28	57.6	1.54	0.
Belgium	1.04	1.24	2.45	2.81	1	2	-6.2	0.42	-0.
Spain	1.68	2.17	2.38	4.03	10	6	-25	0.71	-0.
Indonesia	2.69	0.11	1.99	0.07	0	37	93.5	1.35	0.
Netherlands	0.66	1.08	1.81	2.66	9	7	-18.3	0.36	-0.
UK	0.78	2.18	1.73	6.78	2	-1	-58.9	0.45	-0.
Mexico	1.07	0.41	1.56	0.62	-14	-4	43.6	0.69	-0.
Morocco	16.1	0.56	1.42	0.12	2	13	84.7	11.3	0.
Tunisia	15.5	2.11	1.42	0.26	-2	-1	69.5	10.9	0.
Romania	5.15	0.85	1.33	0.3	-12	6	63.9	3.87	0.
Denmark	2.09	2.48	1.23	1.31	5	4	-2.4	1.70	0.
Poland	1.25	1.09	1.09	1.05	3	30	2.3	1.15	0.
USA	0.15	2.01	0.98	20.71	-4	-5	-90.8	0.15	-0.
Sri Lanka	21.6	0.44	0.98	0.03	-1	-3	94.7	22.0	0.
Pakistan	6.87	0.05	0.77	0.01	-2	19	97.2	8.92	0.
Thailand	0.74	0.15	0.71	0.13	-8	16	69	1.04	0.
Austria	0.79	1.87	0.66	1.65	2	4	-42.1	1.20	0.
Switzerland	0.59	1.78	0.65	1.79	-1	2	-46.2	0.91	-0.
Cambodia	19.8	0.44	0.57	0.01	-5	12	95	34.6	0.
Bulgaria	5.29	0.85	0.55	0.13	-4	4	62.9	9.62	0.
Egypt	3.84	0.49	0.53	0.15	17	14	57.1	7.25	0.
Portugal	1.92	1.38	0.53	0.62	-5	6	-7.3	3.62	0.
Philippines	2.09	0.13	0.51	0.04	-13	8	86.3	4.10	0.

Source: Calculated from the data of UNCTAD, 2010

Table 9.7: Symmetric Revealed Comparative Advantage (SRCA) of Bangladesh with the Core Exporting Countries of RMG to US and EU Markets in 2000, 2005 and 2009

Exporter	2000			2005			2009		
	Global Market Share	US	EU-15	Global Market Share	US	EU-15	Global Market Share	US	EU-15
Bangladesh Share in	2.6	3.4	3	2.5	3.2	3.5	4.3	5	4.7
	Global Market Share	SRCA of Bangladesh with the countries		Global Market Share	SRCA of Bangladesh with the countries		Global Market Share	SRCA of Bangladesh with the countries	
China	18.2	0.13	0.38	26.8	0.13	0.38	31.7	-0.03	0.11
Turkey	3.3		-0.29	4.3		-0.12	3.5		-0.24
India	3	0.10	0.03	3.1	-	0.14	3.6	-0.02	0.005
Vietnam				1.7	-	0.55	3	-0.36	0.50
Indonesia	2.4	-0.05	0.16	1.8	-	0.39	1.8	-0.47	0.28
Mexico	4.4	-0.39		2.6	-		1.3	-0.59	
Thailand	1.9		0.33	1.5	-	0.40	0.9	-0.39	0.10
Pakistan	1			1.3	0.28	-0.23	0.9	-0.32	-0.01
Bangladesh Share in		0.13	0.07		0.12	0.17		0.07	0.04

Source: Calculated from the data of UN Comtrade, Eurostat, ITC and WTO, as compiled by WB, 2009

**Table 9.8: Symmetric Revealed Comparative Advantage Indices of
5 Top RMG export Categories of Bangladesh to EU**

r	China	India	Indonesia	Mexico	Turkey	Vietnam
HS Code 6109:TShirts,Singlets						
1990	0.18	-0.03	0.15	0.47	-0.30	0.21
2000	0.25	0.02	0.18	0.42	-0.34	0.25
2008	0.23	-0.02	0.20	0.42	-0.18	0.19
HScode 6110: Jersey, Pullovers						
1990	-0.03	-0.04	-0.30	0.53	-0.69	-0.03
2000	0.10	0.02	-0.14	0.49	-0.37	0.13
2008	0.04	0.17	0.06	0.49	-0.02	0.06
HScode 6203: Men/boys' Suits, Jackets, Blazer						
1990	-0.20	0.00	-0.03	0.33	-0.63	-0.27
2000	0.10	0.12	0.04	0.30	-0.35	-0.06
2008	0.03	0.08	0.02	0.33	-0.17	-0.13
HScode 6204:Women/Girls' Suits, Jackets, Blazer						
1990	-0.79	-2.33	-0.60	0.22	-2.39	-0.53
2000	-0.22	-0.45	-0.21	0.36	-0.79	-0.12
2008	-0.23	-0.35	-0.06	0.32	-0.50	-0.32
HScode 6205:Men/Boys' Shirts						
1990	0.27	-0.04	0.24	0.50	0.09	-0.05
2000	0.27	-0.06	0.07	0.53	0.12	-0.10
2008	0.09	-0.20	-0.08	0.53	-0.09	-0.18

Source: Calculated from the Data of UN Comtrade.

scope for diversification in new areas, and efforts should be oriented to the potential areas for exports diversification within garments before looking into areas of non-garments exports. We have huge human skill and capital built up over the years and we could show here our competitive edge over others. Lastly, there is a big difference with China in our market share (near about 8 times than that of Bangladesh). Since we are enjoying revealed comparative advantage with

Table 9.9: Standardised Geographical Specialisation Index (SGSI)

Countries/Regions	1989/90	1995/6	1999/00	2009-10
SAARC	-0.669	-0.825	-0.748	-0.37
India	-0.92	-0.9205	-0.915	-0.36
EU	0.25	0.53	0.56	0.63
USA	0.584	0.725	0.754	0.59
Japan	-0.45	-0.29	-0.68	-0.32
ASEAN	-0.55	-0.779	-0.73	
Korea	-0.97	-0.938	-0.918	-0.35
China	--0.71	-0.68	-0.96	-0.39
Thailand	-0.94	-0.49	0.544	-0.37
Rest of the World	0.1224	-0.54	-0.56	
Total	0	0	0	0

Source: Computed from Statistical Yearbook of Bangladesh, BIDS Study, 2004.

China in almost all important garment products market, we have enough scope to increase our market share here.

9.4. Geographic Trade Specialisation Index

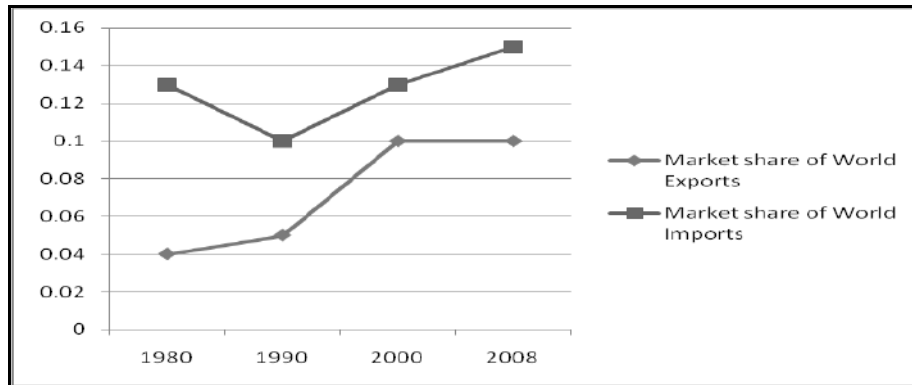
Like Geographic Revealed comparative advantage, geographical trade specialization index also is positive for EU and North America and has increased over the years (Table-9.9). Side by side with consolidating these two regions, we are to diversify market destinations and increase the trade specialization index of rest of the world.

10. Market Share of Exports of Bangladesh and Status of Relative Competitiveness of Bangladesh

10.1 Market Share to World Exports and Imports

Bangladesh has experienced increase in market share of world exports from 0.04% in 1980 to 0.13% in 2008 and in share of world imports from 0.13% to 0.15% during the same period (Fig.9). Despite increased trade openness during

Fig.9 Market Share of Bangladesh in World Exports and Imports in %



1950-2008, market share of SAARC countries in total world trade has declined (from 3.71 to 1.39% in World exports and from 3.12 % to 2.31% in World Imports). Bangladesh position in respect of market share of world export and import is relatively better among SAARC countries except India and Pakistan..

10.2. Market Share of Major Bangladesh Commodities in World Exports Market

Though market share of Bangladesh in world exports constitute 0.13%, it is subject to cross sectoral variation (Table-10.1). Clothing export of Bangladesh is high as 4.55% of world export (in 2010), and Bangladesh ranks 2nd position in world garment export. Market share of other textiles is 14.5%. Market share of footwear is 1.85%. Next important export item of Bangladesh is fish having market share of 1.64%. Market share of vegetable textile fibres is around 0.69%. Market share of hides and skin is 0.27%. Market share of vegetables and roots is around 0.15%. Market shares of furniture and headgear and its parts are 0.15% and 0.13% respectively. Other important export items occupying good market share (more than (0.01%) are articles of leather, plastics, ships, boats and floating structure, coffee and tea, optical and medical apparatus, electrical and electronic equipment, ceramic products, vehicle, beverages, knitted fabrics, toys and printed books. Positive changes in market share during 2005-09 occurred in products of knit and non-knit garments, other made textile articles, sets, worn clothing etc, fish, articles of copper, furniture, products of animal origin, ships, boats and floating structure, manmade filaments, beverages, organic chemicals, salt, IT and consumer electronics, electrical equipments, footwear, plastic products and optical and medical apparatus. Only 25% products at 2-digit level have positive change of market share of Bangladesh.

Table 10.1: Market Share of Major Bangladesh Commodities in World Exports Market at 2-digit level during 2005-09

Export Items	Market Share of Commodities in the World Exports					Change of Share
	2005	2006	2007	2008	2009	
Industry (Bangladesh)	0.09	0.09	0.09	0.1	0.13	0.04
00 All industries	2.39	2.64	2.76	4.1	4.85	2.46
62 Articles of apparel, accessories, not knit or crochet	2.7	2.82	2.7	3.31	4.05	1.35
61 Articles of apparel, accessories, knit or crochet	0.71	1.4	1.03	1.44	1.64	0.93
03 Fish, crustaceans, molluscs, aquatic invertebrates nes	8.64	0.85	12.9	0.78	0.69	-7.95
53 Vegetable textile fibres nes, paper yarn, woven fabric	0.85	10.1	0.99	13.0	14.4	13.64
63 Other made textile articles, sets, worn clothing etc	0.87	0.9	0.91	0.87	0.27	-0.6
41 Raw hides and skins (other than furskins) and leather	0.01	0.83	0.42	0.21	0.81	0.8
87 Vehicles	0.14	0.01	0.17	2.06	1.85	1.71
64 Footwear, gaiters and the like, parts thereof	0.19	0.01	0.01	0.05	0.15	-0.04
07 Edible vegetables and certain roots and tubers	1.43	1.28	0.72	1.28	0.15	-0.57
65 Headgear and parts thereof	0.08	0.01	0.27	0.07	0.06	-0.02
08 Edible fruit, nuts, peel of citrus fruit, melons	0.12	0.23	0.26	0.06	0.05	-0.07
55 Manmade staple fibres	0.1	0.02	0.04	0.02	0.02	-0.08
69 Ceramic products	0.2	0.08	0.12	0	0.05	-0.15
06 Live trees, plants, bulbs, roots, cut flowers etc	0.12	0	0.02	0.04	0.04	-0.08
09 Coffee, tea, mate and spices	0.01	0.01	0.09	0.02	0.09	0.08
90 Optical, photo, technical, medical, etc apparatus	0.05	0.07	0.01	0.06	0.03	-0.02
49 Printed books, newspapers, pictures etc	0.01	0.05	0.08	0.06	0.00	-0.01
30 Pharmaceutical products	0.01	0.06	0.05	0.03	0.02	0.01
74 Copper and articles thereof	0.02	0.02	0.06	0.08	0.02	0
10 Cereals	0.04	0.07	0.04	0.02	0.02	-0.02
60 Knitted or crocheted fabric	0	0	0.23	0.12	0.13	0.13
94 Furniture, lighting, signs, prefabricated buildings	0	0	0	0.03	0.03	0.03
22 Beverages, spirits and vinegar						

Source: Calculated from the data of UNCOMTRADE

10.3 Bangladesh Position in US and EU Garments Market

As already mentioned, Bangladesh ranks second in the world exports of garments having 4.3% of market share in 2009 (Table-10.2). China ranking in first position of world garments exports has market share of 32% of global exports of garments .i.e. 8 times higher than market share of Bangladesh in garments exports. Only 8 countries are having 50% of market share of global garments exports. These are the main competing countries for Bangladesh in global market of garments. Five countries experienced increase and three countries decrease of market share of garment exports. This is indicative of tough competition in between the countries for maintaining market share in the global exports of garments.

Table 10.2: Market Share of Top Garment Exporters of World in US and EU-15 Markets (%), 2000-09

Exporter	2000			2005			2009			Change of Share
	World	US	EU-15	World	US	EU-15	World	US	EU-15	
Total RMG Exports in \$ (2000) Billions	198			277			317			
China	18.2	13.3	9.6	26.8	26.4	17.7	31.7	39.01	24	13.5
Turkey	3.3		6.9	4.3		7.6	3.5		6.3	0.2
Bangladesh	2.6	3.4	3	2.5	3.2	3.5	4.3	5	4.7	1.7
India	3	3.2	2.8	3.1	4.2	3.3	3.6	4.3	3.9	0.6
Vietnam			1	1.7	3.6	0.7	3	7.4	1.1	1.3
Indonesia	2.4	3.5	2	1.8	4	1.2	1.8	5.8	1.1	-0.6
Mexico	4.4	13.1		2.6	8		1.3	5		-3.3
Thailand	1.9		1.1	1.5	2.9	0.9	0.9	2.4	0.8	-1
Total of 8 countries	35.8	36.5	26.39	43.7	52.6	35.65	50	30.4	43.0	14.25

Source: Calculated from data of UN Comtrade, Eurostat, ITC and WTO, as compiled by WB (2012).

10.4 Sources of Changes of Market Share of Bangladesh

10.4.1 Sources of Changes of Market Share of Bangladesh compared to comparators

Since relative competitiveness is affected by multiplicity of factors (including differentials in productivity, prices, quality of export products and delivery and service schedules), its measurement involves analysis of price and non-price determinants of changes in competitiveness. To deal with this problem and to avoid the complexities of measurement of competitiveness, one of the ways is to use country's export shares as ex-post reflection of changes in competitiveness and the model measuring competitiveness under this approach receiving wider use and acceptance is constant market share model of analysis. This model examines firstly, whether and how far export is affected by world demand changes, secondly, whether exports are concentrated in commodities for which demand is growing relatively slowly, thirdly, whether exports are growing primarily to relatively stagnant region and whether the country in question is unable to compete effectively with other sources of export growth.

A change in market share as Stenizke (1979)^{xvi} concludes reflects the changing competitiveness of a country's exports relative to those of the entire region. An unfavourable competitive shift reveals that some other producers enjoy competitive advantage to enter into the market and increase their market share at the expense of others. Thus, the competitive shift may be used as an indicator of changes in the competitiveness of a country's exports relative to those of other countries in the region. Here we have analysed the relative position of sources of changes of market share of Bangladesh relative to comparator countries. There has been positive change of market share of Bangladesh during 1995-07 by 23% (Table-10.3). The comparator countries having positive change of market share are China, Vietnam, India, Thailand, Turkey, Korea and Indonesia. Increased market share of Bangladesh is partly explained positively by increase of competitiveness and commodity adaptation effect and partly negatively by decrease of commodity structure, geographical structure and geographical interaction. Japan, Malaysia, Srilanka and Pakistan showed negative change of market share. Except in Japan, competitiveness has been always positive. The competitiveness is determined by both price and non-price factors. The price factor of competitiveness is influenced by among others, by effective exchange rate, cost and productivity, while the non-price factors involve quality and variety of products, marketing techniques and terms of export finance, transport, packing and delivery time. Negative commodity structural effect in Bangladesh reflects that commodity composition of export is concentrated on those in which world demand is not so high. Negative geographical structural effect reflects that export is concentrated in those areas which have not been growing fast. This implies Bangladesh should shift its product composition and market composition gradually to better end results.

Table 10.3: Relative Market Share and Constant Market Share Analysis of world merchandise exports during 1995-2007

Exporting countries	Market shares 1995	Market shares 2007	Change in 1995-2007	Competitiveness	Commodity Structure	Geographic Structure	Structural Interaction	Commodity Adaptation	Geographic Adaptation	Residual
Bangladesh	0.10	0.12	23	43	-47	-5	-3	5	-1	31
India	0.76	1.28	68	77	-13	9	3	-11	-1	8
China	4.2	10.5	150	172	-38	-14	8	9	-2	15
Vietnam	0.11	0.41	276	336	-27	-22	33	-56	-7	19
Pakistan	0.15	0.15	-3	13	3	11	-2	18	-1	-2.5
Srilanka	0.07	0.06	-16	3	-29	4	-11	47	10	41
Turkey	0.49	0.88	81	86	8	17	12	1	0	-29
Thailand	1.2	1.24	4	25	-17	-2	3	0	0	-5
Japan	9.08	5.33	-41	-33	-6	0	-3	2	1	-2
Korea	2.55	2.85	12	2	-14	8	-18	6	1	27
Malaysia	1.71	1.52	-11	20	-10	-7	1	-8	0	-6
Indonesia	1.05	1.07	2	19	-3	-3	-1	-14	-2	6

Source: Adapted from the UNIDO calculation based on BACI

10.4.2 Sources of Changes of Market Share of Bangladesh by Sectors

Bangladesh has experienced positive change of market share in clothing with high positive competitiveness effect as its main factor showing that concentration in garments was correct one. Its positive change of market share in electric and electronic equipment with high competitiveness effect reflects that Bangladesh has the high potential in these sectors^{xvii}. Textiles also have positive growth with positive contribution of competitiveness to export growth. Similar is the case with leather products where competitiveness has significant impact. Another important emerging sector is IT and consumer electronics sector which have positive growth of market share and high positive contribution by competitiveness for its growth. Processed food also has positive change of market share with competitiveness as major factor for the same. Wood products, basic manufacture, chemicals, non-electric machinery and fresh food had negative change of market share with negative sign of competitiveness but positive sign of geographic specialisation effect. These products require enhancement of competitiveness for increased market share. Thus efforts for consolidation of competitiveness in the products with positive change of market share should continue and side by side efforts should be made for enhancement of competitiveness in the sectors with negative growth of market share.

10.5 Global Ranking of Competitiveness

10.5.1 Status of Global Competitiveness of Bangladesh in of South Asia and competitors

Among 142 countries, Bangladesh ranks 108th position in competitiveness in 2011-12 (Table-10.4) reflecting how weak its position is in the global scale of competitiveness. Even Srilanka is holding 52nd position in global ranking. Bangladesh showed its weaknesses in almost all the components of competitiveness. Infrastructure (132nd), technological readiness (122nd), innovation (124th) and institutions (112th) are the weakest components in global competitiveness ranking of Bangladesh. Even its market size is smaller than Vietnam though population of Bangladesh is much larger. It is poor in quality of business environment and business competitiveness index. Its position in labour market efficiency also has deteriorated over time because of low wage environment of production amidst increasing cost of living despite abundant and surplus labour in the country. The position of the country is good only in maintaining financial stability and macroeconomic environment. Bangladesh ranks 115th in trading across borders with one of the highest time and cost required for exports and imports eroding its competitiveness among nations (Table-10.5).

Table 10.4 Rank of Bangladesh compared to SAARC and other Asian Countries based on Indicators of Competitiveness (Out of 142 Countries)

Competitiveness Indicators	IND	SRL	PAK	BD	Vietnam	China
Global Competitiveness Index						26
Basic Requirements	56	52	118	108	65	30
1. Institutions	91	65	130	112	76	48
2. Infrastructure	69	50	107	112	87	44
3. Macro stability	89	60	115	134	90	10
4. Health & Primary Education	105	116	138	75	65	32
Efficiency Enhancers	105	45	121	108	73	26
5. Higher Education and Training	37	69	100	99	66	58
6. Good Market Efficiency	87	66	122	126	103	45
7. Labour Market Efficiency	70	41	93	81	75	36
8. Financial Market Sophistication	81	117	136	100	46	48
9. Technological Readiness	21	45	70	67	73	77
10. Market Size	93	85	115	122	79	2
11. Innovation	3	67	30	49	33	31
12. Business Sophistication	40	34	72	113	75	37
12. Innovation	43	32	76	88	87	29
	38	42	75	124	66	

Source: Adapted from Competitiveness Report 2011-12, World Economic Forum.

10.5.2 Status of Competitive Components of Export Performance of Bangladesh

Though 94% of Bangladesh export is composed of manufacture, per capita manufactured exports does not exceed 4.5% level of the world figure (Table-10.6). Even Cambodia has per capita manufactured exports three times higher than Bangladesh. Singapore has per capita manufactured exports to the extent of \$50028, Taiwan \$8053, Korea \$ 5766 and Malaysia \$4755. Share of medium/high technology exports in manufactured exports is as low as 3.4% in 2005 which is at the level of 5% of the world, which is unbelievably low. This implies that we have no primary goods for exports and our manufacture for exports is low technology based which can not command high value nor can it produce innovative products for diversification of export basket. Even these low technology based exports are dependent on imports. Our position is not comparable with comparator countries.

10.5.3 Global Ranking of Sectors in terms of Competitiveness indicators in Bangladesh

We have analysed the global ranking of Bangladesh by sectors^{xviii}. Ranking in export growth (Table-10.7) is satisfactory in clothing, textiles, processed food, IT

& Consumer electronics, electric and electronic equipment and leather products. Ranking in market share and net exports is high for garments, textiles and leather goods followed by IT and consumer electronics. Ranking in respect of per capita exports is low across the sectors but relatively better in clothing, leather products and textiles. Ranking in product concentration is very poor across the sectors but a bit better in textiles, leather products and clothing. Ranking in terms of market concentration is better in all sectors except IT & Consumer electronics, electric and electronic equipment. Ranking in respect of competitiveness effect is better in clothing, leather products, textiles processed food, IT & consumer electronics and Electric equipment and electronics. Ranking in terms of matching with world

Table 10.5: The Comparative Position of Bangladesh in Trading (Across Border)

	Trading Across Borders (Rank)	Time to Export (Days)	Cost to Export (\$ per Container)	Time to Import(Days)	Cost to Import (\$ per Container)	
Doing Business Report 2012	Bangladesh	115	25	965	31.00	1370.00
	Singapore	1	5	456	4.00	439.00
	India	109	16	1095	20.00	1070.00
	Pakistan	75	21	660	18.00	705.00
Doing Business Report 2011	Bangladesh	112	25	915	31.00	1390.00
	Singapore	1	5	456	4	439
	India	100	17	1055	20	1025
	Pakistan	81	21	611	18	680

Source: Adapted from Doing Business Report 2011 and 2012, World Bank.

**Table 10.6 Comparison of Competitive Components of
Export Performance of Nations**

Country	Manufactured Exports per Capita(dollars)		Share of Manufactured exports in total exports in %		Share of medium/high Technology exports in	
	2000	2005	2000	2005	2000	2005
World	824	1235	82	81	64.3	62.4
Bangladesh	39	56	92.3	94.0	3.3	3.4
China	182	556	92.1	95.1	45.3	57.5
India	37	82	83.5	87.3	19.8	32.6
Indonesia	210	251	69.7	64.5	34.1	33.1
Japan	3598	4387	95.2	94.2	85.2	82.0
Malaysia	3815	4753	89.3	85.5	76.4	72.1
Korea, Rep	3582	5766	97.8	97.9	69.6	75.1
Singapore	33314	50028	97.1	94.6	77.8	72.1
Taiwan	6494	8053	97.5	96.8	71.3	70.2
Thailand	957	1498	85.5	87.4	59.5	61.6
Turkey	361	925	88.6	90.8	31.9	40.6
USA	2480	2707	89.7	88.7	74.5	72.1
Viet Nam	87	211	46.8	54.0	21.5	21.4

Source: Adapted from UNIDO Data Base, 2009

Table 10.7: Global Ranking of Sectors in terms of Trade related Economic indicators

	Fresh food	Proc esse d food	Woo d prod ucts	Text iles	Che mica ls	Leat her prod ucts	Basic manufac tures	Non- electronic machinery	IT & Consumer electronics	Electr onic compo nents	Transpo rt equipm ent	Clothi ng	Miscell aneous manufa cturing	Min erals
Export growth in value, p.a. (	134	25	136	30	139	54	131	131	29	39	120	7	134	18
Net exports (in thousand US\$)	157	145	109	122	118	11	122	104	75	81	83	2	107	117
Per capita exports	167	158	142	80	141	75	140	138	116	127	130	41	140	157
Share in world market (%)	73	119	134	29	96	34	110	98	87	102	86	4	88	121
Product diversification (N° of equivalent products)	138	89	46	75	117	55	122	126	77	83	129	83	76	80
Product concentration (Spread)	91	90	85	63	106	53	112	117	103	99	116	65	78	106
Market diversification (N° of equivalent markets)	31	30	39	16	52	17	38	99	60	67	102	23	49	66
Market concentration (Spread)	56	66	80	26	71	29	72	101	79	80	87	26	65	108
Competitiveness effect, p.a. (%)	135	19	132	29	133	35	125	133	38	32	115	7	132	15
Initial geographic specialisation, p.a. (%)	89	47	2	86	27	105	47	35	19	23	126	79	116	54
Initial product specialisation, p.a. (%)	111	142	1	117	2	75	27	18	1	114	54	111	66	84
Adaptation effect, p.a. (%)	70	36	143	10	149	34	132	119	110	82	67	14	73	26
Matching with dynamics of world demand	91	70	38	85	52	48	8	21	15	8	123	115	91	52
Absolute change of world market share (% points p.a)	151	64	103	9	118	63	105	110	43	63	112	2	113	58
Average Index: Current Index	120	125	121	58	122	24	130	135	110	114	130	8	101	141
Average Index: Change Index	101	46	32	81	52	51	17	24	5	7	138	105	110	11

Source : Adapted from Data of UNCTAD, 2010

demand is high for IT & Consumer electronics, electrical and electronic equipment and non-electric machinery. Ranking in terms of change in market share, clothing, textiles, IT & consumer electronics performed better.

11. Findings and Conclusion

Trade intensities have increased over time in Bangladesh. However, Bangladesh product is majorly sold in domestic market despite steady efforts for export oriented development. Coverage of imports by exports has increased over time and now though lags behind India and Bhutan in the region. There is a huge trade deficit increasing in absolute terms and as proportion to GDP in the country posing a problem in the way of increasing capacity to import. Import intensity has increased over time and is much ahead of export intensity eroding the capacity to import and creating condition for balance of payment constraint to growth.

Composition dynamics of export show that over time, proportion of manufactured exports has increased and now it reaches 95% of total exports. Though manufacturing component in exports is a sign of progressive structure on the surface, export structure of Bangladesh suffers from poor quality because of poor technological component with 98% exports belonging to low technology based products and relatively poor per capita manufactured exports as indicated by its 4.5% level of per capita global manufactured exports. Export is narrow based and confined to few items of garments and other consumer goods. Though main category of exports is ready made garments constituting 78% of exports, garment products are concentrated in five items-T-shirts, pullovers, jackets, trousers and Men's and Boys' shirts. Concentration ratio of exports of Bangladesh is one of the highest in the world in not only in products but also in market destinations, which are concentrated in two areas-USA and EU. Nine countries buy 75% of Bangladesh garments. The changing export structure has been basically a shift from indigenous resource based jute to labour intensive import dependent garments in the export dynamics.

Import structure of Bangladesh is dominated by consumer goods at both static and dynamic level. Proportion of consumer goods now constitutes 57% of total imports of the country. Intermediate goods stably constitute 22% of imports. Proportion of primary goods and capital goods are 14% and 7% respectively. This indicates poor quality of technology component of imports. From this import structure, it is clear that there is a lacking in import substitution of consumer and intermediate goods by increased imports of capital goods and rawmaterials for using available surplus labour for domestic production with higher productivity. Import is not so much concentrated. But number of suppliers is not many. Only

nine suppliers supply 63% of our imports. High growth of supply is from China, India, Malaysia and Korea in recent years. Deeper analysis of import structure indicates that Bangladesh need to increase quality and technology component of imports for increased productivity in the economy.

Bangladesh has though been doing basically inter industry trade, its intra industry trade also has been increasing gradually though lower compared to India and Srilanka. At present, intra industry trade of Bangladesh is at a level of 28%. In course of trade development, Bangladesh tends to develop intra industry trade.

In so far as intra regional trade is concerned, participation of Bangladesh is very negligible. Results of similarity index show that India is not a competing economy but a complementary economy. India's export is Bangladesh's imports and complementary to Bangladesh development through providing primary inputs and capital goods to Bangladesh. Only country where similarity index is high is Srilanka implying similar trade pattern with Bangladesh. Both Bangladesh and Srilanka are competing imports from India and exports to the rest of the world for similar types of products. Common export items of Bangladesh with SAARC countries specially Srilanka, India and Pakistan are primarily two-fish and garments. Analysis shows that developments of Bangladesh, India, Srilanka and Pakistan are highly correlated.

It has been found that Bangladesh has been enjoying high competitiveness for exports in garments, jute and jute goods, other textile articles, fish, processed food, leather, footwear, IT and consumer electronics. Around 25 % of products at 4-digit level are showing positive RCA and TSI for Bangladesh. Analysis of net trade advantage shows that Bangladesh trade pattern suffers from shallowness as evidenced by the fact that only two categories (at 2-digit level)-textiles and clothing and other manufacture out of ten products of trade basket have positive value. Geographic RCA of Bangladesh is positive only for USA and EU.. In both knit and non-knit garments, Bangladesh has high RCA and TSI. In knit wear, Bangladesh has been enjoying positive RCA but faces tougher competition with established suppliers like China, Vietnam and Turkey. In non-knit garments, Bangladesh has better position relative to China which has negative RCA. But China's market share in both knit and non-knit is more than 30% of world exports. Bangladesh is a better performer in EU but in US market, Bangladesh's competitors are many enjoying positive RCA and TSI making the competition tougher for Bangladesh. In EU market, Bangladesh enjoys higher RCA in T-shirts, jersey, pullovers, Men's and Boys' 'shirts and Men's and Boys' suits and jackets, but experiences competitive disadvantage in women's and girls' 'suits, jackets and blazers. It implies that Bangladesh needs to diversify and increase competitiveness for export expansion.

Market share of Bangladesh in global exports is 0.13% and global imports 0.15% with increasing trend. Bangladesh has market share of 4.85% in garments ranking second position in the world. High market share with positive trend belong to garments, other textiles, jute and jute goods, fish and processed food, leather and leather goods and footwear. It is notable that only 8 countries are supplying 50% world garments market indicating tough competition to maintain the market share. China is having 33% of world garments market which is eight times higher than Bangladesh holding second position next to China. This creates scope for Bangladesh taking over of some of shares of China where it has competitive disadvantage. It has been observed that there has been positive change of market share of Bangladesh by 23%, and main source of this positive change is competitiveness.. Bangladesh ranked 108th position out of 142 countries in global competitiveness ranking of 2012. Infrastructure, technology preparedness, innovation and institutions are identified as the four weakest areas for poor competitiveness of Bangladesh.

Thus Bangladesh has though experienced reasonable growth of exports and remarkable success in garments exports, trade pattern of Bangladesh is characterized by poor quality, low technology based products, narrowness of products and markets, domination of consumer goods in exports and imports basket, poor competitiveness and limited success in product and market diversification for export expansion, All these indicate the necessity of broadening the production base, raising technology level and improving infrastructure for quality production with varieties and innovativeness to address both domestic and export market.

Appendix Table 3.1: Growth of Individual Export Items

Export Items	1972-80	1981-85	1986-90	1991-1995	1996-00	2001-05	2006-10	
Raw jute	4.61	1.85	-1.51	-6.26	0.35	7.22	26.46	High Growth recently
Tea	27.57	14.44	-4.72	-1.88	-6.28	-1.12	-13.45	Negative growth
Frozen Food	62.47	18.56	10.38	18.78	3.06	5.46	6.82	Positive though lowered
Agriproducts	39.47	63.95	12.82	7.06	15.99	40.09	20.38	High Growth
Other primary commodities	30.84	4.18	5.12	21.28	-0.96	17.01	26.43	High Growth
Total primary commodities	8.04	7.03	0.52	8.06	1.28	7.82	12.32	High Growth
Jute goods	14.13	0.14	-2.17	-0.43	-3.24	3.69	20.44	High Growth
total jute and Jute goods	9.18	0.51	-2.38	-2.17	-3.03	4.33	21.07	High Growth
Leather	26.03	3.09	28.37	3.78	-0.24	3.83	5.50	R5easonable growth
Leather goods	517.26	117.24	-100.00	79.64	2.56			Prospective
Footwear	517.26	-85.71	#DIV/0!	66.78	9.49	78.53	26.43	High Growth
woven Garments	211.80	202.49	44.70	25.63	11.27	3.31	13.10	Reasonable growth
Knitwear	20.37	-20.00	0.00	184.99	27.14	17.96	20.10	High growth
total garments (Woven and Knitted)	345.50	204.44	45.33	29.68	14.54	8.35	16.36	High growth
Pharmaceuticals	289.03	40.27	87.95	162.89	22.27	-54.29	#DIV/0!	Prospective
Handicraft	110.93	-10.40	27.65	10.73	8.77	-9.63	3.82	Low Positive growth
Engineering products	566.71	793.96	89.14	36.31	-12.47	#DIV/0!	29.51	High Growth
Specific textiles	-71.79	89.18	90.07	98.98	-1.09	#DIV/0!	#DIV/0!	Negative growth
Other mfg.	197.36	20.96	43.32	98.69	28.73	27.81	14.73	Reasonable growth
Tot mfg exports	15.94	4.46	16.25	20.70	11.95	8.99	15.71	High growth
Total Export	11.93	5.19	11.26	18.34	10.72	8.87	15.44	High Growth
Total exports except garments	11.91	2.29	2.43	7.41	2.55	10.53	12.93	Reasonable growth
Total manufactured exports except garments	15.92	-0.03	4.01	7.14	3.35	11.89	13.37	Reasonable growth

Source: Calculated from the data of EPB of Different Periods

Reference

1. *World Development Indicators, 2011, WB.*
2. I-O Table, Background of Sixth Five Year Plan, Bangladesh Planning Commission, 2011.
3. Balassa, B and L. Bauwens (1987) "Intra-Industry Specialisation in a Multi-Country and Multi-Industry Framework", *Economic Journal*. Vol. 97, Issue 388, p.923.
4. Grubel and Lloyd (1975), *Intra Industry Trade : The measurement of international trade in different products*, London, Macmillan.
5. Vona S. (1990),, "Intra industry Trade:A statistical Artifact or a Real Phenomenon?", *Banco Nazionale del Lavoro Quarterly Review*, 43, 175, pp.383-412. reprinted in Iapadre 1995.
6. Finger, J.M and Kreinin, M.E (1979), "A measure of Export Similarity Index and its Possible Use", *Economic Journal*, Vol.89.
7. Taneja, N, et al (2011), "Enhancing Intra-SAARC Trade: Pruning India Sensitive List under SAFTA". ICRIER, INDIA
8. Balassa, B. (1965), "Trade Liberalisation and Revealed Comparative Advantages", *The Manchester School of Economics and Social Studies*, 33(1).
9. Dornbusch, R., S. Fisher, and P. Samuelson (1977) "Comparative Advantage, Trade and Payments in a Ricardian Model with a Continuum of Goods," *American Economic Review*, 67 (5), 823-39
10. Kathuria, S. (1997) *Competitiveness of Indian Industry* in D. Mookherjee (ed.) *Indian Industry: Policies and Performance*. Delhi, Oxford University Press
11. Siggel, E. (2007) "International Competitiveness and Comparative Advantage: A Survey and Proposal for Measurement." *Journal of Industry, Competition and Trade*, 6 (2), 137-159
12. Taneja, N, et al (2011), "Enhancing Intra-SAARC Trade: Pruning India Sensitive List under SAFTA". ICRIER, INDIA
13. Volrath, T. L. (1991) "A Theoretical Evaluation of Alternative Trade Intensity Measures of Revealed Comparative Advantage" *Weltwirtschaftliches Archiv*, 265-280
14. Siggel, E. (2007) "International Competitiveness and Comparative Advantage: A Survey and Proposal for Measurement." *Journal of Industry, Competition and Trade*, 6 (2), 137-159
15. Taneja, N, et al (2011), "Enhancing Intra-SAARC Trade: Pruning India Sensitive List under SAFTA". ICRIER, INDIA.

16. Dalum et al, (1998), "Structural Change in OECD Export Specialisation Patterns: Despecialisation and Stickiness", *International Review of Applied Economics*,12,3.
17. Iapadre, P.Lelio (1995), "Measuring International Specialisation," *International Review of Applied Economics*, Vol.7, No.2.
18. Scott, L. and Volrath,T.L (1992),"Global Competitive Advantage and Overall Bilateral Complementarity in Agriculture: A statistical Review", US Department of Agriculture Economic Research Service, *Statistical Bulletin*, No 850, Washington..
19. Rajeeb Jain and J.B.Singh (2009)," Trade Pattern in SAARC Countries, Reserve Bank of India, *Occasional Papers*, Vol.30, No.3.
20. *ibid*,
21. UNCTAD, 2009
22. UNCTAD, 2009