THE IMPACT OF TRADE LIBERALIZATION ON THE EXPORTS OF BANGLADESH

A dissertation submitted

by

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to

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CERTIFICATE

This is to certify that the thesis, "The Impact of Trade Liberalization On The Exports Of Bangladesh", submitted for the award of the Degree of Doctor of Philosophy in Economics, to the University of Dhaka, is a record of bona fide research carried out by Riffat Zaman Choudhury under my supervision.

No part of the thesis has been submitted for any degree, diploma, title or recognition before.

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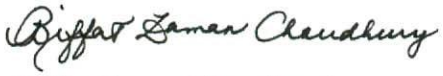
DECLARATION

I, Riffat Zaman Choudhury, do hereby declare that the thesis, "The Impact of Trade Liberalization On The Exports Of Bangladesh", has not been submitted by me for the award of any degree, diploma, title or recognition before.



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THE IMPACT OF TRADE LIBERALIZATION ON THE EXPORTS OF BANGLADESH

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ABSTRACT

The objective of this study is to analyze the impact of trade liberalization on the exports of Bangladesh. Keeping this objective in view, the study tests the hypothesis that trade liberalization in Bangladesh, namely the liberalization of tariff and exchange rate, has had a significant positive impact on Bangladesh's export performance. A regression model is developed to assess the effect of tariff and exchange rate liberalization on Bangladesh's total exports, exports to fifteen major trading partners, and on the country's major export products. Price and production capacity are also included as explanatory variables of exports along with tariff and exchange rate. In addition, the effects of the Generalized System of Preferences (GSP) and Quota on exports are also examined.

Empirical analysis demonstrates that the impact of trade liberalization on exports is not very strong. The elasticity of supply of total exports with respect to the average import-weighted tariff as determined in this study is less than unity. The effect of tariff liberalization on exports of leather goods, frozen food, and jute goods is not significant either. The reason perhaps is that the exporters of these items enjoy the bonded warehouse or duty drawback facilities, which allow them to import the inputs duty free.

However, the partial regression of Bangladesh's total exports, exports to fifteen countries, and apparel exports on average import weighted tariff on raw materials and capital inputs shows that liberalization of tariff on imported inputs would facilitate exports by cheapening the cost of inputs. Reduction in the tariff on inputs of raw materials and intermediate capital goods rather than on all imports is thus warranted because by removing the anti-export bias it would help stimulate exports. Also drastic reduction in all tariff may not be desirable because of its revenue-reducing effects.

The influence of liberalization of nominal exchange rate on exports is not very strong as is indicated by an elasticity less than unity. Devaluation has also various adverse effects and hence its frequent use should be avoided as a tool for stimulating exports.

A striking finding of this study is that changes in the real effective exchange rate have virtually no positive influence on Bangladesh's exports, although theoretically, it is a more realistic indicator of the real value of the country's export earnings.

Bangladesh's exports were not found to be significantly responsive to price, but that does not mean that the price factor should be neglected. Maintaining price competitiveness is of crucial importance in the global market. Prices have to be kept low by keeping production costs down. Macro-economic stability by maintaining inflation rates at low level, is therefore, important. This will require removal of structural constraints that raise the cost of production and also the cost of doing business in the country.

Production capacity is found to be the only factor to have a strong, positive influence on Bangladesh's exports. Thus, expansion of production capacity should be addressed as the prime objective to promote exports. The government should take supportive measures for increasing private domestic and foreign investment in export-oriented industries. The government's, fiscal, financial, structural and sectoral policies should all be directed to enhancing production capacity.

The study confirms that GSP facilities have greatly facilitated Bangladesh's exports to the EU region. GSP is one of the major factors stimulating the exports of ready made garments and leather goods to the EU countries. This suggests that the continuation of this facility would be beneficial to Bangladesh.

The system of MFA Quota that governs trade in textiles is seen to promote Bangladesh's apparel exports by ensuring a secured access to the US market. Quota on apparel exports to USA is not a barrier, but a promoter of Bangladesh's apparel exports. This is why the phase-out of MFA Quota by the year 2005 poses a challenge for Bangladesh when the country will face severe competition from other countries like China and India. Bangladesh could seek to have no quota ceiling or at least expanded quota ceilings for her exports while urging for the existing quota limits to continue in the case of competing countries. This could ensure Bangladesh's exporters unlimited access into the US market. However, this state of affairs will continue only up to January 2005 when all quotas will be phased out.

The study concludes that the liberalization of tariff and exchange rate is not as much a crucial factor for export promotion as enhancing production capacity through increased investment. In the context of an environment clouted with policy uncertainty,

high non-economic costs and acute infrastructural constraints like poorly performing power systems, ports, and banks, mere tariff reduction or exchange rate alteration will not necessarily boost trade. Bangladesh will need to enhance investment and reduce the cost of doing business by implementing structural reforms in power, banking, ports and other sectors. Good governance is also important for sustained expansion of the country's exports.

International support will also be needed to expand Bangladesh's export production capacity. Generous financial and technical assistance from development partners will be needed for capacity development in export industries. Non-tariff barriers, tariff peaks and tariff escalation in industrial countries are currently the major impediments to developing countries' exports. Bangladesh should demand for elimination of all these barriers by the industrial countries on products of export interest to developing countries, in particular the least developed ones. Effective implementation of appropriate domestic policies and the availability of adequate external support will improve the country's export sector performance and contribute to the overall growth of the economy.

Chapter One

INTRODUCTION

1.1 Background and Objective of the Study

Researchers and policy makers have recognized trade liberalization as one of the most challenging issues in the globalization process for stimulating exports ever since exports have been identified as the driving force of growth. Bangladesh, a poor developing country that strives to boost its exports through an export-oriented policy, has recognized the importance of trade liberalization and has put it in the forefront of its policy agenda. The objective of this research is to analyze the impact of trade liberalization on the country's exports. More precisely, the study attempts to evaluate whether trade liberalization exercises undertaken in Bangladesh so far have had any success in stimulating its exports.

The analysis is based on the assumption that the reduction of tariffs on imported capital and intermediate goods used as inputs in the manufacture of export commodity lowers costs and thus benefits the export industries. The other assumption is that devaluation makes imports relatively more expensive and exports profitable and therefore divert resources to export-oriented industries. In addition to examining the impact of these trade liberalization measures, the study also examines the impact of certain factors such as the GSP (Generalized System of Preference) facilities and guaranteed access through quota on the country's exports. The study will hopefully promote the understanding of the related issues and enhance the policy makers' capability to formulate appropriate policies for the county's external sector.

There exists a vast theoretical and empirical literature on trade strategies for development. Useful lessons can be drawn for purpose of the present study from the available literature and the cumulative wisdom of prior research works on the subject. The study, therefore, provides a brief review of the available literature and major researchers done on trade liberalization.

Trade theorists generally recognize the virtues of free trade and lay great emphasis on trade liberalization by dismantling all trade policy barriers. The dynamics of free trade is also supported by empirical evidence gathered during the past three decades. In the recent times, however, there are also views in favor of protection, which cite various kinds of market failure and costs associated with sudden removal of trade barriers. These opinions are not, however, against the freeing of trade but these argue for appropriate phasing and sequencing of trade liberalization in order to give an economy ample scope to develop and become competitive to cope with the ongoing process of globalization.

Bangladesh inherited a highly complex and extensive system of quantitative restrictions, characterized by bans, specific quotas, licensing requirements, and other restraints. The foreign exchange market was highly restricted and rationed through an elaborate import licensing system. A dual foreign exchange market was also maintained. In the post independence era, trade liberalization was initiated in the early eighties as part of the IMF's stabilization and World Bank's structural adjustment programs, and intensified in the late 1980s and early 1990s.

Trade liberalization in Bangladesh has encompassed import liberalization, a switch from fixed to flexible exchange rate, and export orientation (removal of anti-export bias). Trade liberalization consisted of removal of quantitative restrictions, reductions in the level of tariffs, export promotion measures, and removing the bottlenecks in the foreign exchange market. Measures to promote exports and remove anti-export bias included duty free access to imported inputs through bonded warehouse facilities and duty drawback scheme, export processing zones, and generous income tax holidays. While the export oriented garments manufacturing sector has clearly benefited from these measures, it is not clear how far other export oriented industries like leather, frozen food and jute goods have taken advantage of these incentives. It is therefore critical to analyze how liberalization of import and exchange rate regimes has affected the performance of the export sector in Bangladesh. In view of the continuing insistence by the World Bank and the IMF to further liberalize the trade regime on the one hand and

the growing concern among economists and politicians on the pace of liberalization on the other, a study of the impact of trade liberalization on the exports sector is of utmost importance.

Globalization is proceeding in full swing and it poses challenges and provides opportunities for Bangladesh. This study may provide some idea about policies required to face these challenges and utilize the opportunities by improving the competitiveness of the country's export sector.

1.2 The Hypothesis, Methodology and Approach of the study

A theory worth its name can be proved by reference to facts or a set of hypotheses, which can be empirically verified. The true test of a theory lies in how well the hypothesis can be proved or disproved by empirical scrutiny. The present research builds on a specific hypothesis, which can be tested by using real world data. The testable hypothesis of the study is:

Liberalization of import and exchange rate has had a significant positive impact on export performance.

In addition to the above hypothesis, the effect of EU GSP facilities and of US Quota on Bangladesh's exports are examined in this study.

The state-of-the-art methodology is adopted to test the hypothesis of the study. An econometric model, based on the standard export supply function, is developed for that purpose. Regression exercises are carried out to determine the influence of various explanatory variable on Bangladesh's export supply. Data employed in the regression exercises are gathered from secondary sources.

The approach of the present study is in some respects similar to that of certain other studies conducted in the field of trade but different in respect of others. In common with most other researches, some of which are reviewed in the next chapter, the econometric model of the export supply function applied in this study, too, employs the supply price and the production capacity as explanatory variables. However, the present study departs from those other studies by explicitly incorporating the tariff and exchange

rate variables in the regression equations along with some additional variables such as GSP and Quota, which are deemed important in influencing Bangladesh's exports.

To be more specific, in the multiple regression the supply of Bangladesh's exports is regressed on the relative price of exports, the production capacity of the export sector, average import weighted tariff, the exchange rate, the GSP facilities, and the Quota restriction the exports face while entering the foreign markets. How all these variables are incorporated in the estimable equations is discussed in greater detail in Chapter VI.

1.3 Scope of the Study

This introductory chapter outlines the objective and a brief background of the study followed by the statement of the hypothesis and the methodology adopted in the study.

Chapter II clarifies the conceptual issues of trade liberalization, discusses the rationale for and the international experience on trade liberalization, outlines the current drive for trade liberalization worldwide, and highlights the importance of proper timing and sequencing of trade reforms suitable for a particular economy.

Chapter III reviews the existing literature on the subject, while Chapter IV gives an account of Bangladesh's trade regime and experience in trade liberalization. The chapter also provides a comparison of Bangladesh's reform efforts with those of some other countries in the area of trade.

Chapter V provides an overview of the structure and composition of Bangladesh's exports and discusses the four major export products to which the analytical model of the study is applied. Chapter VI formulates an empirical model for assessing the impact of liberalization on exports. Regression equations are developed for testing the hypothesis of the study. The estimated regression results are presented in Chapter VII. Chapter VIII summarizes the findings and policy implications of the study.

Chapter Two

CONCEPTUAL ISSUES IN TRADE LIBERALIZATION

2.1 'Trade Liberalization'. What It Means:

This study is purported to empirically analyze the impact of trade liberalization on Bangladesh's export performance. In order to set the issue in its proper perspective, therefore, an attempt to resolve certain definitional ambiguities in the concept of trade liberalization appears appropriate.

Empirical evidence on trade strategy, or trade orientation and development is not very easy to summarize and explain. Greenaway and Reed (1990) cite the following reasons behind it. First, the issue has been addressed differently by different analysts. Second, even when different analysts have adopted the same approach, alternative interpretations of a given data set could have led to controversy. Third, one can identify links between trade strategy and export growth, between export growth and economic growth, and between trade strategy and economic growth. Empirically it is difficult to disentangle these.

A similar concern is found in Evans (1990). He shows evidence of a strong positive empirical association between periods of rapid growth of trade (exports) and the rate of growth of GDP. However, he notes that the interpretation of the direction of *causality* is more problematic.

What precisely does trade liberalization mean? Even though there is no general consensus on what trade policy reform precisely means, it indicates a reduction in the direct and indirect controls on trade and generally it involves a greater reliance on the market for channeling investment and other resources into the tradable sector (Shafaeddin, 1994). Trade liberalization involves neutralizing incentives for exports and imports at low tariff levels through:

- Removal of import quotas and quantitative restrictions (QR) or their conversion into tariffs, and subsequent reduction in the level and dispersion of import tariff rates
- Compensatory devaluation of national currency
- Removal or reduction of export taxes and anti-export bias of trade policies

In the opinion of some economists, the objective of trade liberalization is to remove anti-export bias expand exports by channeling resources from the domestic sector to the export sector, and eventually raise the growth rate of GDP. Trade liberalization is not, however, the only factor that affects economic performance as it differs among countries depending on their resource endowment, level of development, export capacity, initial degree of openness, liberalization policies and the timing and sequencing of liberalization.

Krueger (1986) defines liberalization as any policy action that reduces the restrictiveness of controls — reduces the scarcity premium attached to those controls. A regime with no quantitative restrictions but very high tariffs could still be considered fully liberalized, but biased.

Bhagwati (1988) emphasizes neutrality as the central aspect of liberalization. In an import-substituting regime, incentives are biased against exports and in favor of domestic sales. The introduction of incentives to exporters (like duty drawback) in such a regime would be viewed as a move toward liberalization because it reduces bias against exports. This would be true despite the fact that import barriers have remained the same.

Thomas and Nash (1991), introduced the terms neutrality and anti-export bias to explain trade policy reform. According to them, 'outward orientation' and 'openness' imply more about policy consequences than about what the policies are. According to them liberalization and neutrality are often used interchangeably. A shift towards ***neutrality*** is a change that makes the policy-induced effect on price incentives more nearly uniform among exportables, importables and non-tradables as well as between sales of a given product in the domestic and foreign markets. This is more relevant in meaning a reduction in ***anti-export bias*** as most countries have this problem more than having a bias against importables and non-tradables. This anti-export bias can be reduced

by a reduction of import protection, increase of export incentive, or by both of these. The term ***liberalization*** implies reduction of trade restrictions and increased usage of prices to replace bureaucratic and political interventions.

Dean, Desai and Reidel (1994), relates liberalization with a more "outward oriented" trade regime, although this term tends to be interpreted in three broad ways. Countries may be considered more ***outward-oriented*** if their trade reforms imply a move toward neutrality and involve equalizing incentives between the exporting and import-competing sectors. A more ***liberal*** regime is one where the level of intervention has been reduced. Finally, an increase in ***openness*** is equated with an increase in the importance of trade in the economy (as percent of GDP).

The lack of an agreed upon definition of trade liberalization makes it difficult to assess the extent to which it has occurred. Greenaway (1992) suggests that a more neutral regime could be achieved through a reduction in import barriers, or through the introduction of an equivalent system of export subsidies. Of the two, however, the latter policy clearly implies a direct intervention in the trade regime. Thus a more neutral regime does not necessarily mean a more liberal one.

Edwards (1989) calls for a definition that will allow for a continuum – recognizing different degrees of liberalization. He refers to the early Krueger/Bhagwati definition as 'mild' liberalization. A move to neutrality would be a more 'intensive' liberalization. Finally, a reduction in levels of intervention (increased liberality) would constitute a more 'drastic' form of liberalization.

The more recent studies by Michaely, Papageorgiou, and Choksi (1991), and Thomas and Nash (1991) appear to include both neutrality and liberality in their definitions of trade liberalization. Liberalization encompasses not only a reduction in the anti-export bias of the trade regime, and an increase in reliance on the price mechanism, but also a reduction in the level of intervention. Inclusion of these concepts in the definition of trade liberalization means that a large number of policy changes need to be considered. Some of these are: lowering average nominal tariffs; a shift from quantitative restrictions to tariffs; a real devaluation; a unification of multiple exchange rates; removal of export taxes; removal of quantitative restrictions on export; and implementation of export subsidies, rebates, or compensation schemes.

2.2 Different Approaches to Measuring Trade Liberalization

There are many views on how trade liberalization can be measured. These are attempts to quantify the extent of openness of a country and its effect on economic variables to indicate some progress in the desired direction. As has been discussed earlier, the very term 'liberalization' is interpreted differently by different economists.

Trade liberalization is often meant to reduce the anti-export bias. Bhagwati (1988) has explained the concept of eliminating anti-export bias by following an EP (export-promoting) strategy. He suggests the following incentive-related terminology:

IS (Import-substituting) strategy : $EERx < EER_m$

EP (Export-promoting) strategy : $EERx = EER_m$

Ultra- EP (Export-promoting) strategy : $EERx > EER_m$

Where, EER stands for effective exchange rate, and the subscripts x and m denote export and import, respectively.

These effective exchange rates measure the incentives to export and import-substitutes respectively. Thus, EERx would include not just the foreign currency earned but also any export subsidy, tax credits, special credits, etc. It would also include the subsidy on inputs used in export production, so that there is no distinction between EER comparisons defined on value added or gross value, for the purpose at hand. Similarly, EERm would add any import duty and import premia resulting from quantitative restrictions (QRs) and other charges to the parity. Bhagwati also explains that probably it would be ideal to call EERx = EERm a trade neutral or bias-free strategy while terming the EERx > EERm the EP strategy. But he then concludes that EP strategy has come to be defined in the academic literature as the one with bias-free incentives simply because the empirical studies of the four Asian economies (South Korea, Singapore, Hong Kong, and Taiwan) strongly suggest that these successful outward-oriented developers were in fact closer to neutrality than to a substantial positive bias in favor of exports. Also, the sequencing of trade regimes, one in which the EP countries went from an IS strategy to a neutral strategy, which eliminated the bias against exports and thereby improved their export performance, prompted the researchers to define EP strategy in terms of neutrality. Nonetheless, it is not uncommon, especially among policy-makers, to find references to EP (or outward-oriented) trade strategy as comprehending both the neutral and the pro-

export-bias strategies. Thus in a nutshell the point that must be taken note of is that one must be careful to understand what exactly is the definition that is being implicitly used in a particular context.

The above definitions clearly relate to average incentives. Within EP strategy, for instance, some activities may be import substituting in the sense that their EERm exceeds the average EERx. Thus, the pursuit of either the EP or the ultra-EP strategy does not preclude import substituting in selected sectors. The EP strategy does not mean the absence of government intervention. This is, in fact, true for most of the successful Far Eastern countries.

Bhagwati further cautions that the EP strategy has to be distinguished from the traditional concept of "export-led" growth strongly with which it is often confused. Export-led growth relates to a situation where external growth, due to income effects centered on a country's exports, generates income expansion attributable to direct gains from trade and indirect beneficial effects. On the other hand, the EP definition has literally nothing to do with such beneficial external phenomena.

There is another way of measuring ***anti-export bias*** as proposed by Thomas, Nash and associates (1991). It is measured as $(1+RP_I) / (1+RP_E)$ where, RP_I is the average net rate of protection to imports (as a percentage of import value) and RP_E is the average net rate of protection to exports (as a percentage of export value). If this ratio is greater than unity, the trade regime is import substituting and there is anti-export bias. If the ratio is less than unity, the regime is export promoting, and if it is equal to unity, the regime is neutral.

Indicators of increased trade liberalization according to Shafaeddin (1994) are:

- increase in the Import/ GDP ratio,
- decline in the relative importance of tariff in government revenue,
- decrease in the black market premium for foreign exchange.

In addressing the measurement issues, the study by Dean, Desai and Riedel (1994) remarks that any attempt at measuring the degree of trade liberalization is difficult. The measure(s) used should be theoretically sound, should correspond to the

chosen definition, and should reflect the net impact of policy changes on the degree of trade restrictiveness in an open economy. Their study presents a brief review of various aggregate measures and individual indicators of trade liberalization.

Aggregate measures: It is suggested that an aggregate index should meet the following requirements. First, an index should objectively distinguish degrees of openness, to allow for cross-country and inter-temporal comparisons. Second, it should be as comprehensive as possible, to account for interaction among policy changes. Third, it should capture changes in both the scope and severity of trade distortions it measures. For example it should account for not only a change in the magnitude of a tariff, but also the change in the coverage of the tariff. Fourth, the index should be sensitive to policy changes.

There are two approaches to constructing these indices. One is to assess the distortionary effects of all trade restrictions on relative prices. The other is to examine trade flows, to assess the extent to which existing trade deviates from the pattern or levels, which would take place under free trade.

There are three examples of measures of distortion in prices: the first by Bhagwati (1988), the effective exchange rate of exports vs. imports; the second by Michaely, Papageorgiou and Choksi (1991), the MPC index; and the third by Dollar (1991), the Dollar index. These measures differ due to an underlying difference in the definition of liberalization. The first is a measure of the degree of neutrality, while the latter two assess the degree of liberality. Two examples of measures, which assess the degree of distortion in trade flows, are the "openness ratio" and Leamer's (1988) index.[1]

The effective exchange rate for exports vs. imports (EERx/ EERm) has already been discussed earlier. This approach meets requirements one, two and four mentioned above. It can also be constructed such that the coverage of trade restriction is captured in the weighting of the variables (e.g., in constructing the "average" tariff), thus meeting the third requirement. However, the index can only show movements

[1] The openness ratio in its simplest form is the ratio of exports plus imports as a fraction of GDP. Leamer's index is based on a regression of net exports of 182 three digit SITC products on factor endowments for each country for 1982. The sum of the deviation of actual from predicted trade (relative to GNP) is used as an index of the degree of distortion. See Dean, Desai and Reidel (1994).

towards or away from neutrality. This index satisfies the first three requirements (Dean, Desai, and Riedel, 1994).

Individual indicators: Alternatively, a set of individual measures can be used to indicate whether or not the trade regime is becoming less restrictive. This should provide some comprehensive information on the direction of change in a country's trade regime.

One difficulty of this approach is that the changes in one indicator are not easily weighed against the changes in the others. For instance, there can be no indication of whether the trade regime has become more open if average tariffs fall with a simultaneous overvaluation of the exchange rate. Similarly, it does not indicate neutrality of the trade regime if average tariffs rise with a fall in export taxes. According to Dean, Desai and Reidel, in each case the relative magnitudes of the changes and appropriate weights must be determined.

Among the individual indicators, four categories were discussed in their study: import tariffs, quantitative restrictions, export impediments and incentives, and the degree of exchange rate misalignment. These indicators are important for the present study as these have been used to analyze the impact of trade liberalization on exports.

Tariffs: The un-weighted average nominal tariff is a logical candidate for measuring the restrictiveness of tariffs, but it tends to have an upward bias due to the fact that the highest rates often apply to a very few categories of goods. Therefore, a weighted average is often more desirable. The problem is of choosing the weights. The most readily available is the **import-weighted average tariff,** but this tends to be *biased downward* - highly restrictive rates, which dramatically lower imports, will have the smallest weights in the average. One useful alternative is weighting by the amount of domestic production protected by the tariff. This should be biased towards putting heavier weight on more highly protected sectors.

Reductions in nominal tariffs do not necessarily indicate reductions in effective rates of protection. Two other indicators are, therefore, useful to capture changes in the structure of the tariff regime, the ***dispersion of tariffs*** (standard deviation around the mean) and the ***range*** (usually the nominal maximum and minimum). One drawback to

the range measure alone is that there is often a large gap between the maximum rate and the next highest rate. Quite often more than 90% of imports face ranges below the maximum. Therefore, reduction in the maximum rate may not reflect a significant move toward liberalization.

Reductions in tariffs may be offset by increases in additional import surcharges, special taxes, and other fees levied on imports. Simultaneous quantitative restrictions are an additional problem. If the quantitative restriction is the binding constraint, the tariff becomes redundant, and reductions in tariffs will not signify a more liberal regime.

It is sometimes tempting to view the data on the **"collected tariff"** as a better indicator of the degree of distortion than the nominal rate, as this indicates the proportion of duty to value of imports actually collected by the government. Thus, a rise in the collected rate is thought to indicate a more distorted regime. But it may in fact indicate the opposite. The collected rate may rise when the nominal rate drops. One reason for this is that the incentive to pursue legal exemptions (or to smuggle) decreases as the nominal rate falls A second reason is the extensive and arbitrary exemptions present in many trade regimes, especially for goods subject to very high tariffs. To the extent that such exemption creates unknown degrees of distortion, removal of these exemptions - and thereby an increase in the collected rate – may again signal a less distortionary regime. This is especially true of the many exemptions on non-competing imported inputs, which contribute to high levels of effective protection. Recent work by Pritchett and Sethi (1992) confirms the ambiguity behind the collected rate as a measure of trade distortion.

Quantitative Restrictions: The incidence of QRs, such as quotas or bans, is often reported as the percent of tariff lines subject to restraints. As with tariffs, some kind of weighted average is desirable to capture the amount of trade that is actually restrained by these QRs, but weights are subject to biases. The percent of product lines subject to QRs may drop, but the remaining quotas may become more restrictive. A measure of the tariff equivalent of the QR would capture changes in severity, but data may be insufficient to estimate this across all restrained products.

An additional problem is that many goods are restricted by licensing procedures, but not bound by any specified quota. Countries maintain negative and /or restricted lists,

which specify goods, which are banned and restricted by quotas and those that can only be imported with a license. Alternatively, countries maintain positive lists, which stipulate which goods may be imported (after obtaining a license). Goods not on the positive list are, in effect, banned.

The procedures involved in obtaining a license act as an NTB (non-tariff barrier). They vary widely across industries and across countries, and they are often not very transparent. In some cases, imports are restricted through the licensing procedures necessary to obtain foreign exchange. Although it is possible to measure the coverage of a licensing system (incidence), it seems virtually impossible to assess the degree to which it distorts relative prices (severity).

Export Impediment: Assessing the restrictiveness of the export regime would require data on weighted average taxes, and the tariff equivalent of quantitative restraints. Monopoly marketing boards, which may set producer prices and carry out all transport and all marketing of export goods, can introduce a large degree of anti-export bias in the trading regime. Therefore, removal of an inefficient marketing board, or allowing competition in the transport of export goods should also be viewed as removal of an export restriction.

Export incentives often take the form of increasing exporters' access to imported inputs, such as duty drawback schemes and bonded warehouses. It can also be in the form of direct (cash) compensation and increased foreign exchange retention rates for exporters.

Foreign Exchange Restrictions: One method of capturing the degree of overvaluation of a currency is to measure the black market premium. This gives some measure of the degree to which the regime is biased against exports. Presumably this premium includes the effects of the incidence and coverage of foreign exchange restrictions and licensing procedures. Removal of restrictions in the foreign exchange market alone should constitute a liberalization of the trade regime.

However, it should be recognized that restrictions on access to foreign exchange might be the binding constraint on a country's trade. To the extent that this is true,

reductions in tariffs and other quantitative restraints will have no liberating impact. Thus, it is important to assess changes in import barriers in light of the structure of the foreign exchange market.

2.3 Theoretical Underpinnings for Trade Liberalization

Adam Smith and Ricardo's arguments for free trade based on absolute and comparative advantage are strong but objections to free trade are also available in the literature. It should be recognized here that some gain and some lose in the game and the arguments in favor of protection are an effort to find ways to compensate the losers.

It should be noted that the classical view of trade as an engine of growth called for free trade through active export promotion policies. The neo-classical theory with its emphasis on static allocative efficiency argued for free trade and neutrality in relative incentives to import substitutes and exports. The structuralists and radical view of biased trade recommended a straightforward import-substituting policy.

In the 1950s and 1960s, it was argued by the structuralists [the proponents of import substituting policy like Raul Prebisch (1950), Gunnar Myrdal (1956), and Ragnar Nurkse (1959)] that trade, termed as the engine of growth by the classical economists in the 19th century, could not play that role in the 20th century because of a slowdown in the growth of demand in developed countries for the exports of developing countries (Bhuyan, 1992). Structural bottlenecks, imperfections in the factor markets and other dynamic factors (such as external economies), balance of payments difficulties etc., motivated these countries towards an import-substituting strategy. Many developing countries adopted extremely protective trade policies and built high tariff walls to protect their industrial sector. But from the mid-1960s, an increasing number of developing countries shifted to a more outward-oriented export-promoting strategy with spectacular results. In the neo-classical framework, trade intervention is thought to be the best option in the case of already existing policy-induced distortions. Thus in a small economy with tariffs, the first-best policy is to remove tariffs directly. If, for institutional rigidities, tariffs cannot be removed, an equivalent export subsidy is needed to neutralize tariffs indirectly. This was widely recommended by the World Bank as a policy guideline. However, a new wave of export pessimism emerged in the early 1980s when the

prolonged world recession cast new doubts on the advisability of following an export-oriented growth strategy.

Modern theoretical models suggest that free trade avoids the efficiency losses associated with protection. Many economists believe that free trade produces additional gains beyond the elimination of production and consumption distortions.

The efficiency case for free trade is that steps towards trade liberalization, such as removal of tariff, eliminate production and consumption distortions, i.e., the net loss to the economy. Thus, it increases national welfare.

Trade liberalization can provide another kind of additional gains from economies of scale. Two Canadian economists Richard Harris and David Cox (1984, 1985) have estimated that real income would rise by 8.6% for Canada due to economies of scale through free trade with the United States of America (Krugman and Obstfeld 1991, p.216).

Trade liberalization, in general, benefits economies in a number of ways.
When tariffs are lowered and relative prices change, resources are reallocated to production activities that raise national incomes. Trade liberalization has other powerful effects. It strongly influences the way firms perform. Increased imports can discipline domestic firms by forcing them to bring prices closer to marginal costs, thereby, reducing the distortions created by monopoly power. Trade liberalization can permanently raise the productivity of firms by providing access to up-to-date capital equipment and high quality intermediate inputs at relatively low prices. Firms' productivity levels also rise when businesses are exposed to demanding international clients and the "best practices" of overseas competitors. Indeed, the differences in productivity levels of exporting and non-exporting firms often diminish once previously non-exporting firms begin selling products abroad, as studies from Colombia, Mexico, Morocco, and Taiwan indicate (World Development Report, 1987, 1999).

Trade liberalization can set off a chain of events that concentrate economic activity in a city or region. When costs fall as output rises, businesses have an incentive to locate production activities in a few locations.

In the context of the present study, the benefits of reducing import tariff should emerge from two sources. First, it should stimulate export production that uses imported

inputs on which tariff has been reduced. Second, when there is a reduction in protection received by the import competing industries, they face competition with cheaper imports and thus resources are diverted to the export oriented industries.

2.4 Advocacy for Protection and Against Free Trade

The strong theoretical arguments and empirical support for free trade notwithstanding, there is a large volume of literature in support of protection as well. A brief look at some of the major arguments for protection should be worthwhile in order to see how relevant these are in the present day world of globalization. **Welfare arguments** against free trade are that protective measures like tariffs and quota are undertaken primarily to protect the income of particular interest groups. Then there is the **terms of trade argument** which has an implication for the export sector. Since an export subsidy worsens the terms of trade and therefore unambiguously reduces national welfare, the optimal policy in export sectors should be a negative subsidy - i.e., a tax on exports that raises the price of exports to foreigners. Like the optimum tariff, the optimum export tax is always positive, but less than the prohibitive tax that would eliminate exports completely.

The existence of unemployed or under-employed labor, and capital or labor market rigidities that prevent resources from being transferred rapidly to high return sectors, and the possibility of technological spillovers from industries that are new or particularly innovative can all be classified under the general heading of domestic market failures. The domestic market failure argument against free trade is a particular case of a more general concept known in economics as the theory of the second best. This theory states that a hands-off policy is desirable in any one market only if all other markets are working properly. If they are not, a government intervention that appears to distort incentives in one market may actually increase welfare by offsetting the consequences of market failures elsewhere. [2] When economists apply the theory of the second best to trade policy, they argue that imperfections in the internal functioning of an economy may

[2] For example, if the labor market is mal-functioning and fails to deliver full employment, a policy of subsidizing labor-intensive industries, which would be undesirable in a full-employment economy, might turn out to be a good idea. It would be better to correct the labor market by making wages more flexible; but if for some reason this cannot be done, intervening in other markets may be a "second-best" way of alleviating the problem.

justify interfering in its external economic relations. This argument accepts that international trade is not the source of the problem but suggests nonetheless that trade policy can provide at least a partial solution.

The infant industry argument for temporary protection of the manufacturing sector argues that governments should temporarily support new industries, until they have grown strong enough to meet international competition. Tariffs and import quotas are used as temporary measures to get industrialization started. There is evidence of many infant industries with protection that could never grow up nor make an effort to grow up in order to continue exploiting the benefits of protection.

2.4.1 Costs of Protection

As against the arguments for protection, its high cost to the economy is also worth noting. There is a welfare cost to the economy as a whole of producing more of the goods domestically rather than importing them. It is a net cost, because the extra price paid by consumers goes partly to local producers whose production expands to replace imports and partly to the governments as tariff revenue. Welfare cost is, however, less than the consumer cost – particularly for tariffs or quotas.

Direct costs derive from the misallocation of resources in production and the reduction in consumer welfare caused by the misalignment of domestic and international prices. In a static and partial equilibrium framework, these direct costs are generally estimated to be about 1-2% of GDP a year (Thomas et al 1991). The costs are larger, however, when the likely effects of the market structure are also considered. Taking account of economies of scale, Harris (1983) estimated that protection had reduced potential output by about 10% in Canada. Further losses were incurred in the event of the use of voluntary export restraints, which involved an income transfer to foreign exporters (Balassa and Michalopoulos, 1985 p.18).

Indirect costs include the waste of resources in income-generating but unproductive activities associated with protection – such as smuggling, lobbying, evading tariffs, and building plants with excess capacity to get import licenses. These rent-seeking costs are significant in economies with severe restrictions. The indirect costs of foreign

exchange controls and non-tariff barriers tend to be large because they involve allocation made by the authorities on a discretionary basis rather than on efficiency grounds. Import controls and undesirable domestic interventions such as price controls and investment licensing are also mutually supportive. High tariffs – especially when they amount to de facto prohibitions – may also induce smuggling and lobbying activities.

The costs of trade and domestic restrictions become most visible when a country faces severe external shocks. Economies that maintain protectionist restrictions are largely divorced from the international price structure and fail to adjust production in response to changes in relative prices. In many cases protective regimes also isolate the domestic economy from technological progress abroad, which ultimately hurts competitiveness. When the terms of trade shifted against developing countries in the 1980s, many of them were unable to increase export rapidly and had little scope for further efficient import- substitution. Large trade deficits and macroeconomic imbalances were the result (Thomas et al 1991).

Finally, high protection involves the misallocation of new additions to the capital stock. This is because apart from safeguarding existing firms, protection provides an inducement for new investments in sectors where the developed countries have a comparative disadvantage. Correspondingly, less capital is available to high-skill, high-technology industries where these countries possess important advantages. Ultimately then protection unfavorably affects economic growth in the developed countries as well as in their trading partners among developing countries.

2.4.2 Net Costs to Developing Countries of Industrial Countries' Protection

Non-tariff barriers in developed countries have forced developing country exporters to adopt stratagems, which they would not choose in either a free trade environment or one in which trade restrictions are non-discriminatory. Protection frustrates comparative advantage. It supports inefficient industries and slows the development of new ones. It diverts energies to rent seeking.

Many studies attempted to estimate the effects of the costs of protection to developing countries in terms of the increase in export earnings which would arise from reduced tariffs and non-tariff barriers (NTBs). Studies by the World Bank, the IMF, and

the Commonwealth Secretariat show that the result would be substantial export gains – worth several billions of dollars a year.

The restrictions on Korean exports of carbon steel cut sales to the United States by 24%, but fortunately Korea was able to cover up by offsetting gains from higher prices and increased sales to other markets. The quantitative restrictions on Hong Kong's exports led to rent-seeking as much as 1.4% of GDP. There are losses from voluntary export restraints. Voluntary export restrictions (VERs) also divert sales to other exporters. Protection has diverted trade from developing country exporters to OECD suppliers (World Development Report 1987).

Balassa and Michalopoulos (1985) reported that the cost of protection in developing countries can be rather high. Estimates cited by them show this cost to have been equal to 9.5% of GNP in Brazil, 6.2% in Chile, 6.2% in Pakistan, 3.7% in the Philippines, and 2.5% in Mexico during the 1960s.

2.4.2 Net Costs to Industrial Countries of Their Own Protection

The developed industrial countries bear the main costs of their own protection. Estimates of the costs seem small in relation to GNP, but they are probably underestimates. Moreover, the appropriate test is not to compare the costs with GNP. As with any economic policy, protection should be evaluated on the balance of costs and benefits.

It is argued that workers whose jobs are lost as a result of import penetration may be compensated more cheaply by a combination of financial compensation, retraining and new job creation than by protection of the contracting industry. According to the World Development Report 1987, the costs to consumers in the United States for textile and clothing were many billions of dollars. The same is true for standard grades of steel. For cars the estimated costs are over $1 billion for the United States and $265 million for the United Kingdom. For the EC the cost of protecting videocassette recorders is estimated at nearly half a billion dollars.

The cost of preserving jobs in developed countries is that each job often ends up costing consumers more than the workers' salary. For example, each job preserved in the car industry in Britain is estimated to have cost consumers between $19,000 and $48,000

a year. In the United States the cost was between $40,000 and $108,500 a year. Looked at another way, in the United Kingdom the cost to consumers of preserving one worker in car production was equivalent to four workers' earning the average industrial wage in other industries. In the U.S. car industry, the equivalent cost would be the wages of six ordinary industrial workers. VERs in the U.S. steel industry cost consumers $114,000 per protected job each year (World Development Report 1987).

Balassa and Michalopoulos (1985) reported that the welfare cost of voluntary export restraints equalled the higher prices paid by the consumer less increased profits to domestic producers, when higher prices paid on imports benefit the foreign producer. The ratio of the welfare cost to average labor compensation for the clothing industry was 13.5 in the US and 9.2 in the EC; it was 1.3 in the US automobile industry and 1.7 in the US steel industry.

2.5 Rationale for Trade Liberalization

Classical economists were the first proponents of the existence of gains from trade. Then the neo-classical economists expanded the doctrine of free trade further.

The new enthusiasm for freer trade originates from four overlapping sources (Dornbusch 1992): anti-statism, poor economic performance, information, World Bank pressure and emphasis on the evidence of success. Major research projects under the auspices of the NBER and the World Bank have documented the problems of inward-looking trade strategies and discerned the lessons from successful trade strategies ((Balassa (1989), Bhagwati (1978), Bruton (1989), Krueger (1978, 1998), Pack (1988), Michaely et al (1991), Thomas and Nash (1991)). These researches helped diffuse the debate on free trade versus protection to reach a more differentiated judgement involving the importance of neutral trade regime as opposed to regimes that are biased against exports. The favorable performance of countries which adopted outward-oriented polices served to make trade liberalization a central condition for World Bank lending.

Dornbusch (1992) discussed the **gains from liberalization** by highlighting the channels through which trade liberalization could bring benefits. These are:

- Improved resource allocation in line with social marginal costs and benefits

- Access to better technologies, inputs and intermediate goods
- An economy better able to take advantage of economies of scale
- Greater domestic competition
- Availability of favorable growth externalities, like the transfer of know-how
- A shake-up of industry that may create a Schumpeterian environment especially conducive to growth.

The **static gains** from improved resource allocation were shown by the classical trade theory. Under perfect competition a small, price-taking country will gain by eliminating tariffs. While the traditional discussion often focuses on final, homogeneous goods, the case for freer trade is enriched by including the facts that trade liberalization increases the variety of goods and raises productivity by providing less expensive or higher quality intermediate goods. The availability of imported intermediate goods and of technology, whether licensed or embodied in imported capital goods, is an important additional source of gain in shedding a restrictive trade system. This explains why import liberalization is emphasized. If appropriate intermediate goods can be imported, a country may easily become an exporter of labor intensive tasks such as assembly services. Without such import, the value-added opportunity is lost, along with the opportunity to graduate over time from assembly to tasks with higher value-added. This can be justified in the case of Bangladesh.

It is a well-known proposition that reducing certain tariffs, as opposed to eliminating all of them, is a more delicate issue. A partial tariff reduction is a second-best exercise, so welfare need not necessarily improve. However, it is generally true that an equi-proportionate cut in tariff rates can raise welfare.

Free or rather freer trade leads to a more rational market structure. Gains from trade liberalization also result from economies of scale that arise in a wider market. Moreover, markets in protected economies are narrow and lack of competitors from the rest of the world foster oligopoly and inefficiency.

Much is gained by the transfer of knowledge among human beings. Haberler (1988) once again reaffirmed that what J. S. Mill (1848) said more than one and a half century ago is still substantially true. Mill had stated that the communication of human beings in

contact with persons dissimilar to themselves, and with modes of thought and action unlike those with which they are familiar, has always been one of the primary sources of progress.

A similar argument underlies the discussion of the convergence of growth rates among countries in the world economy, as in Baumol et al (1989) and the literature reviewed in Edwards (1991). However, the force of the Mill-Haberler argument is lessened once protectionism is taken into account. Multinationals can bring direct foreign investment, technology and knowledge, but under the cover of tariffs and quotas they may not do their best.

Beyond the general benefit of exposure to an advanced, competitive world market, the act of trade liberalization also carries the potential of **dynamic benefits.** In their systematic study of industrialization and development, Chenery et al (1986) focused on the sources of growth in total factor productivity. Their work suggests that periods of trade liberalization also tend to be periods where total factor productivity growth is unusually high. Harrison (1991) and Salvatore and Hatcher (1991) produced supportive evidence to this. The studies carried out by different analysts and the World Bank economists emphasize the positive association between trade liberalization and the residual in GDP growth after accounting for the growth in inputs for a large group of countries.

Dornbusch (1992) noted that it would be helpful to offer summary evidence on the proposition that outward orientation is beneficial but even though the case for productivity gains is highly plausible, it is hard to document in a clear-cut way. The most comprehensive evidence comes from case studies. The other important source of quasi-evidence is the more novel work of modeling imperfectly competitive economies in computable general equilibrium models (for example, Norman, 1990). These models highlight that in specific scale economies, the gains from liberalized trade can be substantial. In fact, in some examples the gains are far larger than the static resource reallocation effects and come to more than 10% of GNP. Edwards (1991) investigated the link to growth performance of a broad range of indicators of openness and concluded on persuasive evidence of the beneficial effects of an outward trade orientation.

The rationale as cited by Nash, Matin and Thomas (1990) are the following:

1. The first is to help improve economic growth and employment generation by improving resource allocation and economy-wide efficiency.
2. The other is to help improve the balance of payments by strengthening the competitiveness of the external sector and expanding exports and efficient import substitutes.

2.6 International Experience on Trade Liberalization

The concept and the theoretical basis for trade liberalization are discussed in the preceding sections. This section briefly reviews the international experience on trade liberalization in order to give a better understanding of the workings of these theories in practice and the consequence of the implementation of trade liberalization efforts.

There was a period of progressive liberalization during the period 1947 to 1974. From the end of World War II until 1974, protectionism seemed to be in decline. Successive rounds of negotiations in the GATT had cut tariffs on trade in manufactures - from an average level of 40% in 1947 to between 6-8% for most of the industrial countries- even before the Tokyo Round (1974-79) had taken place. A new wave of protectionism started since the mid-1970s. Currency crises, oil crises, debt crises, world recession, and high unemployment produced an atmosphere in which demands for protection increased dramatically. The success of Japanese exports, and then of exports from the newly industrializing economies (NIEs), produced pressure for changes in the older industrial nations. Such changes are opposed when unemployment is high. This opposition was the main cause of today's protectionism in the industrial countries. Trade in textiles was the first victim, followed closely by trade in footwear, leather goods, steel, shipbuilding, cars, and consumer electronics.

Then again the decade of 1980s was the phase when developing countries were obligated to restructure through trade reform supported by the structural adjustment lending programs of the World Bank and the IMF. The signing of the GATT Uruguay Round Accord in April 1994 and the establishment of WTO in January 1995 changed the global trade environment by opening new opportunities for least developed countries such as Bangladesh. But the late 1990s experienced a stalling in trade liberalization and

in the twenty-first century there is again a growing skepticism on the effect of opening up, especially the capital market after the Asian Currency Crisis. So, on the one hand, there is the surge of globalization as is emphasized by the WTO, but on the other hand, the fear of losing jobs and elimination of incompetent industries are also raising concerns and vocal objections. Thus the importance of a timely, well-sequenced liberalization program has emerged as the most vital issue of the current world trade regimes. In such a scenario, the likely impact of trade liberalization in an export oriented country like Bangladesh should be carefully evaluated.

2.7 The Drive of Globalization in the Twenty-First Century

Foreign trade has grown more quickly than the world economy in recent years, a trend that is likely to continue (World Development Report 1999/2000). Trade in goods and services has grown twice as fast as global GDP in the 1990s, and the share attributable to developing countries has climbed from 23% to 29%. International trade flows are penetrating deeper into the workings for developing economies, affecting the overall economic structure in general and income distribution, employment practices and productivity growth in particular. For developing countries, trade is the primary vehicle for realizing the benefits of globalization.

The compositional shifts in trade have created a new pattern in the international exchange of goods, services and ideas. Trade in components is one part of that new pattern. While precise numbers are difficult to come by, in the early 1990s one–third of all manufactures trade (approximately $800 billion) involved parts and components. This type of trade has generated an ever-spreading way of global production networks that connect subsidiaries within trans-national firms to unrelated designers, producers, and distributors of components. These networks offer their constituent firms access to new markets and commercial relationships and facilitate technology transfer.

The tremendous growth of trade in services and more recently of electronic commerce is also a part of the new trade pattern. Exports of commercial services have been growing on every continent, particularly Asia, throughout the1990s.

Underpinning this surge in trade flows is the growing commitment developing economies have shown to liberalizing their trade regimes. Their resolution has taken

many forms: membership in the WTO (110 of 152 developing economies were members in 1999), participation in regional trade agreements, and unilateral reforms. But this push for trade reform is meeting with increased resistance, especially in industrial economies, where adjustment to the competitive pressure of the international market place can be a painful process. Successful trade reform requires reallocating resources among economic groups and that adjustment can be costly for some. Increasingly, governments are recognizing that successful trade reform requires flexible labor market institutions. Import-competing firms are also resisting further trade reform by using antidumping laws to reverse the gains in market access previous reforms have secured. At least 29 countries were applying such laws by 1997, and many more had them on their books (World Development Report 1999/2000).

Although the 1990s saw impressive progress in liberalizing trade regimes, sustaining that momentum in the future may be difficult. Recognizing that trade reform creates both winners and losers, the challenge will be to persuade the winners to forego some of their gains in order to compensate influential losers who could otherwise stymie the process of reform.

Public policies must take into account the plight of workers displaced by the forces of trade. Augmenting trade liberalization with labor market policies that ease worker's adjustment to the effects of global trade will reduce pressure to close domestic markets to foreign goods. The resistance shown against the WTO Meeting in Seattle in December 2000 bears evidence of such labor unrest opposing liberalization.

Antidumping laws are allowed under the WTO to ensure that products are not sold below what is considered a "fair" price on domestic market. But such rules can easily be turned into barriers to imports. One solution is to treat the pricing decisions of importers and domestic firms according to the same criteria. Under this approach only antitrust issues such as predation are remedied directly.

2.8 Sequencing, Timing and Pace of Trade Reforms

Orthodox theory suggests that the sequencing of liberalization should proceed by first controlling the fiscal deficit, then freeing the domestic financial markets, then

opening the current account, and lastly and slowly the capital account of the balance of payments.

There has been greater disagreement in orthodoxy over whether the capital account or the current account should be opened first, but the consensus appears to be in favor of the latter (Edwards, 1984, Dornbusch, 1983, Branson, 1983, Frenkel 1982, 1983). The opposite sequence was suggested by Lal (1982), Sell (1988). The generally accepted consensus in the sequencing literature is that the capital account should only be opened after domestic financial liberalization, which should occur after the fiscal deficit has been almost eliminated (MacKinnon, 1982, Edwards, 1984, 1987). The reason for first tackling government deficit, then domestic financial markets and then opening up capital account is as follows. If the fiscal deficit is to be financed by an inflation tax, this means that deposit interest rates must be kept low and reserve ratios high, ensuring minimal erosion of the stock of high-powered money, the base on which the inflation tax is collected (MacKinnon, 1982). If financial liberalization occurs, then it will erode the base forcing the state to accelerate inflation to collect the same real revenue, raising the real exchange rate, with obvious consequence for the outward orientation of a liberalization program.

Simon Chapple (1990) considered a situation of financing deficits by private-sector borrowing, which was not considered by any of the earlier authors. Domestic interest rates will tend to rise as the government competes for funds causing spending to contract in non-tradables, and any fall in their relative price will improve the real exchange rate, reinforcing liberalization. Thus if a fiscal deficit is run, bond finance should be preferred. However, in the event of deficit financing by bond sales with a freed capital account in a world of imperfect capital mobility, money will flow in from abroad as domestic interest rates rise in relation to world rates. This will either expand the money base under a fixed exchange rate or cause a nominal appreciation under a float. In both cases the real exchange rate will appreciate, harming the cause of liberalization.

Simon Chapple (1990) added a new dimension to the existing theories on sequencing economic liberalization which is that the capital account should not be liberalized before the current account and that it should be done slowly, to avoid counter-productive real exchange rate change. He has pointed out that first deficit control then

financial liberalization sequence, usually recommended before current account liberalization, can itself result in unwanted real exchange rate appreciation through various channels harming the external sector. The orthodox theories are based on the idea that the end result of liberalization and the removal of all impediments to markets are a good thing: all that is in question is the sequence.

A weakness of many sequencing theories is their lack of attention to wage policy, which was considered in a growth context by Simon. Such attention is essential in order to ensure a real exchange rate devaluation to shift resources from non-tradables to tradables.

In conclusion, the sequence of liberalization recommended by orthodox theory is heavily contingent on a particular form of economic model; it can offer no magic formulae, no strong conclusions but it does point out some pitfall to be avoided when underrating economic liberalization.

Macroeconomic instability makes trade (and other) reforms more difficult to implement. There are views that fiscal deficits and inflation rates should be reduced before introducing trade policy reforms. Substituting tariffs for quantitative restrictions was seen to be beneficial from the fiscal viewpoint. Furthermore, where the fiscal deficit has been sufficiently reduced and the real exchange rate depreciated, the current account deficit has also declined despite import liberalization. Import liberalization can reduce inflation and contribute to stabilization by providing the much needed competition in the domestic markets. Devaluation may raise the domestic prices of tradables and fuel inflation but an adequate reduction in the fiscal deficit will lower inflation under devaluation.

It has been evidenced that trade policy reform and stabilization, when carried out in parallel, have in most instances been successful. But if inflation is very high and variable, lags in the movement of individual prices mean that the resulting relative prices are a poor guide for economic decision. In addition, the real exchange rate is likely to appreciate and thus conflict with trade reform goals if the authorities use the exchange rate (rather than adequate macroeconomic policies) as a "brake on inflation". Thus,

aspects of trade reform whose effectiveness depends on relative price changes are unlikely to succeed until very high rates of inflation are brought down.

There is a similar discussion on this aspect by Rodrik (1992). Trade reform is expected to work by reducing the distortions in the structure of relative prices and by directing resources to sectors that can make the best use of them, and he discussed about how macroeconomic instability hinders achieving this objective. In explaining why trade reforms are still undertaken in periods of macro instability, Dani Rodrik (1992) believes that it may be a delayed effect of the studies done by Little, Scitovsky and Scott (1970), Bhagwati (1978) and Krueger (1978). But then he gives the following reasons for it.

First, a time of crisis occasionally enables radical reforms that would have been unthinkable in calmer times. He cites examples of Bolivia, Mexico, Poland and Peru where a macroeconomic crisis of unprecedented proportion has led the leadership to embrace a wide range of reforms, of which trade liberalization was one component.

The second reason was the role of foreign creditors, the IMF, and the World Bank in particular. Cash-starved governments frequently adopted trade policy recommendations of the World Bank with little conviction of their ultimate benefits. This accounts for the high incidence of wobbling and reversal on the trade front, especially in Africa. It also indicates that it is better not be too optimistic on the sustainability of reform in many of these countries.

In line with the neo-classical economists, Rodrik (1992) stressed that liberal trade regime is good for economic development. But he cautioned against a wobbly trade reform, which can be worse than none at all, and governments can complicate their macroeconomic stabilization efforts by placing too much faith on the magic of liberalization.

The Pace of Reform: Trade liberalization as a reform agenda has been widely accepted by economists and politicians. But it is the pace of reform that initiates controversy between policy makers, politicians and the business community. When import restrictions are brought down naturally, it is a cost advantage for manufacturers who import their raw materials and capital goods at a competitive price, it discourages the local competing products. So some lose at the cost of greater benefit to many. Economists and policy

makers of Bangladesh emphasize more and more on giving enough time for the inefficient local firms to take a timely exit out of the industry. On the other hand, World Bank and IMF stress on a quick pace of liberalization arguing that the inefficient firms should be eliminated rather than protected at the cost of a freer, more efficient trading environment. The sooner the benefits of reform begin, the better the prospects for sustainability of successful reforms.

Nash, Matin and Thomas (1990) argue that when implementation is spread over a few years to give affected activities time to adjust, it is desirable to announce the trade reforms in advance, as Chile did with its tariff reforms. However, Korea carried out its comprehensive reforms over 20 years, with substantial import liberalization since 1980. While the decision on the pace of import reform depends on a country's circumstances, experience suggests that substantial and comprehensive liberalization can be achieved in less than five to seven years from the start of the adjustment program - including major and decisive action in the first year.

Developing countries are indeed exporting more to their industrial counterparts. As early as 1990, many industrial countries had seen substantial increases in the ratio of their merchandise imports to merchandise exports, leading to even greater competition for sales in their markets. The composition of developing countries' exports has changed, too, creating increased competition in manufactured products especially in medium- and high–technology goods. For example, the share of high-technology products exported by East Asian economies increased substantially between 1985 and 1996. Meanwhile, Latin American countries and India have shifted their exports from resource-based manufactures to low and medium technology exports. The quality of exports from the Czech Republic, Hungary, Poland, and the former Yugoslavia in engineering, clothing, textiles, and footwear products has also improved in the 1990s.

These competitive pressures enhance overall national welfare, but they are not well received by import-competing firms. These firms are already leading a reaction against trade liberalization in both developing and industrial countries. In addition to lobbying policymakers, import-competing firms use antidumping laws, which are permitted by WTO rules to allege unfair trade practices by foreign competitors. Until the early 1990s the main users of these laws were Australia, Canada, the European

Community, New Zealand, and the United States. However, these countries have been joined by a number of new users, primarily developing economies such as Argentina, Brazil, India, Korea, Mexico, and South Africa. In the late 1980s developing countries initiated less than 20% of all antidumping actions. By the late 1990s they accounted for around 50% (The World Development Report 1999/2000). Developing countries have also become the targets of antidumping actions at close to the rate of industrial countries. Antidumping actions are becoming a widespread phenomenon, hindering market access and the gains from trade liberalization.

In concluding this chapter it needs to be said that trade liberalization is proceeding in full swing in the current surge of globalization. It has gains both for the developing and developed countries, which have been recognized all over the world. Of course, there is evidence of costs associated with trade liberalization but this should not stop the liberalization process itself, the potential of which to promote growth is immense. The concern should be on how best to cope with this liberalization process, how well to adjust by compensating the business firms, those that bear the costs. It is the sequence and pace of liberalization that should be carefully designed but liberalization itself should not be stunted.

Chapter Three

REVIEW OF AVAILABLE LITERATURE ON TRADE LIBERALIZATION

3.1 Studies on Trade Liberalization

As mentioned in the introductory chapter, the impact of trade liberalization on exports has been extensively discussed by economists, researchers and policy makers. Knowledge is progressive and there is always something to be learnt from the cumulative knowledge of other research findings. That is why some of the studies, which bear important implications for the topic of the present research, are briefly discussed in this chapter. Most of these studies found trade liberalization as beneficial while others have produced evidence of its adverse effects on the economy as well.

Balassa and Michalopoulos (1985) demonstrates that multilateral trade liberalization is in the mutual interest of both developed and developing countries. A reduction in their own protection levels lessens the economic cost involved and contributes to economic growth in the two groups of countries while a lowering of protection by their trading partners provides them with increased market possibilities. The paper proposes that trade liberalization be undertaken in the framework of a new round of multilateral negotiations, with the effective participation of developing countries at higher levels of industrialization. It also recommends liberalization of trade in agriculture, manufacturing, and services as well as for the establishment of an appropriate safeguard mechanism, dispute settlement procedures, and surveillance by the GATT that existed at that time. Finally, the study recommends that efforts for trade liberalization through multilateral trade negotiations should not inhibit unilateral liberalization by developing or developed countries in pursuit of much needed structural reform. In this connection the World Bank and the IMF would need to continue, and expand, their lending in support of trade policy reforms in the developing countries.

Goncalves and Richtering (1986) in their UNCTAD Discussion Paper cautioned that trade liberalization was an orthodox recommendation for developing countries with

the aim of expanding GDP and exports and diversifying their production and export structure. According to them although foreign trade in general, and exports in particular, are elements in the growth process, their relations and effects should be judged on a case-by-case basis.

It is worthwhile to mention here that in their paper the authors included Bangladesh in the low-income group. The result of equations disaggregated by income level showed that the correlation between exports and output growth was much higher for higher-income developing countries. This means that with rising income levels, the capacity of the export sector to affect growth of the whole economy increases. A look at the average export/GDP ratio makes it obvious that most of the export–to-GDP link was due to a higher share of exports in total GDP. The share of exports in GDP was 31% in the group of high-income developing countries, whereas it was 15% and 21% for the groups of low income and middle-income developing countries, respectively. The paper, however, warns that in so far as the effects of export performance on economic development depend on the structure of the economy and on its specific relations with the international economic system, it is difficult to identify the direction of causation between exports and output growth. The paper cautioned against broad and strong generalizations regarding adjustment and development strategies like trade liberalization in supporting such causation.

Corden (1987) analyzes various protectionist arguments so that either they can be effectively refuted or any kernel of truth in them can be better understood and taken into account in policy proposals. Even though the arguments for protection appear to overwhelm the simple but powerful case for free trade, Corden suggests that protection, whether in developed or developing countries, reduces the gains from trade and real incomes for both. And developing countries are certainly damaged by protection in industrial countries, both in agriculture and in manufacturing. In the case of clothing and textiles in particular, such protection actually discriminates against the developing countries.

Corden observes that import restrictions can only be applied for short term and it may be a matter of balancing possible short-term gains against long-term losses,

essentially the losses from providing inadequate incentives for exports, quite apart from all the other costs of distorting and licensing systems. He also notes that capital movements could present problems for large-scale trade liberalization through their effects on the real exchange rate.

Corden concludes that both from the point of view of national interest of countries imposing protection and from the point of view of their trading partners and the world trading system, increases in protection are rarely justified and hence protection is undesirable. This conclusion also applies to existing protections and hence justifies moves to trade liberalization, preferably multilateral but also unilateral.

The study by **Thomas, Nash** and **Matin** (1990) evaluates developing country experience with trade policy reforms. It considers through specific issues, namely (i) the potential conflicts between trade policy reforms and macroeconomic stabilization efforts, (ii) the supply response to trade policy reforms, in the context of export prospects and domestic and external constraints, and (iii) the sequencing, timing and duration of import reforms, their relation to internal reforms, and the associated transitional costs.

According to their findings, properly implemented trade policy reforms have contributed to improved economic performance in developing countries. Reforms as such were deemed essential for linking developing economies to technological advances to compete in an increasingly integrated world. But the design and implementation of trade reform policies should consider interaction with reforms in institutions and with infrastructure to strengthen the effectiveness of trade reforms. The study shows that the supply response was stronger in countries where institutions and infrastructure supported the reforms and resource reallocation, and that the response has also depended on how well the interconnection with other macroeconomic and sectoral policies were addressed.

Their findings show positive association between exports (without implying causality) and economic growth. However, tracing the influence of specific policies behind superior export and GDP growth is complex, because of the simultaneous presence of other contributing factors. Policy reforms can also take time to produce the expected improvements in resource allocation, efficiency, and growth. Bearing these caveats in mind, the adjustment episodes of the 1980s and longer-term experience

suggest that trade policy and structural reforms have contributed to the growth in output and exports. Real exchange rate depreciation and commercial policy reform are linked to such improved performance.

Agosin (1991) argues that even though both export orientation and import substitution strategies are conducive to growth, it is the export-led growth strategy that can take advantage of international markets and reap the benefits of economies of scale. According to him, import liberalization is essential for export growth only if it is more profitable than import substitution. This view is based on the assumption of costless resource transfer between industries, and the response of producers to invest in export sectors when incentives are reduced in import substituting sectors even though incentives remain unaltered in export sectors. The normal sequence of import liberalization is to convert non-trade barriers to tariff equivalents, then decrease the highest tariff, and finally reduce all existing tariffs.

Agosin, however, explains that import liberalization is neither necessary nor a sufficient condition for export growth. Incomplete markets and structural rigidities of developing countries may not permit export growth as a result of removal of protection. In fact, removal of protection may lead to idling of resources without any compensating policies. Structural adjustment requires investment but that investment may not occur if the economic signals are not there. Decrease of profit in import substitution industries without an indication of increased profit in export promotion industries may not encourage investment in the export sector. This is supported by both quantitative and qualitative evidence reported by Agosin. His findings indicate that real exchange rate stability and the avoidance of exchange rate overvaluation have been much more important in explaining long-term export success than import liberalization. In fact, in Agosin' study, which also includes Bangladesh, qualitative and quantitative evidence shows no clear relationship between manufactured export growth rate and import liberalization and removal of non-tariff barriers.

Agosin grouped countries on the basis of some statistical charts and showed that import liberalization does not necessarily lead to increased growth rate of export as it depends on many other complex factors like real exchange rate policies, structure of the

economy, timing and sequencing of import liberalization, etc. He also cited the case of Korea and Taiwan and argued on the basis of empirical evidence that exports of these countries increased without import liberalization. Import liberalization was carried out much later than export orientation.

The same reasoning as in Agosin's is found in **Helleiner's** (1992) study. Export orientation as stressed for low-income countries is not the only important factor as there are lot more issues involved like macro economic variables and timing and sequencing of liberalization being crucial. The advice to follow Korean export orientation is not applicable to all without discretion. Korea had import substitution strategy with heavy protection before export promoting measures were undertaken and its exchange rate was managed with interventions. Helleiner concludes that technology and technical change can get the economy going in agro-based low-income countries (with major share of labor force employed in agriculture). Export policy or trade policy is only a part of the development process (of course and important one) but openness as suggested by many is not the panacea. He also stressed that trade policy reform involves much more than reducing the anti-export bias.

Meller (1992) reviews the Chilean trade liberalization experience and export expansion process for the period 1974-90. He concludes that the credibility of trade reforms is related more to the overall macroeconomic and policy reform environment than to the specificity of the stages and content of the trade reform itself.

Meller points out that despite the beneficial effects of trade liberalization, one must be aware of the problems associated with such reforms during the implementation phase, which he showed from the Chilean experience. He recognizes the positive effects of trade liberalization like resource reallocation according to comparative advantage, increase in consumer welfare through access to lower priced quality products, efficiency increase of domestic producers, and introduction of latest technology to the domestic economy. The associated costs of trade liberalization were a drop in fiscal revenue close to 1% of GDP for tariff reduction and a reduction of industrial employment close to 10%. He also emphasizes the importance of sustaining the right level of real exchange rate in

the face of inflationary pressure. There is a crucial dilemma between the short run objective of reducing inflation and the long run objective of export expansion with the right exchange rate.

According to **Dani Rodrik** (1992), trade reform cannot be a cure-all for economic problems. He notes that just as protection policies of developing countries in the 1950s and 1960s could not solve their development problems, free trade, by itself, may not be the answer to the economic crisis of the 1980s. In Rodrik's view, trade policy plays a rather asymmetric role in development: an abysmal trade regime can perhaps drive a country into economic ruin; but good trade policy cannot make a poor country rich. He warns that trade policy, at its best, may provide an enabling environment for development but it does not guarantee that entrepreneurs will take advantage of this environment. As the recent literature on trade and growth underscores, trade policy certainly does not guarantee adequate levels of economic growth in the longer run.

Shafaeddin (1994) observes that import liberalization is only one approach affecting export and growth. In terms of import liberalization, the achievement has been impressive in many LDCs, particularly in Africa. He points out that the superb performance of some of the Asian LDCs was mainly because of the economic dynamism of the Asian region. He shows that there is lack of clear association between trade liberalization and devaluation, on the one hand, and the growth and diversification of output and exports, on the other. Shafaeddin thought of a number of "other factors", including exogenous ones, which were of greater importance in the LDCs. First of all, the relationship between REER (real effective exchange rate) and exports may have been affected by movements in the terms of trade rather than by shifts in exports. Secondly, the positive association between liberalization and economic performance shown in some other studies does not necessarily imply a causative relationship owing to two methodological deficiencies: a) the group averages conceal a wide variety of performance, b) the measurement of liberalization used in his study reflects to a large extent actual import performance rather than trade liberalization. Finally, trade and exchange rate policies are not the only factors affecting economic performance.

Shafaeddin further notes that a variety of socio-economic, structural and external factors could explain why liberalization may not work. The design of policy reforms and structural adjustment programs in general were also important factors. According to him the orthodox recommendations on trade liberalization had neglected the importance of long-run development of supply capacity and the limitation of market forces in building up such capacity. Further, the orthodox recommendations over-emphasized the role of currency devaluation, overlooking the adverse effects on productivity, and the important role of imports in improving capacity utilization and increasing exports.

Shafaeddin's study includes Bangladesh in the group of high performers, where growth in the 1980s was not only above the average but was also faster than in the 1970s, despite the slowdown in world economic activity. "Among countries in this group, neither Bangladesh nor Nepal has undertaken substantial trade liberalization in its usual sense, and if their high performance can be attributed at all to trade liberalization, it is due to its "selective" nature." By this he meant that "high tariff rates and some NTMs continue to apply to light consumer goods, but very low ones to imported intermediate inputs and machinery necessary for output and export expansion". From the analysis of other groups in his study Shafaeddin showed that there was no clear relationship between trade liberalization and exchange rate movements, on the one hand, and GDP growth, on the other.

He noted that while some diversification into exports of manufactures has taken place, it has not been accompanied by capacity-building in supply side in most cases. Real MVA (manufacturing value added) growth was negative or negligible, except in Bangladesh and a few other countries, and in most countries the volume of investment also declined. Clothing has been responsible for the bulk of export growth in Bangladesh and some other countries. Among these the most successful case was that of Bangladesh where the value added involved in exports of clothing is very small; imported inputs account for about three-quarters of the value of exports. Exports of garments from Bangladesh have been facilitated by foreign direct investment in the garment industry, attracted mainly by the country's high export quota under MFA. Nevertheless, because of the low quality of domestic textiles there have been no important backward linkages from the garment industry.

In concluding, Shafaeddin recommends the following:

"As a tool of development, trade policy is not necessarily synonymous with trade liberalization, and success in "liberalization" *per se* is not a guarantee of "success" in development. Trade policy should serve to achieve the long-run objectives of development. It may comprise the liberalization of trade in some goods, and it may at the same time strengthen, or loosen, the degree of protectionism accorded to others; it may include tariffs and/or quantitative restrictions for particular goods, or any other measures suitable for achieving the objectives of industrial and development strategies." (p. 19).

Trade policy also needs to be dynamic taking into account changes in the domestic and external situation. Finally, the success of alternative trade policy reforms requires external support in terms of finance, technical assistance and, most important, market access.

The study by **Grossman and Helpman** (1991) shows that in a theoretical framework the relationship between opening up to trade and long run growth is in fact ambiguous. Whether or not a country gains from trade depends on a number of factors, including its comparative advantage vis-a-vis the rest of the world.

Coe and Helpman (1995) discussed how recent models of economic growth showed a positive relationship between openness to trade and total factor productivity growth (TFP). Drawing on Grossman and Helpman (1991), they argue that either an expanding number of inputs or higher input quality can explain differences in TFP. To the extent that countries, which are open to trade can either learn more quickly how to produce these new inputs or can import them, openness will be positively related to TFP. Grossman and Helpman (1991), however, show that in a theoretical framework, the relationship between opening up to trade and long run growth is in fact ambiguous. Whether or not a country gains from trade depends on a number of factors, including its comparative advantage vis-à-vis the rest of the world.

Harrison and Hanson (1999) in their attempt to look into the puzzles of who gains from trade, have shown that establishing a robust link between more open trade policies and long run growth still remains elusive. They examined a popular measure of openness introduced by **Sachs and Warner** (1995) who showed that there is "strong

evidence that protectionist trade policies reduce overall growth..." (p.51). [3] After re-examination of this measure, **Harrison and Hanson** showed that it had failed to confirm the strong link between openness and GDP growth. Then they corrected some limitations of data and found that openness to trade and exchange rate polices have a significant impact on long run growth.

Harrison and Hanson carried out some tests on these conditions and cautioned that the openness measure is a composite index of trade, exchange rate, and other policies, all of which could have very different effects on growth. According to them, quotas and tariffs provide a good measure of commercial policy while the black market premium measures the importance of exchange rate distortions. They found that both tariffs and quotas were insignificant. A joint F-test of their significance indicated that the two variables were jointly statistically insignificant. Tariffs and quotas were only jointly significant with the black market premium when the latter was entered as a dummy. In this case, the variables were jointly significant only because the black market dummy was significant on its own.

The above results perplexed **Harrison and Hanson** enough as to carry out the tests further to see whether any of the measures of trade policy is significantly associated with growth. **Sala-i-Martin** (1997), in his tests of robustness, also failed to find any significant correlation between measures of trade policy and long run growth – with the exception of the composite openness measure. According to Harrison and Hanson one alternative is to use the so-called 'effective' tariffs, defined as tariff revenue on imports (import volumes). They noted that this measure of trade policy is not ideal but an objective measure, which is available across countries and over time anyhow. They replaced end-of-period tariffs and quotas employed by Sachs and Warner by effective tariffs averaged over the period and replaced their measures of the black market premium with a period average collected from Picks's Currency Yearbook. Using a specification similar to Sachs and Warner, they then found strong and significant independent effects

[3] Sachs and Warner have defined an economy as closed if it satisfies at least one of the following conditions: i) Tariffs in the mid-1970s were 40% or more. ii) Quotas in the mid-1980s were 40% or more. iii) The black market premium (computed separately for the 1970s and 1980s) was 20% or higher in either the 1970s or 1980s. iv) The country had a state monopoly on major exports. v) The country had a socialist economic system. Sachs and Warner defined an economy to be open if none of the above five conditions is satisfied. They found that their composite openness measure is significantly related to long run growth.

of openness to trade. Both openness to trade and exchange rate policies have a significant impact on long run growth. The coefficient of tariffs, which is –0.053 or –0.059, suggests that an increase in tariffs (which vary from 0 to over 100) of 10 percentage points would lead to a reduction in average growth in real GDP per capita of 0.5% to 0.6%. But adding three dummies for East Asian tigers, Latin America and India, the significance on the openness variable again disappeared. Thus they stressed the use of panel data instead of cross-section and time series data.

Although most of the early studies of the relationship between trade and growth find a consistently positive relationship, many of the more recent studies do not. This includes both cross-country comparisons of trade policies and GDP growth, as well as individual country case studies that examine intersectional productivity growth and the nature of international competition. Harrison and Hanson suggested using panel data for a fruitful piece of research, which combine cross-country and time series data.

Goncalves (1994) analyzes export expansion, import liberalization and economic growth in Latin America in the context of foreign trade multipliers. A major conclusion of this paper is to avoid broad generalizations and oversimplification concerning the relationship between export expansion and output growth in Latin America. He stressed that this relationship is determined by the interaction of complex sets of structural elements and policy measures. His paper supports the argument in favor of both export expansion and import controls. Goncalves claims his conclusion to be a critique of wisdom, which advocates a generalized strategy for the region, based on export–led growth and adjustment in the context of stabilization programs associated with trade liberalization measures.

Dollar (1999) in his extensive study has cautioned in the interpretations of the existing cross-national evidence on the relationship between trade policy and economic growth. "What we believe we have shown is that the challenge of identifying the connection between trade policy and economic growth is one that still remains before us". Unresolved questions like 'Are tariff and non-tariff barriers to imports of capital goods more harmful to growth than other types of trade restriction? Does the provision of

duty-free access to imported inputs for exporters stimulate growth? Are export processing zones good for growth? Does the variation in tariff rate (or NTB) across sectors matter?' still perplex researchers (p. 39).

In light of the foregoing reviews of the empirical literature, the present study attempts to find out whether import liberalization along with exchange rate liberalization in Bangladesh over the years has had any significant impact on the country's exports.

3.2 Review of Relevant Studies on Bangladesh

This section reviews some of the recent studies specifically carried out in the context of Bangladesh. The studies relate to different aspects of trade liberalization, which are relevant to the purpose of the present study.

Rab (1988) highlighted the need for trade liberalization to promote exports in Bangladesh by pointing out that the rate of effective assistance to export in general provided by the export incentives was very low. The order of magnitude of effective assistance to export industries in general, barring aside a few of them, as depicted by Rab, presented a general picture of rather too light an assistance being received by export industries from the then existing policies.

Based on the trade regime of the eighties, the study showed that the average level of effective assistance was somewhere around 15% while the lowest appeared to be near zero or even negative. The export promotion measures provided an overall effective assistance of some 40% to ready-made garments, about 28% to hosiery products, and some 17% to specialized textiles. Ready made garments received a fairly high effective assistance due to a low value-added to output ratio. The effective assistance to other products in general was considerably lower.

Roy (1991) attempted to analyze the factors responsible for export performance involving both supply inelasticity hypothesis and demand deficiency approach of trade.

Lewis (1980) and **Riedel** (1988) did this sort of empirical work earlier. World demand and relative price affect export performance from the demand side while the variables like effective rate of assistance (ERA), exchange rate, and non-price factors like the process of learning, government policies, and export diversification are considered to be supply side influences on export growth.

The paper demonstrates that world demand is an important determinant of export performance. Although demand from both developed and developing market economies has positive impact on Bangladesh exports, the demand from developed market economy for Bangladesh products seems to be more dominant.

The competitiveness of Bangladesh exports in the world market may be influenced by exchange rate policy, effects of devaluation and export incentives. The coefficients of exchange rate, trade-weighted exchange rate and effective rate of assistance are found to be significantly positive in Roy's study. From the supply side, the exporters respond more readily to changes in nominal exchange rates and export incentives. The positive and significant coefficient of dummy variable in the exchange rate indicates that devaluation has some positive effect on the export performance of Bangladesh. There is a strong indication of positive effect of non-price factors on export growth. Finally, there is an indication that a liberalization of trade and industrial policies (both price and non-price factors including non-commercial policies) have important consequences for the composition of exports as well as their growth and stability. Roy suggested that a shift towards products in which Bangladesh has comparative advantage would presumably bring many gains from trade. Increased international specialization would undoubtedly allow for more rapid and stable export growth. This view also found support in **Rahman** (1990) and **Stern** et al (1988).

Khan (1994) examined the effect of import liberalization in Bangladesh using a modestly disaggregated numerical general equilibrium model. In line with the hypothesis of the present study, Khan argued that as intermediate goods account for a major share of imports, the removal of import restriction has an overwhelming effect on the supply side of the economy. She showed that as a result of import liberalization domestic manufacturing sector, particularly the manufacture of exportables expands, and there is

an increase in consumer welfare, too, which is associated with cheaper imported consumer items.

Khan's paper demonstrates that removal of quantitative restrictions and reduction of tariff rates will make producer goods available at world prices by eliminating a major impediment to the expansion of manufactured exports and modern industry.

Khan demonstrated the effect of liberalization by three cases, the abolition of import tariffs and quotas, imposition of revenue neutral expenditure tax, and the effects of export promotion policies. The first and the third cases are important for the current study. She found that since intermediate inputs account for 53% of all imports, tariff abolition lowers production cost through the reduced cost of imported inputs, expands production, and reduces output prices in these sectors. Resources are attracted to manufacturing, and domestic sales of import-competing manufactured goods produced domestically also increase with tariff abolition. Even though this may seem paradoxical at first glance in the face of a tariff reduction on manufactures, Khan suggests that the essential role of imported intermediate goods in producing domestic manufactures explains this paradox. Also, quotas placed by countries of destination can hamper export growth and, for a small country, negotiating to expand such quotas can be very costly.

Khan's study reveals that domestic sales of manufactured products actually fall if tariffs are cut in the case of repressed demand for imports, where the flood of imports during liberalization gives a severe blow to the import substitution sector. If there is a fixed trade deficit, this is further exacerbated as the rise in exports pulls resources away from the domestic production of manufactured importables.

Khan thus concludes that a liberal import policy would encourage import intensive manufacturing which is also welfare raising for the economy. The unambiguous policy implication is that it is desirable to liberalize import of intermediate goods, although its success is contingent on the ability to increase exports sufficiently.

Khondoker (1996) examined the consequences of tariff liberalization within the paradigm of both 'traditional trade theory', based on assumptions of perfect competition and constant returns to scale, and 'new trade theory' involving imperfect competition and increasing returns to scale. It was observed that the results of tariff liberalization were

sensitive to the way the model was specified. The income distribution effects of tariff were also examined in the study.

It was seen that in the competitive and constant returns to scale model variant, resources moved from the heavily protected sector (manufacturing sector) to less protected sectors (subsistence and commercial agriculture, forestry and trade and transport sector) as a result of tariff liberalization. This movement in resources was to be expected given the initial levels of protection provided to the domestic industries. Protection permits domestic industries to operate with value added higher than what prevails under the free trade, thereby, providing incentives for the movement of resources into protected industries. Almost all the manufacturing sectors showed small to moderate decline in output as protections were reduced. The largest percent decline in output occurred in the machinery closely followed by the energy sector. The other sectors where output declined were cement, food and tobacco, chemical and clothing sector. As a result, total manufacturing output showed a decline by 1.3% in this experiment. The reduction in tariff rates led to a substantial increase in the volume of imports for almost all sectors and larger for sectors with higher tariff rates such as garments, food and tobacco and other industries. The overall volume of exports increased by 1.07%, which was mainly due to an increase in the volume of exports of garments, clothing, chemical, subsistence and commercial agriculture. Other than these sectors, all other manufacturing sectors showed a decline in the volume of exports.

When imperfect competition was introduced, the heavily protected manufacturing sectors turned out to be the main beneficiary. Almost all the manufacturing sectors showed moderate output growth with the largest output growth occurring in for the machinery sector, closely followed by cement and energy sectors. Total manufacturing output increased by 4.3%. As in the competitive case, a reduction in tariff rates led to a substantial increase in the volume of import for all the sectors, the largest growth being in the garments, followed by other industries, machinery, food and tobacco, and cement sector. There was moderate growth in the volume of imports in the chemical and clothing sectors. The overall volume of export increased by 1.33%.

Almost all the manufacturing sectors showed much larger output growth with the incorporation of increasing returns to scale. In particular, the increase in output was

almost doubled for the machinery, cement and energy sectors. This magnification came from a reduction in unrealized scale economies in these sectors.

Bakth (1996,1998,1999) made a critical assessment of policy changes and their impact on the growth of export industries in Bangladesh. He used measures of NRP (Nominal Rate of Protection, intended and observed), ERP (Effective Rate of Protection, intended and observed), TFP (Total Factor Productivity) and DRC (Domestic Resource Cost) to see the level of assistance and efficiency of selected import substituting industries.

His findings show that the export performance in the 1980s and early 1990s, on the basis of these assistance measures, was fairly impressive, total exports growing at an annual rate of about 12% during 1987-94. Another indicator of the impact of trade policy reform is the considerable response in terms of growth in the import of primary goods, intermediate goods and capital goods during the reference period. As the RMG industry is based almost entirely on imported raw materials, enhanced import of intermediate goods that was observed, may have been mainly due to growth of the garment industry. He also showed that some of the major import items (cement, fertilizer, etc.) are used mostly outside the industrial sector. The point Bakth tried to make is that it would be difficult to infer from this evidence that trade policy reform has triggered broad-based industrial growth in Bangladesh.

His argument for further trade liberalization is premised on two grounds. First, the existing levels of nominal and effective protection are still high enough to cause anti-export bias; second, the enclave arrangement for providing access to imported raw materials at world price is a second best solution as it involves substantial administrative cost in implementation.

The constraints to growth of export have been widely categorized into two by Bakth: the price factors and non-price factors. The price factors emanate from policy-induced constraints involving exchange rate policy, trade and industrial policy, fiscal and monetary policy etc. The non-price factors, on the other hand, originate from structural constraints involving inadequate capital and infrastructure, lack of technology and market knowledge, absence of skilled worker etc. Non-price barriers can be overcome by FDI.

The main reason for not being able to attract sufficient amount of FDI is poor implementation of policy reforms, high cost of doing business, and political instability.

A study by the **World Bank** (1999) examined the validity of some of the criticisms made by politicians, academicians, businessmen and industrialists with respect to the pace of Bangladesh's trade liberalization. The protectionist quarters claim that Bangladesh liberalized its import regime too fast, as a result of which domestic markets are "flooded" with foreign goods, particularly from neighboring countries (India); and these developments are hurting domestic industries and inhibiting the country's industrialization.

However, the results of the micro-level quantitative analysis made by the World Bank indicates that the surveyed firms generally experienced sizeable productivity growth over a period of five years, suggesting positive impacts of trade liberalization in the manufacturing sector. According to this report, while Bangladesh appears to be one of the faster liberalizing countries with respect to the import regime in South Asia, being just behind Sri Lanka, its pace does not appear faster compared to other successfully liberalizing countries in Asia and Latin America. It showed that the remaining anti-export bias is substantial being at around 1.26 in 1997/98. The coverage of protective QRs fell from 253 four-digit codes to 28, now affecting mainly textile imports, but there still remains some trade related QRs. The range between the top and the lowest tariff rates is still very wide, with very high nominal protection rates applying to competing final goods. And it is important to look at this range as opposed to the maximum, or average tariff rate reductions alone as these may be deceptive. The existence of license fees, and IDS (Infrastructure Development Surcharge), which are asymmetrically imposed on imported items, push up the protection to import substitutes and contribute to anti-export bias.

Another finding is that the economy has become much more open, without a major surge in imports or unsustainable developments in external current account balances, and the export coverage of imports has increased significantly. There are more foreign goods available (and some being smuggled due to tariff redundancy arising from high protection), and it appears that increased availability of cheaper raw materials,

intermediate inputs and fixed capital goods has generally benefited the economy through faster expansion in exports and stronger GDP growth. There are declining activities and poorly performing firms, many of which have failed to grow out of their infancy despite prolonged high levels of protection, but in general manufacturing industries have been performing strongly, notwithstanding all sorts of constraints to doing business in Bangladesh.

An important implication of these findings is that faster improvements in the areas of infrastructure, financial sector reform, business support services, the customs administration, and law and order would have undoubtedly led to stronger benefits from the trade liberalization effort.

Md. Mamdel Hossain (1999) has worked with a CGE model and showed the effects of a 20% reduction of tariff rates in a situation when the exchange rate is allowed to change freely. The macro-economic effects are found to be sensitive to trade substitution and export demand elasticities. The growth of output is positive in the experiment with unitary trade and export elasticities but negative when either trade substitution elasticities or export demand elasticities are less than one. The point to note is that in all the experiments, exports increase while imports decline.

The sectoral impact of the policy shift showed that both import and export sectors responded as desired. The changes of import prices are mild when volumes of imports (total) decline in all the experiments with higher and lower trade and export elasticities. The increase of exports is, however, moderate in all the experiments.

Among the findings of Mamdel's study the points that should be noted are the effects of reductions in tariff and tariff equivalent of quantitative restrictions. He showed that growth and welfare increases in the event of reduction of QR and tariff rates due to increase of output of primary goods (crop and non-crop agriculture) sectors and also due to better performance of steel and engineering goods sectors.

Chapter Four

TRADE REGIMES AND LIBERALIZATION EXPERIENCE IN BANGLADESH

This chapter reviews the trade regimes in Bangladesh at different periods and highlights the liberalization efforts made so far. A look at the past trade regime and protection prevailing in East Pakistan gives a clear picture of how restrictive the regime was and how and when there was any attempt of gradual slackening of such measures as a move toward a general opening up of the economy.[4] This was a prelude to the post-liberation period when as an independent country, Bangladesh shaped its own trade regime and recognized the necessity of liberalizing the economy as part of the IMF's stabilization and World Bank's structural adjustment programs that were implemented in the late 1980s and early 1990s under Industrial Sector Adjustment Credit (ISAC - I and ISAC – II).

This chapter first discusses the evolution of Bangladesh's foreign trade regime over the past two decades. It then discusses the export development strategy of the current Fifth Five-Year Plan, which bears important implications for this study. Next, it highlights the structure of protection as measured by tariff, quantitative restrictions and effective rate of protection.

4.1 Evolution of Trade Regimes

Import Control: The country's import policy in the early eighties was extremely restrictive for rationing scarce foreign exchange. The traditional administrative instruments to implement the import policy since independence were the foreign exchange allocation system and the Import Policy Order (IPO). The government relied on import licensing rather than on tariffs and exchange rate mechanism for the allocation of scarce foreign exchange. Licenses were required for all imports except a few items for protecting the local vulnerable industries from import competition.

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[4] See Nurul Islam (1981): *Foreign Trade and Economic Controls in Development, A Case of United Pakistan*, for a discussion on the structure of trade and reforms in the pre-independence era of Bangladesh.

A new commodity classification system (based on the Brussels Tariff Nomenclature) was adopted on 1 July 1979. In July 1988, the Government adopted the Harmonized System (HS) of notation as the basis for classification for trade restriction. The import procedures concerning licensing, customs clearance etc., were simplified and standardized. Strict criteria and procedures were introduced for importer registration in an effort to weed out ineligible importers.

Import licensing procedures were greatly liberalized in the 1980s by specifying broad categories of eligible imports of raw materials and spare parts, and by the adoption of pass-books. Firms were permitted to import a fraction of these entitlements under cash license at the official exchange rate.

This system of licensing was changed in 1983-84. Imports financed with cash license at official exchange rate were gradually reduced to 60% of entitlements in 1983-84 to 50% in 1984/85 and were limited to some essential imports in 1985/86. All industries were required to import the rest of their requirements from the secondary (WES) market where the exchange rate better reflects the opportunity cost of foreign exchange.[5] In 1986/87, all government imports except those financed by foreign aid or barter trade were assigned to the WES market.

As a result of these measures, imports financed at the official exchange rate through cash licenses were gradually reduced from 39% of total imports in 1979/80 to 14% in 1990/91. The proportion of total imports financed through WES market increased from about 8% in 1979/80 to 43% in 1990/91. These policies, by providing easier access to imported raw materials and intermediate goods through the WES market, did away with the cumbersome and time-consuming process of import licensing and increased the ability of manufacturers to plan and adhere to production schedules.

A significant improvement made in the import regime was that the system of import licensing was abolished in 1983/84, and imports were permitted against L/C authorization forms to be accepted by banks designated by the industrialists. The most

[5] WES (Wage Earners' Scheme) was introduced in 1977/78 to encourage the flow of workers' remittances and promote non-traditional exports by allowing a premium over the official exchange rate. A secondary market for foreign exchange was thus developed, which operated alongside the official market. The two markets were, however, unified in 1992 in order to eliminate multiple currency practices.

radical change in import regulations was, however, the shift in 1986 from a positive list to a "negative list" supplemented by a "restricted list".

Despite these creditable efforts, a considerable proportion of imports remained subject to rigid and complex administrative regulations and controls. There were also outright bans or quantitative restrictions on imports, which competed with domestic production.

The adjustment program initiated in January 1985 proposed to phase out the QRs on industrial raw materials, with priority being given to removing bans in the steel, chemical, textile and light engineering sectors. The Government acted on this and there have been significant reductions in the items included in the control list (from 648 in July 1986 to 250 in July 1991). Nevertheless, the target of eliminating import bans and restriction (except for items relating to security, health etc.) by 1992-93 could not be achieved.

Import Duties: In the decade of the eighties taxation of imports in Bangladesh included a combination of customs duties (tariffs), value-added tax (introduced since July 1991 to replace the sales tax), development surcharge and license fees. Value-added taxes were imposed at 15% on the customs duty paid c.i.f. value of import. Development surcharge was introduced since July 1972. License fees were imposed on import license, import permit or L/C authorization.

The tariff structure in the early 1990s protected most products at the final stage of production by very high nominal rates. The rationale was to provide greater assistance to industries with higher value added. Raw materials received less protection than intermediate products, which in turn were less protected than final goods. However, there were serious anomalies within this general tariff structure, because some intermediate inputs were banned or had much higher tariffs than the final products. Special exemptions and the existence of a large volume of illegal trade created additional anomalies in the levels of effective protection for different industries, often resulting in low or even negative rates of protection for some processes and unduly high levels of protection for others.

- Prior to 1986, the tariff code had 24 tariff slabs. This large number of tariff slabs complicated the tariff structure. There were large differences in the duty rates not

only among different industries but also between products in the same industry. The existence of widely divergent nominal rates contributed to wide differentials in effective rates of protection. Thus, for many products, basic raw materials were given higher protection than intermediate outputs. These anomalies in the tariff system distorted the structure of protection and inadvertently fostered oligopolistic market structures and allocative inefficiency, often according the highest protection to industries with lowest value added.

- Beginning from 1987/88, the government adopted a phased three-year program (1987/88-1989/90) to rationalize the tariff structure by reducing the maximum tariff for most final goods imports in the textile, steel and engineering, chemicals, and electronic sectors from over 200% to 125%. The objective of the program was eventually to i) reduce the maximum tariff rate to 100% (with the exception of specified luxury goods); ii) limit customs duties to a maximum of 20% on raw materials, 75% on intermediate products, and 100% on final products; and iii) that nominal tariffs in these sectors fell within the range of 0-85%. Commensurate downward adjustment was also made to the rates for raw materials and intermediate products in these sectors.
- Beginning in 1983, the government had been in the process of implementing some reform in the tariff regime. Steps had been taken to rationalize the tariff structure, and to gradually replace the QRs and other administrative controls on imports with tariffs. Some progress was made in 1983-84 towards eliminating the different rates of protection among similar products by equating customs duties on imported inputs and finished products among different types of textiles, cotton, synthetics, and blends. In 1985/86, the existing 24 rates were brought down to 11.
- Nevertheless, the number of effective duty rates was still large and the government agreed to simplify the rate structure by reducing the number of non-luxury customs duty rates to 0%, 2.5%, 5%, 10%, 20%, 75%, and 100% during 1987/88 and 1988/89. However, the objectives of the phased program were not fully achieved till the advent of the 1990s.
- The import regime was greatly liberalized in the 1990s. The system of import licensing was abolished. The tariff structure was rationalized with a maximum rate of

40% import duty whereby average rate of protection dropped from 100% in 1985 to 22% in 1996. The coverage of QR was reduced from 42% in 1985 to only 2% of imports in 1996. Average un-weighted tariff was reduced from 89% to 20%, and import-weighted tariff declined from 30% in 1990/91 to 16% in 1998/99.

- The spread between the official exchange rate and the market exchange rate was reduced by the lowering of tariffs and the withdrawal of QRs. The exchange rate policy regime was unified in 1992, and made flexible and market-based. The local currency Taka, was made freely convertible for current account transactions as Bangladesh accepted the obligations of Article VIII of the IMF in 1994. IMF consistent counter trade /Special Trading Arrangements were allowed.

Export Incentives: During the 1980s and the 1990s a number of incentives were introduced to encourage export activities, some of them were new, while others were already in operation and were improved upon. The incentives are as follows:

XPL (Export Performance Licensing): Under this incentive, exporters of non-traditional products received import licenses (Import Entitlement Certificates - IEC) for specific products over and above their normal percentage allotment based on the f.o.b. value of their exports. The primary objective of XPL was to provide exporters with needed imports of raw materials, spare parts, and machinery.

XPB (Export Performance Benefit) scheme: In 1985/86 the XPL scheme was replaced by the XPB scheme and entitlement rates were raised much above the earlier XPL rates. The scope of the XPB scheme was steadily expanded over the years. A serious drawback of this scheme was, however, that the benefit it conferred depended upon the differential between the exchange rates prevailing in the official and the secondary markets. With the unification of the exchange rate in 1992, the XPB scheme became redundant.

Liberal Tariff Policy for Export-Oriented Industries: The 1991 industrial policy defined an export-oriented industrial unit as one that directly exports, or indirectly assists firms using indigenous raw materials in exporting 70% or more of its output. These firms

enjoyed concessionary duty of 10% (up from 2.5%) for import of machinery and spare parts for setting up new industries. This facility has now been further liberalized. All export-oriented manufacturing units outside EPZs are now eligible to import raw materials and capital inputs duty free.

Income Tax Rebates: The export policy announced in 1991 allowed income tax rebate up to 100% of export income but subsequently the rebate was reduced and lowered to only 50% of export income. However, exporters of non-traditional items are allowed rebates on fire and insurance premium, and are exempted from paying local taxes (such as municipal taxes).

Duty Drawback System: This provision has been there in Bangladesh since the early 1970s. Exporters of manufactured goods are entitled to get refund of duties and taxes already paid on importation of inputs used exclusively in export production and also all excise duties paid on exported finished goods. In the earlier years, the duty and tax drawback was calculated on the basis of the proof of actual payments made and refunded on a case-by-case basis. The duty drawback scheme was cumbersome, time-consuming and involved complex procedures to establish the drawback rate. In order to make the drawback system simplified and concise, all duty drawback under the 1991 industrial policy (VAT Act 1991) had been fixed at a flat rate to enable the exporter to get the duty drawback directly from the relevant commercial bank. In order to ensure automatic duty-free import by exporters and remove related difficulties in the drawback system, a Duty Exemption/Drawback office (DEDO) was established in 1986 in the National Board of Revenue. Those industrial units that do not use the bonded warehouse facility can avail of the duty drawback facility. Leather exporters are the prime users of this facility.

Bonded Warehouse Facility: A system of private bonded warehouse was in existence in Bangladesh since the early seventies under which firms producing exclusively for export could import and stock duty free inputs. The most efficient system to exempt exporters from import duties and taxes is perhaps the Special Bonded Warehouse Scheme, which was first introduced for the ready-made garments industry in 1978. Until 1993, SBW was

only available to 100% exporters in the RMG industries using back-to-back lines of credit, and to suppliers that sell 100% of their output to garment exporters. Since 1993, SBW facility was extended to all 100% exporters and "deemed exporters" *(Bakth 1998)*. The scheme is allowed only for garments, specialized textile, and leather goods manufacturers that export 80% of their output. Indirect exporters (suppliers of inputs to export manufactures) supplying under international tender and against permit of foreign exchange have also access to this facility. A few leather and toy exporters have been the other users of this facility.[6]

Export Processing Zones (EPZ): An export processing zone (EPZ) was set up in Chittagong in 1984 where both foreign and local entrepreneurs could set up 100% export oriented factories and receive complete exemption from customs duties and import restriction. A second export-processing zone was set up in Dhaka in 1993. Both the zones are almost full and further expansion of the Dhaka zone has been undertaken recently. There are plans for establishing some other EPZs in Dhaka, Khulna and Chittagong with improved infra-structural facilities and incentives to facilitate new investments and improve their operating efficiency. Under the provisions of the EPZ, entrepreneurs import raw materials, supplies, and capital goods free of duty, retain foreign exchange earnings, and operate in a labor market free of unions. Industries in the EPZ enjoy income tax exemption for ten years and after that period proportional income tax rebate of 30-100% on their export earnings.

Export Financing: Access to working capital finance up to a certain proportion of confirmed L/C value of exports at concessional interest rate has been available to selected exporters since late 1970s. The coverage of this facility has been extended over time. The Export Credit Guarantee Scheme provides exporters with credit at concessionary rate up to 90% of confirmed L/C value. The Export Development Fund provides exporters with credit in foreign exchange for pre-shipment financing of imported inputs.

[6] See report by Maxwell Stamp PLC, Review of Relative Protection, 2001, prepared for the Bangladesh Tariff Commission, by the Protection Analysis and Trade Cooperation Project, March 2001.

Another export financing facility was introduced for a broader range of export industries in 1986-87 through the provision of the back-to-back L/C system. This system allows the exporter to import raw materials on a deferred payment basis, payments being effected out of proceeds from export. Prior to 1986, this facility was available to RMG, specialized textiles and hosiery industries but since then Bangladesh Bank has allowed a case-by-case authorization of the establishment of such L/Cs in other sectors as well. The facility has also been extended to indirect exporters supplying inputs to 100% export oriented industries.

To insure the loans in respect of export finance, an Export Credit Guarantee Scheme was introduced in 1978. The public sector insurance body Sadharan Bima Corporation administers the scheme. Bank's risk associated with both pre-shipment and post-shipment financing was covered up to 75% of the loss. There was also the provision for comprehensive guarantee directly to the exporter (Bakth 1998, Bhuyan & Rashid, 1993).

Fiscal Incentives: The export industries enjoyed a wide range of fiscal incentives. Export earnings from handicrafts and cottage industries remain exempted from income tax. Other industries enjoy varying degrees of tax holidays and income tax rebate on export earnings. Industries located in the EPZs are allowed income tax exemption for ten years and proportional income tax rebate between 30-100% on export earning after this period. These industries also enjoy tax exemption on (i) the salaries of foreign executives and technicians for three years, (ii) interest on foreign loans, (iii) royalties, technical know-how and technical assistance fees, and on (vi) profits on account of transfer of shares by foreign companies.

Liberalization of Exchange Rate: In Bangladesh the liberalization of the exchange rate consists of the transition from fixed exchange rate to "managed" system of floating exchange rate in 1979/1980 and the unification of exchange rate in 1992 when the wage earners scheme (WES) was removed. The major objective for a move towards more flexible exchange rates was to promote international competitiveness, export diversification and dynamic import substitution. In October 1993 Taka was made

convertible for all transactions in the current account. The Government of Bangladesh withdrew the requirement of prior approval from the Bangladesh Bank for sale of foreign currency by commercial banks, permission to exporters to retain a portion of their earned foreign exchange, enhanced foreign exchange rate entitlements for business, travel, health facilities, etc. Other measures include withdrawal of restriction on the borrowing capacity of foreign firms from domestic banks, withdrawal of restrictions on non-residents' portfolio investments, etc (IRBD 1995, Rab 1994). Dealers' control over fixing the selling and buying rates has been established, which were previously fixed by the Bangladesh Bank. Further concessions were made in liberalizing access to foreign exchange availability by providing for greater foreign exchange liquidity with authorized dealers whereby their ceiling for foreign exchange increased from 5% to 20% of the outstanding L/C holding liabilities from August 1993 (IRBD 1995).

Bangladesh is yet to reverse the real appreciation of the taka overall and on a bilateral basis against competitor countries such as India, Pakistan, Malaysia, Indonesia and Thailand, despite repeated depreciations, at small doses though, over the past five years. IMF data indicates that Bangladesh's REER at the end of June 2001 stands greatly overvalued vis-à-vis its main competitors such as India, Pakistan, Thailand, Malaysia and Indonesia.

The response of exports to these policy changes has been quite significant although, as widely recognized, exports have also flourished as a result of the special situation created by the international trading environment under GSP and the availability of Quota under the MFA. As will be seen in Table 5.1 of Chapter 5, Bangladesh's merchandise exports increased from US$ 1.5 billion in 1990 to US$ 5.8 billion in 2000, an annual average growth rate of 28% in US$ terms. This is an exceptional performance, by any standard.

4.2 Trade Strategy of the Fifth Five-Year Plan 1997-2002:

Bangladesh's Fifth Five Year Plan (FFYP) reiterates the country's commitment to private sector led export-oriented growth and emphasizes the need for "conscious policy shifts" in order to facilitate such growth. Bangladesh has adopted an **export-oriented**

growth strategy and recognizes that its vital interest lies in the effective operation of the multilateral trading system.

Export Policy: The objectives of the current trade policy are to diversify the range of exports and improve their quality, set up backward-linkage industries and services, promote the use of local inputs in export production to maximize value addition particularly in the textile sector, extend fiscal and other incentives to attract entrepreneurs, both local and foreign, to invest in export-oriented industries, and consolidate existing markets and explore and develop new ones.

Strategy of Export Policy: The main elements of the long-term export strategies outlined in the FFYP are as follows:

1. To remove all bottlenecks to achieve the objectives of export policy.
2. To provide policy support to private sector operators on a continuous basis to ensure competitiveness.
3. To strengthen support services and infrastructure for exports and export-oriented industries.
4. To priority will be given to build export infrastructure.
5. To develop managerial and entrepreneurial skills through HRD programs.
6. To design an appropriate export development program to broaden and diversify the country's export base which is central to the export strategy.
7. To build long-term capability to export by developing new products through adaptation and increased R&D activities.

In order to achieve rapid export-led growth under private sector the Export Policy envisages the following incentives:

Fiscal incentives:

1. Duty free import of capital machinery for export-oriented industries outside Export Processing Zones.

2. Bonded warehouse to facilitate duty-free import of raw materials for export production.
3. Duty drawback if the bonded warehouse facilities is not used.
4. Sale of 20% of products by the 100% export-oriented industries in the local market on payment of duties.
5. Exemption of 50% of export income from income tax.
6. Tax holidays.
7. Duty-free import of samples.

Financial Incentives:

1. Local currency export credit at a concessional rate of interest, which is currently between 8-10%.
2. Foreign currency export credit under Export Development Fund at a concessional rate of interest (LIBOR + 1%).
3. Back-to-Back L/C for import of raw materials for export production on deferred payments basis.
4. Retention of export earning by the exporters in their own accounts to the extent of 40% in general cases and 7.5% in lower value-added items.
5. Facility for use of $25 million credit line for the markets of Commonwealth of Independent States (CIS).
6. 25% compensatory cash benefit to the local producers and suppliers of fabrics and other textile products for export in lieu of BW and DD facilities.
7. 10% market development assistance for export of jute yarn and twine.
8. Banking facility for BMRE projects.
9. Export Credit Guarantee facility.

General Incentives:

1. Recognition of leather industries exporting at least 80% of their products as 100% export oriented industries to enjoy the benefits of such industries.
2. Banning the export of crust leather to increase value addition.
3. Enhancing the financial limit for dispatch of export samples abroad.

4. Product and market development support under Export Promotion Fund (EPF).
5. Awarding national trophy for export performance.
6. Extending quasi-diplomatic and social privileges under CIP (Commercially Important Person) schemes.
7. Pivot Export Processing Zone (CEPZ) Act passed to allow establishment of Private EPZ by local and foreign investors.

Import Policy: The main features of the current Import Policy are given below:

1. Liberalization of imports through removal and significant reduction of tariff and non-tariff barriers and gearing up the customs administration for speedy clearance of goods. At present average and maximum tariff rates are 22% and 37.5% respectively.
2. Rationalization of the tariff structure to remove disincentives to domestic production arising from tariff anomalies. This involves lowering of duties particularly on industrial inputs and capital machinery.
3. Making foreign exchange convertible in current account transactions. A key object of tariff rationalization was to create a neutral trade regime by eliminating anti-export bias resulting from high tariffs and QRs. The government is committed to the reduction of tariffs as part of its liberalization program under WTO.
4. Like tariff rationalization, significant progress has been made in removing QRs. Whereas almost 25% all items under 4-digit headings of imports were subject to QRs in 1990, now only 119 items covering only 2% of imports are so disposed. Of these, only 27 items are restricted for trade reasons.

The thrust export sectors declared in the current export policy are leather and leather goods, ready-made garments, computer software, and agro-processing industry. Bangladesh could seek ways to promote exports of consumer electronics, soft toys, sports shoes, where it has comparative advantage. From rural industry, items like tropical fruits, vegetable, cut flowers, fresh water shrimp, bamboo fishing rods and fishing flies, bamboo cane, coconut fibers and straw products, handloom products, and wooden boats have

export potential. Export of jewelry also has a good potential in the Middle Eastern markets.

Export of gas and gas-based products, after meeting domestic needs, holds considerable promise for the future to provide valuable foreign exchange. There is export potential of gas in different forms including fertilizer, electricity or the gas itself.

4.3 Structure of Protection as measured by Tariff, QR and ERP

4.3.1 Tariff:

Duties and taxes payable by an importer on imported products are the following:

i) Import tariff as percent of C.I.F. price

ii) Value Added Tax (VAT) at the rate of 15% of duty paid value of imports

iii) Supplementary Duty (SD) at different rates on some products

iv) Infrastructure development surcharge at the rate of 2.5%

v) Advance income tax at the rate of 2.5%

vi) Import permit fee at the rate of 2.5%

The import discriminating, multiple rate sales tax has been replaced by a 15% VAT levied on both imports and domestically produced goods. Regulatory duties and surcharges on imports are replaced by a supplementary excise duty, a trade-neutral consumption tax. VAT and supplementary duties are imposed on both import and domestic products, and hence they are trade neutral and do not provide additional protection to domestic producers. The other three charges are levied on imports only. However, the advance income tax is subsequently adjusted with actually payable income tax, and hence in the ultimate analysis it does not provide additional protection to domestic industry. The sole objective of the infrastructure development surcharge is to raise revenue for developing the physical infrastructure for which there is a critical need.

The maximum tariff ("customs duty") rate was reduced from 350% in FY91 to 40% in FY99, while the (un-weighted) average tariff rate fell from 89% to 20% over the same period. Under the FY00 Budget, the maximum tariff rate was reduced further to 37.5%. However, with the decision to retain the 2.5% "temporary" Infrastructure Development Surcharge (IDS), the top tariff rate (inclusive of the IDS) still remains at

40%. (See Table 4.1). Moreover, the average rate is pulled down substantially because many of the non-competing imports – such as locally unavailable raw materials and machinery, equipment – enter at zero or very low rates. Competing imports face higher tariff rates. Nearly 25% of tariff lines (mainly finished products) face the maximum tariff rate. The IDS has become an import tax only. There are many cases where VAT and SDs are levied on imports alone, not on domestically produced substitutes, and in some cases SD rates levied on imports are higher than those levied on domestic production. Consequently, the (un-weighted) average nominal protection rate (inclusive of import tariffs, protective taxes and the protective components of VAT, SD and IDS) has remained much higher than the average tariff rate.

Table 4.1 Trends in Average and Dispersion of Tariffs, 1991-2000

Description	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
Number of tariff slabs	17	17	14	11	5	6	6	6	6	4
IDS	--	--	--	--	--	--	--	2.5	2.5	2.5
Average license fee		1.2	1.4	1.5	1.5	1.2	1.3	1.3	1.0	--
Top CD rate	350	350	300	300	60	50	45	42.5	40.5	37.5
Dispersion (CV)	72.0	71.9	65.6	68.2	75.6	74.4	75.7	74.4	72.4	82.0
Ave. un-weighted CD	88.6	56.7	46.8	35.8	25.4	22.2	21.5	20.7	20.2	16.7

Source: WB 1999.

The average import-weighted tariff rates for intermediate goods, capital goods and final consumer goods are shown in Table 4.2. It should be noted that the final consumer goods face the maximum tariff while the tariffs on raw materials and capital goods are lower. This is to discourage import of consumer items and luxury items while the import of inputs are less protected. This is to encourage domestic production and exports that need imported inputs. In this research the average import-weighted tariffs on intermediate goods and capital goods are considered to analyze the impact of liberalization of the tariff regime on exports.

Table 4.2	Average Import-Weighted Tariff in Bangladesh									
Import Categories	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000
Intermed inputs	24.1	24.1	23.6	22.9	26.3	22.43	21.40	20.95	21.45	15.54
Capital goods	18.7	18.7	18.4	16.1	12.5	9.61	10.81	8.38	8.57	8.96
Final Cons goods	47.3	47.3	36.5	36.7	26.4	23.57	24.85	17.56	11.19	29.24
All imports	24.1	24.1	23.6	24.1	20.8	17.01	17.90	16.06	14.68	16

Source : CPD 1996 (FY92-96), 1997(FY91, 94-98), M. Rahman, Budget (FY96-2000).

A comparison of the tariff structure was made for 1991/92 and 1995/96 by the World Bank (Oct.1996) and for the period 1989/99 and 1999/00 by the World Bank (Sattar, July 1999). The comparison is presented in Table 4.3.

Table 4.3 **Trends in Nominal Protection, 1990/91 to 1999/00**
(Figures are averages, %)

Time Period	Manufactures	All Tradables
Pre-reform, 1990/91		
Un-weighted	89.0	88.6
Import-weighted	51.8	42.1
Dispersion (CV) *	72.4	71.9
Post- reform, 1995/96		
Un-weighted	24.6	24.6
Import-weighted	21.9	21.0
Dispersion (CV)	73.5	72.7
In 1998/99		
Un-weighted	26.0	28.2
Import-weighted	23.8	20.3
Dispersion (CV)	68.3	66.6
In 1999/00		
Un-weighted	24.2	24.7
Import-weighted	--	--
Dispersion (CV)	84.1	76.8

*This figure is given from WB 1999; in WB 1996 it is 58.6 and 59.0, respectively, and represents coefficient of variation for the un-weighted average.

Source: Compiled from the World bank reports of 1996 and 1999. The figures for the period 1995/96 are taken from the 1996 report.

4.3.2 Quantitative Restrictions

The textile sector enjoys the heaviest protection from QRs. Approximately 25% of all HS-8 lines in textiles are under QR. But barely 2% of tariff lines overall are subject to trade related QRs. This is to point out that even though QRs have been reduced from

the earlier periods, a crucial sub-sector, textiles, remains protected, and reductions have occurred unevenly across commodity groups and sectors. In general, restrictions on domestically produced goods have been removed more slowly than those on other goods and restrictions on manufactured goods have been lifted more slowly than those on agricultural goods. In manufacturing, controls on consumer goods have been more stringent than those on intermediate and capital goods. Table 4.4 shows that import bans are in place on all woven fabrics, and gray fabric imports are restricted, while items such as raw cotton, machinery, spare parts, cotton yarn and other inputs are free of any quantitative restrictions.

Table 4.4 **Protection on Textile Items**

Items	QR	CD	VAT (imports)	VAT(exports)
Raw cotton	free	0	0	N/A
Machinery	free	7.5%	0-15%	0-15%
Spares	free	0-30%	0-15%	0-15%
Cotton yarn	free	7.5%	15%	0
Other inputs	free	30-45%	15%	15%
Grey fabric	restricted	45%	15%	0
Fabric (woven, cotton, synthetic) are banned.				

Source: The World Bank,1999, originally from Ministry of Commerce, Import Policy Orders.

Table 4.5 shows reduction of quantitative restrictions for trade reasons from 1989/90 to the period 1997-2002, where the number of banned items have been reduced from 135 to 5, restricted items from 66 to 6, and mixed items from 52 to 17 (banned items are chicks, animal fats, gypsum, woven, cotton and synthetic fabric, and petroleum gas and products, insecticides). However, the quantitative restrictions due to non-trade reasons have been raised from 62 to 96 during the same period.

Table 4.5 **Phased Removal of Quantitative Restrictions, 1989/90 - 1998/99**
(Number of 4 - digit H. S. Codes)

Fiscal Year	Total	Trade Reasons			Non-trade Reasons
		Banned	Restricted	Mixed	
1989-90	315	135	66	52	62
1990-91	239	93	47	39	60
1995-97	120	5	6	17	92
1997-2002	124	5	6	17	96

Source: The World Bank,1999, originally from Ministry of Commerce, Import Policy Orders.

A significant number of export items are prohibited and restricted for no obvious criteria on religious, cultural, moral, health or environmental grounds. The rationale for so doing, presumably, is to safeguard supplies for domestic consumption. As such it is a highly counter-productive policy. Some of the products included are standard prohibited items throughout the world (firearms, fissionable materials etc.) but many are not. Prohibited items include: petroleum and petroleum products other than naphtha, furnace and lubricant oils and bitumen, oil seeds, except Kapok, and edible oil, jute and sun hemp seeds, wheat, molasses and Khandseri sugar, pulses, unfrozen or unprocessed shrimps, onions, rice bran, bamboo and cane, and raw hides and wet blue leather. Items, which require permission of Ministry of Commerce, are: molasses, de-oiled rice bran, wheat bran, urea fertiliser, and date-gur. Export prohibitions do, therefore, assist domestic consumers in price term, but only at the expense of reducing domestic production of the very goods for which domestic availability is considered essential.

4.3.3 Effective Rate of Protection and Anti-Export Bias

Effective Rate of Protection

There are five major manufacturing activities in Bangladesh which are produced for exports, these are: food products and beverages, textiles, wearing apparel etc., leather dressing and tanning etc., and rubber and plastics products. With the exception of rubber and plastic products, these sectors receive relatively very little effective protection. It can be seen in Table 4.6 that the average rate of EPR enjoyed by these industries in Table 4.6 (with 100 percent duty exemption) is about 75%.

Table 4.6 Product-level ERPs (%)

Description	Export share	100% Duty Exemption		80% Duty Exemption	
		Un-weighted	Weighted	Un-weighted	Weighted
Manufacture of food products & beverages	58%	94.77	20.21	92.92	11.71
Manufacture of textiles	18%	54.93	41.23	51.55	39.18
Manufacture of wearing apparel; Dressing & dyeing of fur	99%	14.56	1.08	–6.29	–29.45
Tanning & dressing of leather, Manufacture of luggage, hand bags, Saddler, harness & footwear	79%	39.34	1.55	38.0	–0.50
Manufacture of rubber & plastics products	18%	146.18	106.39	145.45	103.98

Source: PATC – Protection analysis survey, 2000

According to an exercise of the Protection Analysis and Trade Co-operation Project (2001), carried out by Maxwell Stamp PLC for Bangladesh Tariff Commission, wearing apparel, which includes the ready-made garment sector, is particularly disadvantaged by the trade policy framework with the lowest EPR of any sector (under both input tariff assumptions). Thus, even assuming the maximum range of input tariff concessions granted to the sectors through Special Bonded Warehouse arrangements, Export Processing Zone arrangements and duty drawback (by assuming that 100% of input tariffs are exempt), the apparel sector is highly disadvantaged relative to other sectors. This arises because the sector's export concentration is high. As discussed above, exports, whose prices are determined internationally, receive no protection from the tariff policy framework. The leather-tanning sector faces similar obstacles. Under the 80% tariff exemption assumption, for example, wearing apparel faces a negative (weighted) EPR of 29.4%. In other words, a unit of value added in the sector, is disprotected by 29.4%, implying a high negative incentive to produce these products or to enter the sector relative to zero rated or positive EPR products.

The above sectoral EPR results demonstrate the fundamental inconsistencies that arise from parallel attempts to support import-substituting firms and promote exports simultaneously. Thus, by raising the prices of domestic import substitutes, tariffs automatically disadvantage exports sectors - and potential export sectors - in relative terms by reducing the relative price of exports. This militates directly against export growth. In the case of wearing apparel, which is primarily the RMG sector, it demonstrates that despite all the special promotional measures applied to the sector it is the most disadvantaged sector.

Anti-export Bias

An estimate of the **anti-export bias** by the World Bank (1999) for the period 1991/92 to 1997/98 as reproduced in Table 4.7 shows that the reforms have been partially successful in reducing it. However, the PATC Project shows that there is still a strong anti-export bias in Bangaldesh's trade policy framework. The project shows that this result applies whether export orientation is defined by the criterion of firms which export more than 60% of total production value, or those which export more than 90%.

Table 4.7 Effective Exchange Rates for Import Substitutes and Exports (Tk. / US $)

Fiscal Year	Overall un-weighted protective rate	Nominal Exchange Rate	EERm	EERx	EERm/EERx[@]
1991-92	67.35%	38.15	63.84	38.53	1.657
1992-93	55.37%	39.14	60.81	39.72	1.531
1993-94	42.43%	40.00	56.97	40.48	1.407
1994-95	31.32%	40.20	52.79	40.53	1.302
1995-96	27.11%	40.84	51.91	41.25	1.258
1996-97	26.85%	42.70	54.16	43.22	1.253
1997-98	28.54%	45.46	58.44	46.25	1.263

Source: World Bank, 1999.
Note: @ The higher the ratio, the greater the anti-export bias.

Chapter Five

AN OVERVIEW OF THE MAJOR EXPORT SECTORS

5.1 Introduction

It may be worthwhile to provide an overview of the evolution of the structure and commodity composition of Bangladesh's exports before attempting to analyze the determinants of exports and estimating the export functions. The econometric model of export supply function of this study is applied to total exports as well as to the four major export items of this country. This is done with a view to finding out the effect of trade liberalization efforts on these particular items, which constitute the bulk of the country's export basket. Before going into sector-wise discussions, some basic information pertaining to the manufacturing export sector of Bangladesh is provided. To highlight only the important developments, the discussion is confined to the developments in the last two decades (1981-2000) only.

The first notable point is that over the last two decades (1981-2000), Bangladesh achieved impressive growth in merchandise exports propelled mainly by the growth in garments and knitwear sector. Table 5.1 indicates that measured in U.S. dollars, the exports registered an annual average growth rate of 37 percent for the period 1981-2000 and about 28 percent during the last decade (1990-2000). This was made possible by an extremely high rate of growth of garments and knitwear exports recorded for that period. While the traditional exports of Bangladesh, namely raw jute, jute goods and tea declined during the period, ready-made garments and knitwear exports, starting from a low base, grew at a rapid pace (several thousand percent during 1980-00 and about 40 percent during 1990-2000). In addition, exports of frozen food (mainly shrimps) also recorded 40 percent growth during 1980-2000.

The second point highlighted in Table 5.1 is that the structure of Bangladesh's exports has undergone a major shift during the period 1981-2000 mainly as a consequence of the emergence of readymade garments and knitwear as the major exports of Bangladesh. At the same time, the importance of traditional exports: raw jute, jute goods, and tea declined drastically. Whereas the share of readymade garments and

knitwear increased from less than 1 percent in 1981 to 40 percent in 1990 and further to above 75 percent in 2000, the share of the three traditional products raw jute, jute goods and tea declined from about 74 percent in 1981 to about 33 percent in 1990 and further to only about 6 percent in 2000.

The third notable development is that during the period a number of other manufactured products, including frozen food have emerged as minor but sizeable exports from Bangladesh. Some of these products (e.g., frozen food and fertilizer) have a potential to grow if infrastructural bottlenecks are addressed and adequate market-based incentives are provided.

As a consequence of the shift in the structure of exports, manufactured products dominate the export structure of Bangladesh compared with the predominance of primary and semi-processed exports at the beginning of the 1980s.

Table 5.1 Bangladesh: Structure of Merchandise Exports, 1981-2000

(In millions of US dollars)

	1981	Percentage share	1990	Percentage Share	2000	Percentage Share	Average Growth rate (1981-00)	Average Growth rate (1990-00)
Raw Jute	118.6	16.7	124.6	8.2	71.62	1.25	-2.1	-4.3
Jute Goods	366.5	51.6	331.3	21.7	265.85	4.62	-1.5	-2
Leather	56.7	8	178.9	11.7	195.05	3.39	12.7	0.8
Tea	40.7	5.7	39.5	2.6	17.69	0.31	-3	-5.5
Frozen Food	40	5.6	137.8	9	343.82	5.98	40	14.9
Naphtha	29.9	4.2	7.9	0.5	11.5	0.20	-3.2	4.5
Garment	3.2	0.5	609.3	40	3,082.56	53.59	4,975.20	40.3
Knit-wear	--	--	--	--	1,269.83	22.08	--	--
Other	55	7.7	94.3	6.2	494.28	8.59	45.5	46.2
Total	710.4	100	1,523.70	100	5,752.20	100.00	37.4	27.8

Source: Export Promotion Bureau and the World Bank.

Table 5.2 shows the changing share of manufacturing in the country's GDP and exports over different time spans. It can be seen that the share of manufactured exports in the total export basket rose from 66% in the seventies to 77% in the eighties and then to 90% in the nineties.

Table 5.2	Share of Manufacturing in GDP and Export (in %)						
Products	**1972-73**	**1977-78**	**1982-83**	**1987-88**	**1992-93**	**1995-96**	**1997-98**
Share of Manufacturing in GDP	7.9	10.08	11.14	8.95	10.50	11.37	11.30
Share of Export in GDP	5.44	5.10	5.49	6.38	10.24	12.20	15.94
Share of Manufg Export in Total Export	57.0	66.0	65.0	77.0	86.83	88.0	90.27

Source : EPB, BBS

There has been a shift in the composition of exports over the years but the export basket remains as un-diversified as before. This is shown in Table 5.3. Initially, after the independence of Bangladesh, its exports were concentrated mainly on traditional items like raw jute and jute goods. The situation started changing since around the mid-eighties when jute and jute goods exports gave way to the garments sector. So the problem of export concentration on a few commodities remains, making the country's export basket extremely vulnerable to external shocks.

Table 5.3	Share of RMG, Leather, Frozen Food and Jute in Total Export (in %)						
Year	**RMG**	**Knitwear**	**Leather**	**Leather Goods**	**Frozen Food**	**Raw Jute**	**Jute Goods**
1972-73	-	0.002	4.64	-	0.88	38.41	51.45
1977-78	0.01	-	9.19	-	3.94	19.63	50.43
1982-83	1.58	-	8.51	-	10.49	15.99	46.56
1987-88	35.24	-	11.95	-	11.34	6.54	24.56
1992-93	52.06	8.58	6.21	0.45	6.93	3.12	12.27
1995-96	50.19	15.41	5.45	0.76	8.08	2.34	8.47
1997-98	55.09	18.22	3.68	0.93	5.69	2.09	5.45

Source: EPB

Table 5.4 shows an increase in the ratio of exports to imports, a positive trend for an export-oriented development strategy which Bangladesh has been pursuing for some time now. This table shows that both imports and exports have risen over the years but exports as a percentage of imports have risen from around 35% to 68% from the early eighties to the late nineties. This is a welcome development as it helps to reduce the huge trade gap that Bangladesh has with its trading partners.

Table 5.4	Exports as a percentage of Imports (in million US dollars)						
Year	1973/74	1979/80	1982/83	1988/89	1991/92	1997/98	1999/2000
Export(X)	372	749	687	1292	1994	5161	5752
Import(M)	851	2035	1923	2997	3466	7545	8403
(X/M)%	43.71	36.81	35.73	43.11	57.53	68.40	68.45

Source: Export Promotion Bureau.

Table 5.5 is relevant for the hypothesis of the present study, that the reduction of tariff on raw-materials and capital goods used in export production should have a positive impact on manufactured exports. Table 5.5 indicates that there has been some growth in the stock of capital as evidenced by the trend in imports of capital and intermediate goods. As tariff and other quantitative restrictions have been reduced substantially on imported inputs over the years as part of the trade liberalization process, this may have contributed to the expansion of such imported inputs.

Table 5.5 Import of Capital Goods and Intermediate Inputs as Share of GDP (%)

Category	1991-92	1992-93	1993-94	1994-95	1995-96
Capital Goods	2.66	2.34	2.16	3.72	5.22
Intermediate Inputs	4.81	4.74	74.73	6.76	7.05
Both	7.47	7.08	6.89	10.48	12.27

Source: Bhattacharya, 1997, 1999.

5.2 Apparel (Garments and Knitwear)

The apparel sector consists of ready made garments (woven) and knit garments. In these broad categories, T-shirts, sweater and others fall in the knit garments while shirts, trousers, jacket and others fall in the woven category.

The RMG industry of Bangladesh is of relatively recent origin compared to the traditional tailoring activity. Manufacturing of RMG for domestic markets started since the early 1960s, but it was not until 1976 that Bangladesh began to produce garments for the export market. Since then the number of RMG enterprises has grown from 4 in 1976, to 45 in 1985 to more than 2,800 in 1999. Since 1988, the RMG sector for the first time overtook the traditionally dominant jute sector in terms of gross export accruals. The sector has continued to consolidate its dominant position in the Bangladesh's export basket. The country has experienced an unprecedented growth during the last two decades. At present it provides employment to more than 1.50 million people, majority of whom are disadvantaged and economically backward women. The export earnings from RMG during 1999-2000 was US$ 1269.83 million for knit and $3082.56 million for woven, which together accounts for 77% of the total export earnings of the country.

The relatively stable macroeconomic environment and gradual trade liberalization have enabled Bangladeshi exporters to take advantage of low domestic wage rates to carve out an impressive niche in the international apparel market. The wage levels are 30-40% cheaper than China and 30% cheaper than India. They have, without doubt, been assisted considerably by the international trading environment. The preferential treatment by EU under the GSP scheme, and the quota availability in the US market, coupled with the imposition of quota restrictions by the MFA on its major competitors mainly India and China contributed substantially to the rapid expansion of Bangladesh's garment exports.

In the US market there are Quota limits on twenty-one garment-related products produced by Bangladesh. In Canada, the number of categories facing quota is 9. The US is Bangladesh's second largest export market for apparel. Exports to the US have increased by 115% during the latter half of the nineties but this is slower than the growth rate achieved in the EU. Under GSP, Bangladesh has unrestricted duty-free entry into the countries of the European Union, giving it a competitive edge over other exporting countries.

In the late nineties exports of apparel to the EU have grown by 174%, faster than Bangladesh's total exports to the EU region, which grew by 141%. The main reason for this rapid increase is basically the duty–free and quota–free access to this market. Bangladesh, however, exports a very limited range of garment products to the EU market. In fact, as few as five product categories (woven shirts, blouses, knitted shirts and T-shirts, sweater, jackets and trousers) account for more than 85% of Bangladesh's exports to the EU region.

Table 5.6 shows the growth of US apparel import as well as the growth and market share of some major exporters to US market in 1998 and 1999. It can be seen that the US apparel import as a whole had a growth rate of more than 12% during 1998 (calendar year). But during the first ten months of 1999 (January – October) the growth has been only 4.24%. This has created an unfavorable demand situation for Bangladesh apparel exporters. The same table shows that during the same period Bangladesh apparel export has declined by 0.18%.

Table 5.6 Growth in apparel export to USA for some major exporters

		1998 (Jan. – Oct.)		1999 (Jan. – Oct.)	
Country	% share in US market	Export Value in mln US $	Growth over previous year	Export Value in mln US $	Growth over previous year
Mexico	14.42	5423			
China	8.74	3764	-3.92%	3815	1.36%
Hong Kong	8.41	3784	12.55%	3554	-6.16%
Dominican Rep.	4.69	1931	5.67%	1933	0.11%
Honduras	4.15	1575	12.88%	1772	12.54%
S. Korea	4.12	1628	24.59%	1793	10.12%
Taiwan	3.93	1828	2.12%	1677	8.28%
Philippines	3.65	1489	9.25%	1567	5.23%
Indonesia	3.27	1465	3.89%	1441	-1.67%
Bangladesh	**3.25**	**1449**	**12.34%**	**1446**	**-0.18%**
Total US import	100	41077	12.48%	41077	4.24%

Source: US Department of Commerce Web Site

The decline in Bangladesh's apparel export to the US market is worrying indeed. There are indications that Bangladesh has been losing out some of its markets to its competitors in recent times. Exporters attribute this lack of competitiveness to factors like failure of timely shipments, higher lag time, etc. rather than pure price factors.

Future Prospect: The acute dependence of Bangladesh's exports on ready-made garments and knitwear remains an issue of grave concern. Failure to diversify exports makes the economy vulnerable to the vagaries of the international market. The absence of adequate backward linkage industries has compounded the problem, which is reaching threatening proportions as the deadline of MFA phase-out in 2005 is approaching fast. The inclusion of China, the biggest competitor in apparel market, in the WTO has created some added concern. Then the USTDA 2000 (United States Trade Development Act) providing duty free and quota free access to the seventy-two countries of Sub-Saharan Africa and Caribbean Basin poses a great challenge to Bangladesh's apparel exports to the US market.

The Uruguay Round Agreement on Textiles and Clothing (ATC) calls for the gradual elimination of the MFA and the complete integration of the textiles and clothing sector into GATT 1994 by the year 2005. When this happens, Bangladesh will lose its guaranteed access to the US market and its unrestricted and preferential access to the EU.

Bangladeshi exporters have been very successful in penetrating the highly competitive markets of EU and the US. For instance, while the quota realization rate for different categories of apparel has recently been nearly 100% for Bangladesh, it has been

around 51-89% for India, and below 50% for Pakistan. Bangladesh has a comparative advantage in the relatively labor-intensive garment sector with its very competitive wage rates (0.24 US$/hr). For India, Pakistan and Sri Lanka, the corresponding wage rates are 0.56, 0.49, 0.39 US dollar per hour respectively[7]. Over the years, Bangladesh has been able to improve product quality and has gained greater acceptance in international markets, with apparel exports increasing from 5.2% of total world imports in 1995 to 6.8% in 1997. Garment exporters have gradually moved to the higher-priced market in recent years and are increasingly exporting sophisticated items like high quality suits, jackets and branded items. In recent years some exporters have also been successful in penetrating Japan's extremely quality conscious market. Nevertheless, Bangladesh lies far behind major competing countries as far as product variety and quality is concerned.

Given its existing market penetration rates, consumer acceptance of Bangladeshi products, inexpensive and relatively skilled workforce, and the increasing dynamism of entrepreneurs, Bangladesh should be able to compete effectively in a more liberal trade environment. However, the survival and growth of the garment industry in a quota-free environment will depend upon the private sector's ability to develop new products, improve product quality and increase productivity, as there will be intense competition from countries like China and India.

Streamlined import procedures, improved customs administration, minimal clearance delay, and removal of infrastructural bottlenecks will also be necessary for improving the performance of the garment sector. Additionally, there will be the need for training workers, improving working conditions, providing incentives, re-organizing the shop floor, etc. These will help the garments industry compete effectively and survive in the post-MFA era.

The growth in the RMG sector has encouraged backward linkages for accessories, with almost 80% of the garments industry's accessory requirements such as elastic, collar bands, hangers, metal clips, etc. being produced locally. Unlike in the 1970s, these industries are now thriving in a free-trade environment and have not needed extra protection or special incentives to help them meet international competition.

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[7] See International Textile Manufacturers Federation (ITMF), *International Production Cost Comparison,* Zurich, 1995.

With the MFA's impending phase-out, the Government is providing a cash incentive of 25% for knitwear exports that use domestically produced fabric to promote domestic textile industry. Substantial new private spinning capacity has been created. Public spinning mills have, on the other hand, continued to perform poorly with declines in capacity utilization. Low labor productivity, power failures and poor liquidity are some of the reasons underlying the increasingly higher losses of the state-run textile companies.

Developing backward linkages in the textile sector alone cannot by itself ensure the survival of the garment industry. Diversifying exports both within the garment sub-sector and outside of garments is important. Despite expansion, domestic fabrics have not been able to meet the garment industry's rapidly growing demand. Garment exporters who use woven fabric only procure about 15% of their requirement from the domestic market most of which comes from the newly established private mills. Large investments are required in the domestic textile industries. Both domestic and foreign private investment should be encouraged for that purpose.

5.3 Leather and Leather Products

The leather and leather goods manufacturing in Bangladesh dates back to the tenth century when it was engaged only in the vegetable tanning of leather. Over time it has branched out to wet-blue, crust and finished leather and a number of leather products, primarily footwear. The leather goods industry is an export-oriented industry and the comparative advantage lies in the cheap labor (the wage being among the lowest in the world), and the abundant availability of hides and skin, which constitute the main raw material of the industry. However, the industry has been experiencing a stagnant growth in terms of a number of enterprises and real value added. Its contribution to employment is very low, and its share in the country's total exports fluctuates substantially. The changing share of leather goods in Bangladesh's exports is shown in Table 5.7.

Table 5.7	Share of Leather in Total Export
Time Period	share of leather
1981-82	10.1%
1986-87	12.6%
1997-98	5.2%
1999-2000	3.01%

Source: BIDS (Technological Competitiveness in Leather and Leather Goods Manufacturing in Bangladesh, Dr. Mondol, March 8-9, 1999)

There was an expectation that the leather sector could be as dynamic as the garments sector in Bangladesh. This expectation has not materialized, however. The exporters identify lack of internal competitiveness as well as adverse demand in international markets as the reason behind its stagnant growth. Local tannery units are ill-equipped and technologically backward compared to those in other leather exporting countries. The falling world price, too, has affected this sector. Unit price of leather fell by more than 40% the past couple of years.

In the case of leather goods export (mainly footwear) the situation is somewhat better (though footwear export constitutes less than one third of the leather export). Footwear export increased by more than 18% and the export of finished and semi-finished leather by 15% during 1998/99 compared to the previous year. The international leather market is, however, passing through a recession as demand for leather fell sharply in Asian countries, which imports the bulk of Bangladesh's leather. Many leather goods factories were shut down in Asian countries especially in Korea, following the 1997 financial crisis while others suspended fresh import of raw leather and used previous stock. Meanwhile, the local footwear industry is being severely threatened by cheap imports that are smuggled and dumped from neighboring countries such as Myanmar and India.

Export earnings from the sector could be higher if export of value-added leather goods could be increased. The incomes from leather goods still remained insignificant in 1998-99, according to figures compiled by the Export Promotion Bureau. Even international leather fairs organized by the Bangladesh Leather and Leather Goods Exporters Association for the last two consecutive years could not help much to expand the export basket.

The key elements of trade and industrial policy pursued by the government to promote the leather and leather products industry are the following:

1) Export of raw-hides and skin is banned to promote leather finishing of domestic supplies of hides and skins.
2) Export of wet blue leather is banned to promote the export of finished leather.
3) To promote the export of semi-finished and finished leather, various incentives are allowed on export earnings from these sources.
4) There is the provision of investment funds to aid the conversion of wet blue units into finishing units.

These policies have not, however, produced the desired effects. The prohibition on the export of hides and skin led to smuggling of many of the best hides and skins to India. Moreover, the low prices resulting from the export ban may have contributed to inadequate preservation and flaying of hides and reduced both the quality and quantity of hides available for processing.

Banning of export of wet blue leather may have inhibited forward and backward integration of the industry. While the banning of wet blue leather export is deliberate, this has inadvertently discouraged the production of shoes and shoe uppers because of the interrelated nature of leather and leather goods industry. Exports of footwear and leather products have not been specifically encouraged, and have, in fact faced the general discouragement by all exporters.

5.4 Frozen Food

Bangladesh is one of the largest frozen food exporting countries in the world. According to 1995 statistics, Bangladesh was the second largest exporter in the world with 4.21% share in world production. About three-quarters of frozen food exports from Bangladesh comprise primarily of shrimps. The rest include various types of fish including white fish. Bangladesh is the seventh shrimp producing country in the world and 50% of shrimp export goes to European Countries. The second and third largest markets are in the USA and Japan. As in leather, the comparative advantage of frozen food lies in cheap labor and natural resource - namely shrimp.

There are about 123 shrimp processing firms in Bangladesh. About 55 of these firms were not operating in 1999, and those that were producing and exporting have a very low level of capacity utilization. But there seems to be a sign of hope for this sector.

Bangladesh exporters have regained the European market they had lost previously due to the European Union ban on the grounds of microbiological hazard. Export to EU has been very impressive after the lifting of the ban. But the sector has not fared well in the US market. In the Asian market also (constituting mainly of East and South-East Asia), the sector has not done well, mainly due to the price competition from the other East and South East Asian fish producing countries like Indonesia, Thailand and Vietnam. The fierce price competition has affected the sector not only in Asian markets, but also in the major markets of frozen food, particularly for frozen shrimp export. The export earnings from frozen food was US$ 343.82 million in 1999-2000.

Facilities extended to this sector include provision of funds from financial institutions, both government and private, for freezing plant projects and working capital and assistance in the form of incentives to boost export. This sector also enjoys the facilities of GSP. Prior to 1992 the sector was allowed export performance benefit (XPB) as an export incentive, but the XPB benefit was abolished from 1 January 1992 without any alternative incentive being provided.

5.4 Jute Goods

The jute industry of Bangladesh, is the foremost traditional activity inherited from pre-independence era. Export of raw jute was the major source of foreign exchange for Bangladesh for a long time until the RMG sector took its place in the mid-eighties. A structural shift took place in the economy from the eighties when the traditional exports were taken over by non-traditional exports. However, jute is still an important source of foreign exchange earnings. This sector needs to be diversified by substantial improvement in the design and technology of the jute products.

Jute sector, constituting of both raw jute and jute goods has many problems. Several factors have been responsible for the continuous decline in raw jute export. China is one of the biggest raw jute export market of Bangladesh but their demand for raw jute has declined largely because of increased domestic production. Another reason is the sharp fall in the price of raw jute. Higher production in all the jute growing countries, coupled with low demand, has contributed to problems of raw jute exports.

As far as jute goods export is concerned, the sector as a whole has not performed that bad (sector growth for the year has been 7.37%), but there has been some setbacks in the EU market. The fall of exports to the EU market was basically caused by lower import by Belgium, which constitutes around 60% of the total EU imports of jute goods. Belgium mainly imports jute yarn from Bangladesh, which is used there to manufacture carpets for exporting all over Europe. One of the biggest importers of Belgian carpets happens to be Russia. Lately, the slump in the Russian economy affected Belgian carpet industry heavily.

In fact, the major factors which reduced jute markets in Europe and indeed world-wide are: the move towards bulk handling which started in the 1950s; paper and plastic bags, the use of which grew rapidly in the 1960s, and above all, the introduction of flat and circular woven polypropylene plastic tapes for carpet backing and sacks, which started in 1966 and radically changed the outlook for jute goods markets around the world.

A bright side of jute products is that the competing polypropylene products are environmentally damaging while jute goods are not. It may therefore be possible to regain part of the lost markets of jute goods, provided the industry can develop new products and make them price-competitive vis-à-vis the synthetic substitutes

The problems faced by the jute industry in Bangladesh are, however, more fundamental than simply a lack of new products. They include: excess capacity in public sector jute mills; a structure and tradition which favor employment at the expense of productivity and indeed profitability; centralized bureaucratic decision making which has progressively got worse since nationalization in 1972; falling standards of maintenance and management; and the huge debt problem. All these problems will need to be tackled before the present spiral of decline becomes irreversible.

Chapter Six

IMPACT OF TRADE LIBERALIZATION ON EXPORTS: AN ECONOMETRIC ANALYSIS

6.1 The Hypothesis

The study develops and tests a specific hypothesis to analyze the impact of trade liberalization on the exports of Bangladesh. This chapter describes the hypothesis and highlights the econometric model and the data that are used to test the hypothesis.

The econometric model built for the purpose of this study is a reformulation of the export supply function as conceived by Leamer and Stern (1970), which was also applied to Bangladesh exports in an earlier research conducted by the Centre for Policy Dialogue (1995). In that study, only two explanatory variables of export supply were used, namely, the supply price and the production capacity. The econometric model employed in the present study, too, applies these two variables in the equation but then goes a step further by incorporating certain other variables to assess their impact on exports. Most of the available studies on the impact of trade liberalization have used measures of effective rate of protection, patterns of average tariff reduction, trend of nominal protection, total factor productivity and so on as explanatory variables. This study departs from these other studies in that it explicitly incorporates the tariff and the exchange rate variables in the multiple regression model along with some additional variables like the Generalized System of Preferences and the Quota on apparel exports, which are deemed important in influencing exports. Partial regression equations are also estimated for capturing the effect of Quota on apparel exports to USA and the effect of GSP facilities on exports to EU countries.

The testable hypothesis of this study is:

Liberalization of import and exchange rate has had a significant positive impact on Bangladesh's export performance.

In addition, the effect of EU GSP facilities and US Quota on exports is examined in the study.

6.2 Estimation of Total Export Supply Functions

In order to study the impact of liberalization on the performance of the export sector, a complete model of export supply relationships for Bangladesh has been developed and estimated. On *a priori* basis, it is well known that exports (supply) of goods from a country depend on a number of factors, namely,

- the relative price of the export product (the world price relative to domestic prices of exportables),
- the production capacity of the exportable sector (in the short run),
- the import tariff that the exporter faces for imported inputs,
- the existing exchange rate, and
- export incentives (including the exogenous factors such as the GSP facilities that the country gets from the EU region, and the Quota imposed by importing countries on certain products such as textiles quota imposed by USA under MFA).

The relationship can be described as in Equation 6.1:

$$X = f(Px, Py, CP, T_{im}, ER, GSP, Q) \qquad \text{Eqn (6.1)}$$

where, X = Volume of exports

Px = World price of exports

Py = Price level of other competing goods, in this case local goods

CP = Production capacity of the export sector

T_{im} = Average import weighted tariff rate on imported inputs

ER = Exchange rate

GSP = Generalized System of Preferences

Q = Quota on exports imposed by an importing country

For econometric estimation, the following log-linear functional form is proposed for the export supply function:

$$\log Xs = \alpha_0 + \alpha_1 \log P + \alpha_2 \log CP + \alpha_3 \log T_{im} + \alpha_4 \log ER + \alpha_5 \log GSP + \alpha_6 \log Q + E \quad \text{Eqn (6.2)}$$

where, X_S = Export Supply in real terms

P = Relative Price of exports

CP = Production Capacity of the export sector in real terms

T_{im} = Average Import-weighted Tariff on imported intermediate and capital goods

ER = Exchange Rate

GSP = The ratio of GSP-covered exports to total exports to EU from Bangladesh

Q = Quota Fill Rate in percentage per annum on textiles imposed by USA

E= error term

A log linear formulation is adopted since such formulation is appropriate for time series data; it has the advantage that the coefficients are elasticities with respect to the variables concerned.

Thus the estimable equation could be written as:

$$\log \{(X^*ERi)/WPI\} = \alpha_0 + \alpha_1 \log \{(P^*ERi)/WPI\} + \alpha_2 \log (CP/WPI) + \alpha_3 \log T_{im} + \alpha_4 \log ER + \alpha_5 \log GSP + \alpha_6 \log Q + E \quad \text{Eqn. (6.3)}$$

where, X = Export Supply in real terms

ERi = Weighted exchange rate index.

WPI = Wholesale price index of Bangladesh.

{(X*ERi)/WPI} = Volume of Export supply in millions of dollars, multiplied by Weighted Exchange Rate Index of major trading partners, and then deflated by the whole sale price index to get the real exports.

{(P*ERi)/WPI} = Price Index of Exports multiplied by ERI and deflated by WPI to get the relative price of exports.

(CP/WPI) = Trend Growth of Output or Production Capacity of the export sector deflated by the wholesale price index.

T_{im} = Average import weighted tariff on imported inputs.

ER = Exchange Rate

GSP = GSP covered exports as a ratio of total export to EU countries from Bangladesh. [The Generalized System of Preferences (GSP) is a preferential treatment of tariff (by way of a reduced rate of duty or at zero duty) granted by the industrially developed countries to the eligible products imported from the developing or least-developed countries. The benefit under the GSP is offered for increasing the export earnings of the preference receiving countries].

Q = Quota fill rate.

For the purpose of estimation, the nominal export values are deflated by the wholesale price index (WPI). Available export data are expressed in U.S. dollars. The dollar values are first transformed into local currency value by using the trade weighted exchange rate index, which are then deflated by WPI. The reason for taking a weighted exchange rate lies in the fact that different countries have different weights in the export basket. As such the weighted exchange rate is estimated by taking the top fifteen major trading partners of Bangladesh (Appendix Table A.2). Similarly, CP, production capacity, is deflated by WPI to express the values in real terms. P, the ratio of world price to domestic price, is defined as the world price multiplied by weighted exchange rate to obtain the world price in domestic currency terms, which is then divided by WPI.

6.2.1 Expected Signs of Estimated Coefficients

The basic explanatory variables are suggested by the standard theory of supply. The supplier (exporter) will export that commodity which gets the maximum price. The quantity of exports supplied by the country will thus depend on the relative price of its exports (i.e., relative to the price of other local products). Another variable is the production capacity up to which the exports can be supplied at a given time. In order to capture the impact of trade liberalization on exports, the average import weighted tariff rate and the exchange rate are incorporated in the export supply function. Export incentives like the guaranteed access through U.S. Quota and the GSP facilities offered by the EU are included as independent variables in the function. The expected signs of these variables are discussed in the following:

P(+): On *a priori basis*, it is expected that the higher the price of exports relative to other local product prices, the higher will be the incentives to increase exports. The coefficient is expected to have a positive sign.

CP (+): The larger the production capacity of the tradable export sectors the better the possibility of enhancing exports, particularly in the short run. A study by the Centre for Policy Dialogue (1995) shows that the production capacity has a dominant influence on exports and the coefficient of the capacity variable bears the expected sign and is statistically significant at 1%. The result of that study shows that, as far as Bangladesh is concerned, export supply is primarily a function of production capacity. The elasticity of export supply with respect to capacity output was found to be 3.9. The explanatory power of the regression equation was 98%.

T(-): An increase in import tariff accords higher protection to domestic industries, but at the same time creates or increases anti-export bias, which discourages exports. Likewise, a reduction in the tariff level is expected to stimulate exports by encouraging export production based on imported inputs. The tariff liberalization variable is thus expected to appear with a negative sign. As has been seen in the literature review in Chapter 3 (Harrison and Hanson 1999), both openness to trade and liberal exchange rate policies have a significant impact on long run export growth.

ER (+): When the exchange rate regime is liberalized, it is expected to have a positive impact on exports. The rise in the exchange rate (more taka per one dollar's worth of exports) is immediately conceived by exporters as a windfall gain to which they respond by an attempt to increase exports.

It is worth mentioning, however, that even a large depreciation of the currency in terms of the nominal exchange rate may in reality mean only a modest depreciation in terms of the real effective exchange rate (REER). The taka may appreciate against some currencies even as it depreciates against the dollar, an outcome especially likely in an era of floating exchange rates. Thus an index of the trade-weighted exchange rate provides a

better measure of what a representative exporter actually earns than does the nominal taka/dollar exchange rate. This measure includes export taxes and the subsidy provided under various schemes to take account of the actual earnings of the exporter. The sign of the coefficient of REER is also expected to be positive.

GSP (+): The larger the product coverage under GSP, the wider the options are to increase exports, by availing of the facility. By utilizing this facility the EU importers can import Bangladesh's products at zero duty as they get a 100% duty drawback when the products fulfil the eligibility criteria of GSP. The coefficient of GSP is expected to be positive as this facility gives an edge to Bangladeshi exporters over exporters of other countries that do not enjoy this facility.

Q(+): Quota, a quantitative restriction by the importing country, is meant to be a restraint on exports. But in the case of Bangladesh, the U.S. quota on apparel exports means the opportunity of guaranteed access in the U.S. market. Increase in quota should be an incentive to increase exports. Thus, the coefficient of this variable is expected to be positive.

6.2.2 Data Used for Estimation of the Export Supply Functions

Exports (X): Data on total export and on exports to fifteen major trading partners for the period 1972/73 -1997/98 have been collected from Export Promotion Bureau (*Export from Bangladesh 1972-73 to 1997-98*). As these values are in U.S. dollars and are to be deflated by the wholesale price index of Bangladesh, which are in taka, the export values in dollars are first converted to taka by using the exchange rate index to convert it into real terms. (Appendix Table No. A.3).

The wholesale price index is taken from different issues of the Statistical Yearbook of Bangladesh of the Bangladesh Bureau of Statistics and converted to the same base year, 1990. (See in Appendix Table No. A.2).

The weighted exchange rate series are calculated from the IMF, IFS (Appendix Table No. A.2).

Price (P): Price of exports (f.o.b.) are taken from World Tables 1995, published for the World Bank by the Johns Hopkins University Press, Baltimore and London. The export price for 1972/73 is calculated from World Tables 1993 and the prices for 1993-1997/98 from BBS Statistical Yearbook 1998. The price series is first multiplied by the weighted exchange rate index (ERi) to convert it to taka terms and then deflated by the wholesale price index of Bangladesh (WPI) (Appendix table A.4).

Production Capacity (CP): Data on production capacity are collected from the World Bank Country Reports for Bangladesh and different issues of the Statistical Yearbook, Bangladesh Bureau of Statistics. For estimating the series of the tradable sector, values are taken in millions of current taka on agriculture (crops, livestock and fisheries excluding forestry) and industry. The exponential trend growth rates are then estimated, which are deflated by the WPI (wholesale price index) of Bangladesh. This gives the production capacity values in real terms (Appendix Table A.5).

Tariff (T_{im}, T_m): Average import weighted tariff is taken from the Bangladesh Tariff Commission (Appendix Table A.6). The average weighted import tariff on intermediate goods and capital goods (T_{im}) is taken on the assumption that the cost of exports is affected by the import duty that exporters have to pay for importing intermediate inputs and capital goods for the manufacture of exports. This is a ratio and hence it does not require to be deflated by WPI. Unfortunately data on average import weighted tariff on imported raw materials and capital goods is available for the period 1991-1999 only.

As the short period of available data on raw materials and capital goods reduces the number of observations and thus the degree of freedom of statistical tests, the average import weighted tariff on all imports, which is the ratio of realized customs duty to total import payments (T_m), is used in the regressions. The data on T_m is available for the whole study period covering 1972/73 to 1997/98. This data is collected from Bangladesh Bank's Economic Trends, 1988 and 1999.

Exchange Rate (ER): Two variants of the exchange rate are used. One is the Nominal Exchange Rate (NER) and the other is the Real Effective Exchange Rate (REER). This is

intended to find out which of these variables better explains the export performance of Bangladesh over the past twenty-six years. NER is the simple taka/US$ exchange rate (Appendix Table A.7). REER is the nominal trade-weighted exchange rate deflated by a weighted average of consumer price indices (1990 =100) for the major export trading partners, relative to the consumer price index in Bangladesh. [The nominal trade weighted exchange rate is based on an index applied to the actual 1973/74 exchange rate, a weighted average of the exchange rates of Bangladesh's major export trading partners, with the weights reflecting their share in total exports for the period 1990.] (Appendix Table A.7).

Data on Nominal Exchange Rate (NER) is collected from different issues of Economic Trends, Bangladesh Bank. Data on REER is collected from IMF. Data for the period 1973-74 to 1979-80 is taken from *World Development Report* Vol.16, No.12 (Foreign Exchange Regimes and Industrial Growth in Bangladesh) and calculations are made to convert data to 1990 =100 base to match with the rest of the series.

Regressions are carried out by taking the levels of REER. Since this series is already in real terms, it was not required to be deflated by the wholesale price index or any other deflator (Appendix Table A.7).

Generalized System of Preference (GSP): Data on GSP facilities is collected from the reports and publications provided by the local office of the European Union in Dhaka.
GSP scheme was first implemented by six states of EEC in July 1971. Currently twenty-nine developed countries offer GSP facilities to Bangladesh. EU GSP Scheme lays down that the origin criteria have to be met if the product is to qualify for preferential treatment. If the product uses imported materials, then different countries follow different rules to determine whether the imported materials have undergone sufficient transformation for the final product to qualify as originating in the exporting country. There are the process criteria and the value added criteria. EU GSP Scheme follows the process criterion. Process criterion requires that materials used in the manufacture of a product must undergo sufficient transformation. For the purpose of quantifying the effect of the GSP facilities, the ratio of actual exports that utilized GSP facilities over Bangladesh's total exports to the EU region is used in this study. This should explain part

of the exports to EU countries that provide GSP facilities to Bangladesh. A partial regression equation of exports to the twelve EU countries that provide GSP to Bangladesh on GSP as the independent variable is also estimated.[1] Data on GSP as a ratio of exports from Bangladesh covered by GSP facilities to the country's total exports to EU countries is provided in Appendix Table A.8.

Quota (Q): Bangladesh faces Quota restrictions in USA and Canada on its apparel exports. As consistent data for Canada is not available, Quota on textiles in USA alone is used for the analysis. It should not make any significant difference because Bangladesh's exports to Canada are quite small compared to exports to USA. Total exports, exports to fifteen countries as well as exports to USA are regressed on the Quota variable.[2]

Data on Quota in USA is obtained from US Textile Sector Status Report for the period 1990-1999, and data for the period of 1989-1996 is collected from the BGMEA (Bangladesh Garments Manufacturing and Exports Association). The Textile Report presents the quota percentage filled which is a ratio of released over control limit. The data on quota fill rate is given for each category of exports. The data is given in dozens, dozen pairs, numbers and kilograms for different categories. It is necessary to convert the data to square meters according to the conversion table provided by the U.S. Commerce Department in order to obtain an aggregate percentage filled for the whole year to be used for estimation. As the data is in terms of percentages, it is not required to be deflated by the WPI of Bangladesh. The same conversion factors are given in both the U. S. Customs Textile Status Report and U.S. Department of Commerce data. Data on quota is given in Appendix Table A.9.

6.3 Estimation of the Export Supply Function for the Major Export Products

Supply functions are estimated for RMG, leather, frozen food, and jute goods sectors, which together account for 90 percent of the country's total exports. The model remains the same for the apparel sector while the quota variable is eliminated for leather,

[1] These countries are Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Britain (UK).
[2] The figure on exports to USA is the total amount of exports to USA and not just export of apparel.

frozen food and jute goods sectors as these do not face any quota in the importing countries.

6.3.1 Data Used for the Estimation of Supply Functions of the Major Export Products

Export: Export supply data for these four categories of products in terms of Taka are obtained from the Export Promotion Bureau and deflated by the wholesale price index of manufactures (WPIm).

Price: Unit price indices of exports of these products are deflated by the wholesale price index of manufacturers. The related data are obtained from Bangladesh Bureau of Statistics, Statistical Yearbook and are provided in Appendix Tables A.14 and A.15.

Production Capacity: Data on production capacity is derived from the trend growth rate of output of the respective products, estimated by using CMI (Census of Manufacturing Industries) data on gross output. These are the predicted values of estimated exponential growth functions. Data on gross output of all these products are provided in Appendix Table A.12.

Data on the independent variables, tariff, exchange rate, GSP, and quota, remain the same as used for the regression equations of total exports and exports to fifteen major trading partners.

Chapter Seven

EMPIRICAL RESULTS

Empirical results of the study are presented in Tables 7.1 and 7.2. The overall fitness of the results as shown by the adjusted R^2, their significance as shown by the t and F values, and other statistical information like the sum of squared residuals, Durbin-Watson statistic, period of observation, etc, are also provided in these tables.

In each of the tables the dependent variables are shown horizontally with the statistical test results while the independent variables are shown vertically. The following points are worth nothing with regard to the presentation of results.

In Table 7.1 total exports and exports to fifteen major trading partners are shown as dependent variables. Data on all the variables except GSP and Quota are available for the sample period 1972/73-97/98. For GSP, data is available for the period 1983/84-1997/98 while only eight years of data from 1990/91 to 1997/98 is available for Quota. The inclusion of GSP and Quota variables thus reduces the number of observations and hence the degree of freedom to such a low level that making any meaningful interpretation of the statistical results becomes difficult. For this reason, the analysis first begins by regressing exports on price, production capacity, tariff and exchange rate but excluding the GSP and Quota. Multiple regression is then carried out by including GSP and Quota as additional explanatory variables.

Regressions are carried out in line with the assigned model and then a few changes are made in the liberalization variables to see whether and how far the changes modify the results. This is done in the case of the two important variables, namely the average import tariff and the exchange rate. As has already been discussed in Chapter Six, average import tariff is calculated in two ways: one as the ratio of customs duty over total import value (T_m), and the other, as the average import weighted tariff on raw materials and capital goods (T_{im}). As observed data on T_{im} is for a very short period, only a partial regression of exports on T_{im} is presented while in the multiple regression equations T_m is used. Results of regression of exports on both nominal and real effective exchange rates are also presented separately.

Results of two partial regressions of exports are presented, one for exports to USA and the other for exports to EU with respect to GSP with a view to capturing the effects of Quota in USA and GSP facilities in EU countries, respectively.

Results of the equations in Table 7.1 are explained separately and then the main findings are highlighted.

Table 7.2 presents the results concerning the four major export items anlayzed in this study. These are RMG, leather goods, frozen food, and jute goods. This table has the same set-up as in Table 7.1 except that the results of equations with real effective exchange rate as an explanatory variable are not presented because REER does not appear statistically significant in any of the equations pertaining to the four products, a finding similar to the results obtained for total exports and exports to Bangladesh's fifteen major trading partners.

Table 7.1: Aggregate Export Supply, Regression Estimates

Eqn.	Dependt variable	Cons-tant	Price P	Prdn Capcit CP	Ave M Tariff Tm	Exch Rate ER		GSP GSP	Quota Q	Adjstd R^2	F-stat	Sum of sqd.resid	period	No. of Obs	DW
		INDEPENDENT VARIABLES													
Total Exports															
1a)	Xs total	-3.38	0.46	1.13	-0.7	0.44	NER			0.96	145.6*	0.22	1972/73-97/78	26	1.5
	t-value	-2.46	4.97*	8.05*	-4.09*	7.52*									
1b)	Xs total	-3.36	0.35	1.59	-0.61	-0.44	REER			0.91	58.36*	0.49	1973/74-97/98	25	1.21
	t-value	-0.77	2.51**	5.66*	-1.85	-1.59									
2)	Xs total	12.49			-1.49	(Tim)				0.6	10.02	0.28	1991/92-97/98	7	0.65
	t-value	9.07			-3.16*										
3a)	Xs total	5.21				0.73	NER			0.68	54.89	1.92	1972/73-97/98	26	0.28
	t-value	16.74				7.41*									
3b)	Xs total	14.78				-1.55	REER			0.4	17..19	3.58	1973/74-97/98	25	0.34
	t-value	8.41				-4.14*									
4a)	Xs total	-26.3	0.59	1.16	0.27	0.02	NER	3.67	0.97	0.98	110.8	0	1990/91-97/98	8	2.65
	t-value	-3.92	1.15	0.68	0.68	0.04		3.37	3.87						
4b)	Xs total	19.2	0.94	1.1	0.08	-1.01	REER	3.31	0.68	0.99	529.5	0	1990/91-97/98	8	2.89
	t-value	-4.15	3.82	7.17	0.43	-1.94		6.37	3.6						
Exports to Fifteen Major Trading Countries															
5a)	XS (15)	-7.22	0.15	1.61	-0.53	0.6	NER			0.96	152.8	0.44	1972/73-97/98	26	1.3
	t-value	-3.69	1.17	8.09*	-2.25	7.18*									
5b)	XS (15)	-5.1	-0.03	2.12	-0.54	-0.72	REER			0.9	57.75	1.05	1973/74-97/98	25	0.8
	t-value	-0.81	-0.14	5.15*	-1.11	-1.77									
6)	XS (15)	12.85			-1.67	(Tim)				0.58	9.56	0.37	1991/92-97/98	7	0.67
	t-value	8.12			-3.09*										
7a)	XS (15)	3.53				1.12	NER			0.75	78.21	3.14	1973/73-97/98	26	0.33
	t-value	8.86				8.84*									
7b)	XS (15)	18.16				-2.37	REER			0.45	20.64	6.99	1973/74-97/98	25	0.27
	t-value	7.4				-4.54*									
8a)	XS (15)	-31.9	0.69	1.83	0.37	-0.52	NER	3.87	1	0.98	105.5	0	1990/91-97/98	8	2.65
	t-value	-4.12	1.16	2.62	0.81	-0.71		3.08	3.45						
8b)	XS (15)	-18.3	0.93	1.28	-0.08	-1.58	REER	3.51	0.56	0.99	2168	0	1990/91-97/98	8	2.89
	t-value	-7.08	6.8	15.02**	-0.73	-5.45		12.1	5.37						
Exports to USA and EU															
9)	XS USA	-1.73							1.74	0.51	8.33	0.51	1990/91-97/98	8	1.2
	t-value	-0.66							2.86**						
10)	XS EU	-6.42						2.96		0.41	11.19	2.89	1983/84-97/98	15	0.45
	t-value	-1.61						3.29*							

Note: * denotes significant at 1% level and ** denotes significant at 5% level

NER = nominal ER, REER = real effective exchange rate

Tm = customs duty over total imports, Tim = average import weighted tariff on raw material & capital goods

Eqn. # 1-4, Total Export Supply:

Eqn. 1a): The multiple regression of total exports (Xs) with respect to price (P), production capacity (CP), average import weighted tariff (T_m) and nominal exchange rate (NER) shows that it has a good fit as shown by the adjusted R^2, which is 0.96. The F-statistic shows that all these variables are jointly significant. The coefficients are individually significant at 1% level as shown by their respective t-values carrying their expected signs. This equation depicts the correct direction of change between the dependent and independent variables, which is in conformity with theory. However, in the case of log-linear regression equations, which are used in this study, the magnitude of the elasticity coefficients needs to be carefully looked at for drawing conclusions on the effect of the independent variables on the dependent variable.

In this equation total export is inelastic with respect to price ($e_P = 0.46$), tariff ($e_{Tm} = -0.7$), and nominal exchange rate ($e_{NER} = 0.44$), but elastic with respect to production capacity ($e_{CP} = 1.13$). The magnitude of these elasticities indicates that it is difficult to draw a firm conclusion on a strong positive impact of the trade liberalization variables on total exports. This is indicated by the fact that the elasticities with respect to tariff and nominal exchange rate are lower than unity (0.7, 0.4). However, the effect of tariff liberalization is more prominent than that of nominal exchange rate. Price does not appear to be have any strong effect on exports either. It is only the production capacity of the tradable sector that is the sole dominant factor in promoting exports as shown by its high elasticity coefficient. This result has important policy implications as is discussed in Chapter Eight.

Eqn. 1b): In equation 1b, real effective exchange rate (REER) is used as an explanatory variable instead of nominal exchange rate (NER). This substitution of NER for REER makes a striking difference in the sign of the coefficient of REER. The multiple regression of total exports (Xs) on price (P), production capacity (CP), average import weighted tariff (T_m), and real effective exchange rate (REER) has a good fit as shown by the adjusted R^2, which is 0.91 and the F-statistic shows that all these variables are jointly significant. However, the tariff variable carries the expected negative sign but is not

statistically significant. The exchange rate variable is not only not significant, it also appears with the wrong sign. The price and production capacity are with the correct, positive signs and have coefficients, which are statistically significant at 5%. The elasticity with respect to price is below unity. As in Eqn. 1a, it is only the production capacity that has a dominant effect on exports. **Thus, this finding does not lend a strong support to the hypothesis of the study that tariffs and real effective exchange rate liberalization has a significant impact on stimulating exports.**

The qualitative difference appearing in the results when the real instead of the nominal exchange rate is used, is worth noting. With nominal exchange rate, not only the exchange rate variable but also the tariff variable is significant at 1% level with the expected signs (Eqn.1a). But with real effective exchange rate, the exchange rate variable appears with a perverse sign and is also not significant. The tariff variable appears with the correct sign but it is not significant (Eqn. 1b). This finding is further confirmed by the two partial regressions of exports on REER and NER, which are presented in Eqn. 3a and 3b.

Eqn 2: This partial regression equation of total exports is carried out on average import weighted tariff on raw materials and capital goods (T_{im}). Tariff, as measured by average import weighted duty on raw materials and capital goods (T_{im}) is the appropriate variable to assess the impact of tariff liberalization on exports, in the production of which imported inputs are used. However, as has been discussed in Chapter Six, data on this variable is available for only 7 years for which reason it could not be used in the multiple regression equations. In Eqn. 1a and 1b, the ratio of customs duty over imports (T_m) are used since data on T_m is available for the whole study period. However, T_m is the second best option.

Eqn. 2 shows that the elasticity of export with respect to tariff is –1.49, implying that liberalization of tariff on raw material and capital inputs has a strong effect on exports. This equation supports the hypothesis of the study. It is seen that using T_m in Eqn. 1a the tariff variable has the expected negative sign and is statistically significant at 5% level even though the elasticity is lower than unity (-0.7). Eqn. 1b shows that the

elasticity coefficient of T_m has the right sign but is low (-0.61) and it is not statistically significant either.

Eqn. 3a: The partial regression of total exports on NER confirms the finding of Eqn. 1a with respect to NER. This partial regression depicts the correct direction of change between nominal exchange rate and total exports as indicated by the positive sign and the statistical significance of the elasticity coefficient. It also confirms that NER has a positive impact on total exports. However, the elasticity coefficient of NER is less than one (0.73) implying that changes in NER do not have a strong influence on exports.

Eqn. 3b: The partial regression of total exports on REER confirms the finding of Eqn. 1b with respect to REER. This partial regression depicts the incorrect direction of change between REER and total exports as the coefficient of REER appears with a negative sign. However, the elasticity coefficient of REER is –1.55, which is significant at 1% level, implying that REER has a strong but negative influence on exports. Thus, the partial regression of exports on REER shows that liberalization of REER does not promote exports.

Eqn 4a: In this equation the GSP and quota variables are added to price, production capacity, tariff, and nominal exchange rate. The equation is based on only 8 years of data. It shows that all the variables other than the tariff variable have the expected signs but none are statistically significant at 1% or even at 5% level. No meaningful conclusion can, therefore, be made.

Eqn. 4b: Here NER is replaced by REER, and GSP and Quota are added to the list of independent variables. Price, production capacity, GSP, and Quota carry the expected positive sign but none of the variables are statistically significant. Moreover, the tariff and REER do not carry the expected signs either. It must be noted here that this equation, like equation 4a, is based on only eight years of observation due to the lack of data on GSP and Quota for the whole study period. Therefore, it is difficult to make any meaningful interpretation of its result.

The main points that emerge from the above regressions of total export are:

- The supply price of exports has an elasticity that is not only below one but quite low. In spite of having the expected positive sign, which is statistically significant at the 5% level, the magnitude of elasticity indicates that it does not have a strong influence on exports of Bangladesh.

- The production capacity is the sole dominant factor positively influencing exports. Export elasticity with respect to production capacity is greater than unity. It means that the expansion in exports depends mostly on the expansion of production capacity of the export sector. This has an important policy implication, which is discussed in Chapter Eight. For example, Bangladesh needs to put in place policies to expand production capacity in the export sector encouraging investment, removing infrastructural bottlenecks, improving fiscal and financial incentives and so on.

- The tariff coefficient, which is a measure of elasticity of exports with respect to tariff, carries the expected (negative) sign. It must be noted here that average import tariff (T_m) is used as a proxy for average import weighted tariff on raw materials and capital goods (T_{im}). In the multiple regression equation (Eqn 1a) of export on T_m, price, production capacity, and nominal exchange rate, the coefficient of T_m is less than unity, which implies that export supply is inelastic with respect to tariff liberalization. But when T_{im} is used in a partial regression equation, the elasticity turns out to be –1.49 as can be seen in Eqn. 2. However, in the multiple regression using REER (Eqn 1b), the coefficient of T_m has the right sign but does not appear to be statistically significant. This indicates that tariff liberalization does not have a strong influence in stimulating exports.

- As regards the exchange rate, two variants of it are used. First, the nominal exchange rate (NER), and then the real effective exchange rate (REER), which is believed to be a better indicator of what the representative exporter actually earns. The regression analysis, however, shows that export supply is not very responsive to the liberalization of NER and less so to REER. The coefficients of NER are positive and

statistically significant but the elasticities are below unity. The result of the regression exercise, which does not find any positive association between REER and exports, is similar to the findings of an earlier study carried out by the Centre for Policy Dialogue (1996). NER appears to be the more appropriate variable because any policy change in NER can immediately be felt by the exporters through a change in their export earnings.

Eqn. #5-8, Supply of Exports to the Fifteen Major Trading Partners of Bangladesh:

Eqn. 5a: The multiple regression of exports to fifteen major trading partners (Xs_{15}) on price (P), production capacity (CP), average import weighted tariff (T_m) and nominal exchange rate (NER) shows that all the variables carry the expected signs. The adjusted R^2 of 0.96 indicates a good fit of the equation. This equation depicts the correct direction of change between the dependent and independent variables, which is in conformity with theory. The F-statistic shows that all these variables are jointly significant. However, only the coefficients of production capacity and nominal exchange rate are statistically significant at 1% level. The elasticities of these two variables are 1.61 and 0.6 respectively. The elasticity coefficient of the tariff variable is not significant even at 5% level, and the NER elasticity, even though statistically significant, is less than unity. This implies that the influence of trade liberalization variables on exports to the fifteen major trading partners is rather weak. It is only the production capacity of the export sector, which is the sole dominant factor in promoting exports as indicated by its high elasticity coefficient ($e_{CP} = 1.61$).

Eqn. 5b: In this equation, real effective exchange rate (REER) is used as the explanatory variable instead of nominal exchange rate (NER). This multiple regression of exports to fifteen countries (Xs_{15}) on price (P), production capacity (CP), average import weighted tariff (T_m), and real effective exchange rate (REER) has a good fit as shown by the adjusted R^2, which is 0.90. The F-statistic shows that all these variables are jointly significant. However, the tariff variable carries the expected negative sign but it is not statistically significant. The exchange rate variable is not only not significant, it also

appears with the wrong sign. The price and production capacity appear with the correct, positive signs but only the production capacity coefficient is statistically significant. As in Eqn. 5a, it is only the production capacity that seems to have a dominant effect on exports. Thus, this finding does not lend a strong support for the hypothesis of the study that the liberalization of tariffs and real effective exchange rate has a significant impact on stimulating exports.

The difference appearing in the results of equation 5a and 5b, when the real instead of the nominal exchange rate is used, is worth noting. With real effective exchange rate, the exchange rate variable appears with a perverse sign and is not statistically significant. This finding is further confirmed by the two partial regressions of exports to fifteen countries on REER and NER, which are presented in Eqn. 7a and 7b.

Eqn 6: Partial regression of exports to fifteen major countries on average import weighted tariff on raw materials and capital goods (T_{im}) shows that the elasticity of exports with respect to tariff is –1.67, which is significant at 5% level. This result supports the hypothesis that tariff liberalization promotes exports by reducing the cost of imported inputs used in the production of manufacturing exports. The fit of the regression equation is, however, not very satisfactory (adjusted $R^2 = 0.58$).

Eqn 7a: The partial regression of exports to fifteen countries on NER shows an elasticity of 1.12 which is significant at 1% level. This equation, with adjusted $R^2 = 0.75$, lends a strong support for the hypothesis that liberalization of NER promotes exports to fifteen major trading partners significantly.

Eqn 7b: The partial regression of exports to fifteen countries on REER shows that the REER coefficient is statistically significant but it has the wrong sign, implying that the REER does not have any positive influence on exports to fifteen countries. Instead, the equation indicates an inverse relationship between REER and exports. This is in conformity with the results found in the regressions of total exports in this study.

Eqn 8a: Regression of exports to fifteen countries on price, production capacity, tariff, NER, GSP and Quota shows that the trade liberalization variables have the wrong signs even though the rest of the variables carry their expected signs. None of the variables are statistically significant. The equation is estimated with only eight years of observation due to lack of data on GSP and Quota for the whole study period under consideration.

Eqn 8b: This equation employs all the independent variables as in Eqn 8a, except that it uses REER in place of NER. Regression of exports to fifteen countries on all the independent variables, including REER, shows that all except the REER variable have the expected signs. Only the production capacity has an elasticity coefficient above one, which is significant at 5% level.

Results of the regression exercise reported in equations 5 to 8 can be summed up as follows:

- Exports to fifteen countries are not responsive to price. This finding conforms to the results of regression of total exports on price (Eqn 4a and 4b). The coefficient of price is not also of the expected sign either, as in Eqn 5b, which uses REER as an explanatory variable.

- Exports to fifteen countries are highly elastic with respect to production capacity. The elasticities are above unity in all cases. This indicates that production capacity is the dominant factor behind the expansion of exports in Bangladesh.

- The coefficient of tariff (T_m) has the right sign but is not statistically significant. However, partial regression using T_{im} as the explanatory variable shows that the elasticity of exports with respect to tariff -1.67, which supports the hypothesis of the study that tariff liberalization stimulates exports. It can thus be stated that tariff liberalization and exports are positively related but the influence of the liberalization of tariff on exports is not that strong as is indicated by the low magnitude of the elasticity.

- The multiple regression of exports to fifteen countries shows a direct relation between nominal exchange and exports but the influence of exchange rate liberalization on exports is not very strong as is indicated by its low elasticity coefficient. However, it is not so in the case of the regressions on REER. This is confirmed by the partial regression of exports on REER as well (Eqn. 8b). The partial regression of exports on NER (Eqn 8a), however, shows a strong effect of NER liberalization on exports, which supports the hypothesis of the study.

Eqn. # 9-10, Exports to USA and EU:

Eqn 9: The partial regression of exports to USA on Quota shows that Quota has a dominant influence on exports to USA. The elasticity of exports with respect to Quota is 1.74, which is significant at 5% level. It means that Quota provides a guaranteed access for apparel export to the US market. In fact, it is now recognized that the rapid growth of Bangladesh's apparel exports to the US market, has been possible largely because of the availability of Quota in that country.

Eqn 10: Exports to the EU countries are regressed on the GSP variable, which shows that Bangladesh's export to EU markets is greatly influenced by the provision of the Generalized System of Preference. The elasticity coefficient of this variable is 2.96, which is significant at 1% level.

Table 7.2: Regression Estimates of RMG, Leather Goods, Frozen Food, and Jute Goods

		INDEPENDENT VARIABLES												
Eqn	Dependent Variable	Cons-Tant	Price P	Prdn capcity CP	Ave M Tariff T_m	Exchng Rate ER	GSP GSP	Quota Q	Adjusted R^2	F-stat	Sum Sq.res-	Period	Number of Obs	DW
1)	Xrmg	-9.67	0.64	0.64	-0.59	3.56	0.66		0.97	64.19	0.01	1987/88-95/96	9	3.3
	t-value	-0.88	0.6	0.34	-0.4	0.91	0.61							
2)	Xrmg	-5.59	0.61	0.17	-0.36	3.01			0.98	101.04	0.01	1987/88-95/96	9	3
	t-value	-0.72	0.64	0.63	-0.28	0.88								
3)	Xrmg	-4.89						2.06	0.54	9.29	0.65	1990/91-97/98	8	1.3
	t-value	-1.67						3.05**						
4)	Xrmg	9.54			-1.9	(T_{im})			0.81	26.55	0.16	1991/92-97/98	7	0.8
	t-val	9.1			-5.2*									
5)	Xrmg	-29.3				9.06			0.93	326	22.74	1974/75-97/98	24	0.57
	t-value	-17.6				18.05*								
6)	Xrmg	-37.8					9.24		0.93	208.7	1.45	1983/84-97/98	15	1.26
	t-value	-13.4					14.44*							
7)	Xlg	-11.7	1.16	43.32	-1.35	-1.19	4.47		0.8	12.29	0.36	1983/84-97/98	15	2.58
	t-value	-1.55	1.98	1.58	-2.05	-0.81	2.69**							
8)	Xlg	-2.37				1.71			0.85	133.01	2.23	1974/75-97/98	24	0.99
	t-value	-4.87				11.53*								
9)	Xff	0.89	0.48	0.36	-0.24	-0.25	0.74		0.84	16.37	0.27	1981/82-97/98	17	1.24
	t-value	0.22	1.24	0.74	-0.38	-0.15	0.49							
10)	Xff	-0.98	0.52	0.02	-0.36	1.65			0.93	66.99	0.32	1980/81-97/98	18	1.19
	t-value	-0.67	2.34	0.09	-0.91	2.95**								
11)	Xff	-5.67				2.7			0.95	481.51	2.07	1973/74-97/98	25	0.54
	t-value	-14.2				21.94*								
12)	Xff	-7.65					2.6		0.64	26.92	0.89	1983/84-97/98	15	0.44
	t-value	-3.44					5.18**							
13)	Xjg	-2.78	0.42	4.25	-0.18	-0.73	-2.29		0.89	12.64	0.003	1983/84-90/91	8	2.3
	t-value	-0.66	2.69	2.04	-0.83	-0.96	-1.36							
14)	Xjg	7.18	0.69	-0.8	-0.11	0.44			0.45	3.05	0.049	1980/81-90/91	11	2.06
	t-value	1.68	2.74*	-0.61	-0.39	0.67								

Note: * denotes significant at 1% level and, ** denotes significant at 5% level

Regression Results pertaining to the four selected sectors presented in Table 7.2:

Before discussing the regression equations relating to the four major export items considered in Table 7.2, the constraints imposed by the limitation of data need to be mentioned. The regression exercise has been carried out with a very small number of observations because data for a sufficiently longer period of time for a meaningful regression analysis is not available. However, it is still worthwhile to take a look at the results, which can have important implications for policy.

One point to note here is that the REER has been dropped as an explanatory variable in the regression equations for the four products. This is because, first of all, the findings of the regression equations for total exports and exports to fifteen countries (presented in Table 7.1) show that REER is not a statistically significant determinant of exports. It rather refutes the hypothesis. In the regression equation pertaining to the four specific export products, too, the REER variable is not statistically significant and also appears with the wrong sign. For this reason, the regression equations using REER as an explanatory variable are not reported in Table 7.2. All equation presented in Table 7.2 use NER to represent the effect of exchange rate, as NER has been found to be the better indicator of export performance in this analysis.

Eqn.#1-6, RMG Exports:

The full model could not be employed because the number of observations needed for purpose of the regression exercise is not sufficiently large. There are as many as six variables but only 5 years of observation available for some of the series.

Eqn 1: Regression of RMG exports on price, production capacity, average import tariff (T_m), nominal exchange rate, and GSP shows that all the independent variables carry their expected signs but none of them are statistically significant. It must be noted that this result is based on only 8 years of observation. The F-statistic is significantly high. This underscores the fact that these variables are capable of jointly explaining the export behavior. The adjusted R^2 is 0.97.

Eqn 2: The GSP variable of Eqn 1 is dropped in Eqn 2 to find out if the trade liberalization variables become significant as a result. Dropping GSP from Eqn 1 does not, however, alter the result in terms of statistical significance. As in Eqn. 1, all the variables in Eqn 2 carry the expected signs with a significant F-statistic, showing that they are jointly significant. However, none of the variables, individually, are statistically significant. The Adjusted R^2 is 0.98

Eqn 3: This partial regression equation uses Quota as the lone explanatory variable. The regression coefficient is 2.06, which means that RMG exports are highly elastic with respect to quota utilization. However, the explanatory power of this regression is quite low (0.54), evidently because all the other variables are excluded from this equation.

Eqn. 4: In this partial regression equation, RMG export is regressed on tariff (T_{im}). The estimated elasticity coefficient is –1.9, which is significant at 1% level. The explanatory power of the regression is also quite high (adjusted R^2 = 0.81). This is an interesting finding which is discussed in the result summary below.

Eqn 5: The elasticity of RMG export with respect to nominal exchange rate in a partial regression is 9.06, which is significant at 1% level. The adjusted R^2 is 0.93. This indicates that RMG exports are very responsive to nominal exchange rate changes.

Eqn 6: The elasticity of RMG export with respect to GSP in a partial regression is 9.24, which is significant at 1% level. The adjusted R^2 is 0.93.

The findings of the regression analysis carried out for the RMG sector can be summed up as follows:

- Supply price is not a significant factor in influencing RMG exports as the results of the multiple regressions indicate.

- The results of the multiple regressions show that production capacity is not an important factor in explaining the RMG exports.

- The effect of tariff (T_m) liberalization on RMG exports is not significant in the multiple regressions. It is pretty obvious that the tariff variable alone, when measured by the overall average rate of customs duty, cannot influence RMG exports, because this variable represents customs duty on all imports, not just the duty on imports of inputs used in RMG production. But when the tariff variable represents the tariff on only raw-material and capital inputs (T_{im}) and is used as an explanatory variable in a partial regression equation, it does appear to have a significant impact on RMG exports. The importance of this finding lies in the fact that, in Bangladesh, government promotes RMG exports by allowing the exporters to import their raw materials and capital inputs needed in the export production through bonded warehouse or duty drawback schemes. This means that the garment exporters are not required to pay import duties on inputs in the enclave setting. However, the point to be emphasized here is that tariff liberalization would greatly benefit the exporters in a situation where the export incentives were absent and therefore the exporters would be required to pay import duties on their input imports.

- The exchange rate variable is not statistically significant in the multiple regression but highly significant (at 1% level) in a partial regression equation. The partial regression based on a sufficient number of observations is more authentic than the multiple regression which is based on only five years of observation.

- Partial regression of RMG exports on GSP and Quota indicates that both of these variables have significant influence on garment export. The elasticity of garment exports is 9.24 with respect to GSP, and 2.06 with respect to quota. These elasticity coefficients are significant at 1% level. The share of RMG in total exports is currently about 73%. USA is one of the major export markets of this product, which is subject to quota in that country. This quota does definitely help Bangladeshi RMG export to the US market by providing a guaranteed access up to its set limit.

Eqn. # 7-8, Leather Goods:

Eqn 7: The regression of export of leather goods on price, production capacity, tariff, nominal exchange rate, and GSP, shows that only the GSP variable is statistically significant. Also, the exchange rate variable appears with the wrong sign. The estimated elasticity of leather exports with respect to GSP is 4.47. The adjusted R^2 is 0.80.

Eqn 8: This is a partial regression of leather goods export on GSP. It drops all the other variables that were not statistically significant in the multiple regression of Eqn. 7. As a result, the explanatory power of the equation improves significantly. The elasticity coefficient of GSP is 1.71, which is significant at 1% level.

Partial regression of leather exports on tariff attempted in this study renders the tariff variable not-significant and hence it is not reported in Table 7.2.

Main points that emerge are that for leather and leather goods export the provision of GSP facilities is the sole dominant factor. Trade liberalization in terms of tariff liberalization depicts the right direction of change in leather goods exports but does not have a strong influence on the export of leather and leather goods. In the same way, exchange rate liberalization, too, does not have any positive impact at all on leather goods export. Price and production capacity, as determinants of leather goods exports are not significant either.

Eqn. # 9-12, Frozen Food:

Eqn 9: Multiple regression of exports of frozen food on price, production capacity, tariff, nominal exchange rate, and GSP shows that none of these explanatory variables are statistically significant. The explanatory power of the equation is, however, pretty high, i.e., 0.84. The F-statistic shows that all the variables are jointly significant.

Eqn 10 is a modified version of Eqn 9 in that it excludes GSP from the list of independent variables in order to capture the influence of the trade liberalization variables on frozen food exports. In the equation, only the nominal exchange rate variable appears significant at 5% level. The elasticity coefficient of NER is 1.65. All the other variables, however, carry the right signs.

Eqn 11 is a partial regression of frozen food exports on nominal exchange rate. The elasticity of exports with respect to NER turns out to be 2.7, which is significant at 1% level. The explanatory power of the equation is 0.95. This equation confirms the result of Eqn 10, which shows that exchange rate changes have a significant influence on the volume of frozen food exports.

Eqn 12: Even though GSP is not statistically significant in the multiple regression (Eqn 9), it becomes significant in the partial regression of frozen food exports on GSP. The elasticity of frozen food export with respect to GSP is 2.6. This implies that the GSP facilities can significantly influence frozen food exports in much the same way as they influence export of ready-made garments and leather products.

A partial regression of frozen food exports on tariff has also been tried but the tariff variable does not appear statistically significant in the equation. The adjusted R^2 is zero, which means that it has no influence on exports of frozen food. This equation is not, therefore, reported in Table 7.2.

Jute Goods, Eqn. # 13-14:

Eqn 13: Regression of exports of jute goods on price, production capacity, tariff, exchange rate, and GSP variables reveals that the price, production capacity and tariff variables take the expected signs but the exchange rate and GSP do not. None of the coefficients are significant individually. However, the explanatory power and the F-

statistic of the equation are high, implying that jointly these variables explain exports quite well.

Eqn 14: When the GSP variable is dropped from the equation the degree of freedom is raised to 11 and the result improves in two ways. The price variable becomes significant at 5% level with an elasticity coefficient of 0.69, and the exchange rate variable takes the right sign. The explanatory power of the equation, however, falls greatly, and the production capacity variable also takes the wrong sign. However, all the explanatory variables are jointly significant as shown by the F-statistic.

Partial regressions of the export of jute goods on tariff and exchange rate do not produce satisfactory results. None of the variables appear statistically significant, and the adjusted R^2 of the equations are zero, for which reasons these equations are not reported in Table 7.2.

Chapter Eight

SUMMARY OF CONCLUSIONS AND POLICY IMPLICATIONS

8.1 Main Findings

Researchers, policy makers and development practitioners, in their endeavor to stimulate exports have come to recognize the policy of trade liberalization as one of the most challenging tasks in the context of globalization. Bangladesh, an export-oriented least developed country, has put trade liberalization at the core of its policy agenda. This study is an attempt to assess the impact of trade liberalization on Bangladesh's exports sector performance. It investigates whether trade liberalization, more precisely, the liberalization of tariff on imported inputs and exchange rate, has had any positive impact on the exports of Bangladesh. This hypothesis is based on the generally accepted belief that liberalization of foreign trade and exchange rate regime promotes exports of countries which pursue export-oriented policy. In addition, the study also examines the impact of certain 'market distorting' factors such as the GSP (Generalized System of Preference) facilities and guaranteed access through Quota on Bangladesh's exports of apparel to the USA.

A regression model is developed to estimate the elasticity of export supply with respect to trade and exchange rate, supply price and production capacity, and the Generalized System of Preferences (GSP), and the MFA Quota. The regression analysis enables to understand and trace how movements in the explanatory variables have impacted on the following as far as Bangladesh's export sector performance is concerned:

(a) total exports,

(b) exports to fifteen major trading partner countries, and

(c) exports of four major items, viz., RMG, leather goods, frozen foods, and jute goods, which together constitute about 90% of the country's total exports.

Two variants of the tariff variable have been tried in the regression exercise. One is the average import-weighted tariff on all import goods (T_m), i.e., realized customs duty

on all imports divided by the total value of all C&F imports. The other variant is the average import-weighted tariff on the import of intermediate imports and capital goods (T_{im}). As for the exchange rate variable, both the nominal exchange rate (NER) and the real effective exchange rate (REER) have been used to find out which of these two variants is more effective in influencing exports.

According to the findings of this study, the relation between trade liberalization and export is direct but the derived coefficients of the liberalization variables, which are elasticities, are quite low. This indicates that the influence of trade liberalization on export, though positive, was not found to be unambiguously strong.

In fact, the results of the regression exercises carried out in this study vary widely, depending upon:

(i) the type of regression applied: multiple or partial;

(ii) alternative variants of the tariff variable used: the average import-weighted tariff on all imports (i.e., T_m), or the average import weighted tariff on only imports of intermediate and capital goods (i.e., T_{im});

(iii) alternative variants of the exchange rate used: nominal or real effective exchange rate (NER or REER); and

(iv) the dependent variable: total exports, or exports to the group of fifteen major trading partners, or exports of the four specific products.

Thus, in most of the multiple regression equations, the coefficients of the tariff liberalization variable (T_m), which are elasticities, are less than unity. This implies that the response of exports to the change in tariff rates is not very strong. On the other hand, the elasticity of exports as estimated from the partial regression equation with respect to average import weighted tariff on raw materials and capital goods (T_{im}) turns out to be pretty high, which indicates that tariff liberalization stimulates exports substantially. This result lends support to Khan's (1997) conclusion discussed in the literature review.

The analyses of different regression equations carried out in this study reveal that the results are highly sensitive to the type of data used and the sample size. For instance, in the multiple regression of Bangladesh's exports to fifteen major trading partners, the tariff coefficient is not statistically significant, but the F-statistic shows that jointly with

other variables, tariff liberalization has a positive impact on exports. However, the partial regression equation of exports to fifteen countries on average import weighted tariff on raw materials and capital goods (T_{im}) yields an elasticity of 1.67, which indicates that tariff liberalization has a strong, positive influence on exports.

Again, the estimated results of multiple regressions of the four export items analyzed in the study show that the tariff (T_m) coefficient carries the expected sign but is not statistically significant. But when tariff on raw material and capital goods (T_{im}) is used as an explanatory variable in a partial regression equation for RMG exports, the tariff liberalization variable appears with a high elasticity coefficient ($e_{Tim} = 1.9$).

Thus, it can be said that exports in general are not highly responsive to tariff liberalization as measured by T_m, even though partial regressions of exports with respect to average import duty on raw materials and capital goods (T_{im}) yield highly elastic coefficients.

As regards the effect of exchange rate, both multiple and partial regression equations of total exports and exports to fifteen major trading partners show that the export supply bears a direct relation with nominal exchange rate. However, the magnitude of the elasticities with respect to nominal exchange rate is less than unity in most of these multiple regressions. In the few cases of partial regression of exports to the group of fifteen partners, exports of frozen foods and exports of RMG, elasticities with respect to nominal exchange rate are greater than unity having high statistical significance while the elasticities in the multiple regressions do not bear any statistical significance.

The regression of exports on real effective exchange rate (REER) does not produce satisfactory results. The coefficient of the REER variable in all regressions, whether multiple or partial, appears with the wrong (negative) sign. It is noteworthy that these results are in conformity with the findings of an earlier study carried out by the Centre for Policy Dialogue (1996), which did not to find any causality between real exchange rate depreciation and growth of exports in Bangladesh.

GSP facilities provided by the EU countries have a strong positive impact on Bangladesh's exports. The elasticity of exports to EU countries with respect to GSP is

2.96. The elasticity coefficients of total exports and of exports to fifteen countries with respect to GSP in the multiple regressions are all positive and high but not statistically significant. However, GSP is a very important factor for RMG, leather goods, and frozen food exports. It is only in the case of jute goods that GSP carries neither the right sign nor is statistically significant. Thus, on the basis of results obtained in the present study it can be said that the GSP facilities contributed significantly to expanding exports of RMG, leather goods, and frozen food to EU countries in the recent years.

The elasticity of exports to USA with respect to Quota, as estimated in the present study, is 1.74. The elasticities of total exports and of exports to fifteen major countries with respect to Quota are 0.97 and 1.0, respectively.

Quota plays a dominant role in Bangladesh's exports by providing a secured access to the US apparel market. Estimated with the help of a partial regression equation, the elasticity of RMG exports with respect to Quota is 2.06. About 73% of Bangladesh's exports (in 1998/99) consist of apparels, and approximately half of that is exported to USA. It is to be noted that quota is imposed on 31 categories of apparel in USA and there are some non-quota export items of apparels as well. Often, Bangladesh could not utilize 100% of the US Quota. Notwithstanding this, availability of Quota has been a crucial factor in expanding Bangladesh's apparel export to the US market.

The two other explanatory variables of exports used in this study are price and production capacity. The supply price of exports has the expected positive sign but the low magnitude of elasticity indicates that it does not have a strong influence on exports of Bangladesh. This has been seen in the case of total exports, exports to fifteen countries and exports of apparel, leather goods, frozen food and jute goods.

The production capacity is the sole dominant factor positively influencing exports. This finding implies that the expansion in exports depends basically on the expansion of production capacity of the export sector. Export to fifteen countries also are highly responsive to production capacity.

Summarizing the results of all the regressions it can be said that liberalization of neither tariff nor nominal exchange rate can ensure speedy expansion of exports, while production capacity is the crucial factor for exports. Price does not seem to be an important factor, too. But GSP facilities and availability of Quota played a major role in exports.

8.2 Policy Implications

In a small, export-oriented, developing country such as Bangladesh it is of utmost importance to carefully design appropriate trade policies, which would stimulate exports and achieve the ultimate objective of a higher growth rate. The following policy implications can be drawn on the basis of the findings of this empirical exercise.

Tariff: According to the findings of this study tariff liberalization does not have any strong influence on exports even though there exists a positive relationship between tariff liberalization and exports of Bangladesh. However, rationalization of the tariff structure and liberalization of the entire trade regime is important for the overall expansion of exports that are intensive in the use
of imported inputs. In Bangladesh, the government promotes exports by allowing the export-oriented industries to import raw materials and capital inputs needed in export-oriented production by way of bonded warehouse facility, preferential tariff treatment and duty drawback schemes. The garment exporters are not required to pay import duties (on inputs) in the enclave setting.

The point to be emphasized here is, that if these facilities were ever to be discontinued then further liberalization would be necessary for providing equivalent support to these industries. For instance, if the RMG and leather goods producers were required to pay the duty on their imports of inputs, then further tariff liberalization would definitely benefit them by reducing their production cost. Another point to note is that tariff liberalization will be required for facilitating imports of capital inputs and raw materials for new entrants in the export sector. This will be helpful for the purpose of Bangladesh's export diversification as well.

Exchange rate: The study has shown that Bangladesh's exports are inelastic with respect to changes in nominal exchange rate. This suggests that devaluation may not always be the right policy for promoting exports.

According to the study, the change in real effective exchange rate, which is generally considered a better indicator of what a representative exporter actually earns, does not show a significant positive impact on exports. This is also corroborated by the findings of a recent study conducted by the Centre for Policy Dialogue (1996).

According to this study, devaluation by itself cannot be successful to promote exports. However, the prevailing system of flexible exchange rate should be maintained and exchange rate overvaluation vis-à-vis the currencies of major competing countries should be avoided. This is necessary in order to lessen the risk of losing external competitiveness, and also to protect domestic production from cheaper import substitutes that flow in through official and unofficial channels.

Export Price: Bangladesh's exports are not found to be significantly responsive to price, but that does not mean that the price factor should be neglected. Maintaining price competitiveness is of crucial importance in the global market. Macro-economic stability by maintaining inflation rates at low level, is therefore, important. Prices have to be kept low by keeping production costs down. This will require removal of structural constraints that raise the cost of production and also the cost of doing business in the country.

Production capacity: An important finding that emerges from this study is that it is not trade liberalization but the production capacity, which is the dominant factor behind expansion of exports. This is indicated by the elasticity coefficient of production capacity, which is well above unity. ***Hence, random reduction of tariff rates and frequent devaluation of the exchange rate may not be the most efficient policy instrument to promote Bangladesh's exports. It is capacity enhancement and proper utilisation of existing capacity, which should be the focal point in the government's policy agenda.*** The government should take supportive measures for increasing private domestic and foreign investment in export-oriented industries. Government's, fiscal,

financial, structural and sectoral policies should all be directed to enhancing production capacity.

Sector specific fiscal policy could be in the form of subsidy on a selective basis to producers in particular sectors like textile and leather, which are major exports but face high tariff in the importing countries. This is because under the WTO provisions exporters cannot be given relief from direct taxes; it has to be in the form of indirect tax relief, for example, in the form of duty exemptions, refunds or duty drawbacks. LDCs are, however, accorded some preferential treatment in this regard. It is to be noted here that the WTO requires the developed countries to give technical assistance (TA) for capacity building in the LDCs. Since the findings of this research establish a close link between growth of export and capacity enhancement in export sector, Bangladesh should vigorously pursue its demand for speedy implementation of technical assistance commitments to support the manufacturing sector of the LDCs, which were pledged by developed countries during the Uruguay Round and also in the Third UN LDC Conference (May 2001) in Brussels. In view of EU's everything but arms (EU-EBA) global zero-tariff and Quota free market access to all LDCs, the need for such TA has gained added importance.

It ought to be mentioned here that in the context of an environment clouted with policy uncertainty and political instability, high non-economic costs and acute infrastructural constraints like poorly performing power systems, ports, and banks, mere tariff reduction will not necessarily boost trade. *First,* tariff rationalization should be coupled with flexible exchange rate management policy so that lowering of tariffs becomes politically more feasible. *Second,* and more importantly, Bangladesh needs to reduce the cost of doing business by implementing structural reforms in power, banking, ports and other sectors. Good governance is also important for sustained expansion of the country's exports.

International Support - GSP: GSP is found to be a strong positive stimulant to exports. Bangladesh should therefore seek support from the GSP providing countries in continuing this preferential treatment. It should be pointed out that while the

continuation of preferential treatment under GSP facilities can immensely benefit LDCs like Bangladesh, the cost to developed countries themselves for extending such facilities can at best be marginal. This is because the current share of Bangladesh's exports in the total imports of the developed countries is very small. For example, imports from all LDCs taken together currently constitute a paltry 0.5% of EU's total imports; Bangladesh's share is, obviously, even smaller.

One impediment to utilizing the GSP facilities to Bangladesh's advantage is, however, the strict rules of origin requirement of the EU. In fact, the EU-ROO (Rules Of Origin) still continues to remain stringent, and at present only about 30 percent of Bangladesh's exports of woven-RMG to EU is able to comply with the ROO. In the given context, *Bangladesh should emphasize the relaxation of the ROO.*

It should be mentioned in this connection that although GSP margins have been greatly eroded as a result of successive rounds of tariff reduction under GATT, it still remains important for Bangladesh. In order to retain its benefits, substantial improvements of the various elements of the scheme are needed. In addition to liberalizing the rules of origin, the GSP facility should be improved by (i) expanding the product coverage, (ii) expanding the duty-free provision to cover all GSP products, (iii) eliminating all ceiling-type limitations on GSP trade, and above all (iv) liberalizing all non-tariff barriers to trade affecting Bangladesh's exports.

The policy implication of this research is that Bangladesh should ask for the continuation of GSP facilities from EU and seek similar facilities from other countries such as Japan and USA as this preferential treatment does have a strong positive impact on its exports.

Quota: The present research confirms that US Quota on apparel exports has been an important factor for Bangladesh's exports of this particular commodity. Evidently, Canadian quota also has the same dominant role. The market share of Canada increased from 0.6% in 1990 to 2.5% in 1997. Following EU, Japan has also offered to provide quota and duty free access to imports from LDCs. Textile/apparels is one sector, which stands to gain significantly from this offer. As a matter of fact, tariff rates even on quota

items are very high. ***Bangladesh should seek global quota free and duty free access for LDCs' products.***

In 2005 the US quota will be removed from all categories of exports from all countries. Bangladesh could seek to have no quota limit or at least expanded quota limits while the existing quota continues to remain in the competing countries. This could ensure Bangladesh's exporters unlimited access into the US market provided that their exports are competitive. However, this state of affairs will continue only up to January 2005 when all quotas will be phased out.

The Caribbean Basin and Sub-Saharan African countries have been allowed duty-free and quota free access to the US market under the United States Trade Development Act 2000, and have emerged as competitors to Bangladesh in the US market. These countries enjoy about 18-20 percent price advantage over Bangladesh as regards apparel export to USA. After the TDA was put into force in October 2000, Bangladesh has failed to compete with the Caribbean and African countries, and their apparel exports to USA has drastically fallen in the past one year. Bangladesh should seek similar quota and duty free facilities in the US market so that its exports can remain competitive vis-à-vis those of the Caribbean and African countries.

Additional International Support: Additional international support will be needed to expand Bangladesh's export production capacity. The world community is obligated by various provisions of the WTO Agreement and other sectoral agreements of the Uruguay Round to provide technical assistance (TA) to the LDCs for developing their export capacity. As an LDC, ***Bangladesh is eligible for this type of TA, and should energetically pursue TA for capacity development in export industries in all global fora.***

Bangladesh urged upon the WTO Ministerial Meeting in Doha to ensure that the industrial countries open up their markets to developing countries' exports. Despite tariff liberalization by the rich countries, the rates of tariff remain very high on products of export interest to developing countries. Trade policy of industrial countries often severely constrains the developing country exports. Average tariffs in US, Canada, EU and Japan range from 4.3% (Japan) to 8.3% (Canada). However, tariff and trade barriers imposed

by developed countries on many products exported by developing countries continue to remain at very high levels. For example, tariff rates range between 15%-30 % on textiles, clothing and footwear, and are more than 30% on many food industry products. Apart from tariff peaks, the cascading structure of tariff – low duties on raw materials and high duties on finished goods – in the industrial countries makes it difficult for developing countries like Bangladesh to produce and export these products in processed form. Hence in the new round of WTO negotiations Bangladesh should strongly argue for reducing the tariff peaks and eliminating tariff escalations.

Non-tariff barriers remain in agriculture, textiles and clothing sectors in which developing countries have a comparative advantage. ***Thus, Bangladesh should seek elimination of all non- tariff barriers by the industrial countries on products of export interest to developing countries, in particular the least developed ones.***

In concluding, it should be reiterated that trade liberalization and its positive consequence is a much discussed topic. The discourse on the effect of trade liberalization and the optimal pace and sequence of the process is indeed quite rich. This research on the impact of trade liberalization on the exports of Bangladesh and the attendant implications throw some critical insight in terms of the degree and direction of the impacts in the particular case of Bangladesh. The study has come up with some concrete policy suggestions to stimulate the export sector performance of the country. Effective implementation of these policy recommendations will, hopefully, raise the efficacy of export sector performance and contribute to the overall growth of the Bangladesh economy.

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APPENDIX

TABLE A.1 SUPPLY OF EXPORTS TO FIFTEEN COUNTRIES

Year	BEL	CAN	DEN	FRN	HK	IND	ITA	JAP	NETH	SPN	SWE	UK	USA	GRM	PAK	X15tot
72-73	22.99	7.026	0.483	8.738	0.864	7.712	14.362	6.697	8.139	4.997	0.405	26.551	71.392	10.881	NA	191.233
73-74	15.83	6.286	0.861	8.048	0.486	16.296	1.049	14.247	8.898	4.217	0.436	25.163	60.047	7.098	NA	168.96
74-75	11.63	6.271	4.874	4.839	0.26	10.451	12.398	5.741	9.064	1.029	0.214	23.545	56.909	8.293	NA	155.515
75-76	17.25	6.082	2.048	8.885	0.382	17.049	23.237	9.222	8.162	1.816	0.595	29.482	61.918	8.203	6.629	200.957
76-77	15.98	6.298	0.376	9.423	2.213	1.937	23.598	10.647	9.028	2.766	0.31	40.69	53.44	9.901	32.65	219.254
77-78	15.95	5.841	0.582	6.216	1.261	1.238	18.575	15.13	8.956	1.38	0.286	40.981	64.915	9.115	48.66	239.085
78-79	18.46	6.647	0.481	6.097	2.167	10.506	43.414	33.247	9.643	2.874	3.264	45.712	83.215	14.125	40.41	320.263
79-80	26.02	9.04	0.39	7.648	3.522	8.343	31.588	34.776	15.35	2.732	0.238	48.808	87.505	16.563	65.83	358.348
80-81	14.3	6.055	0.232	5.429	3.143	32.386	27.355	19.34	11.42	1.325	0.712	24.754	83.516	9.788	54.5	294.248
81-82	15.89	3.66	0.325	7.262	5.781	15.8	31.399	27.639	13.3	1.43	2.039	28.36	50.43	12.587	65.7	281.595
82-83	30.29	6.679	0.323	7.258	4.53	13.291	32.124	45.014	12.79	2.057	0.906	30.959	78.856	13.913	61.31	340.307
83-84	47.02	7.374	0.201	10.93	1.96	21.215	69.132	43.142	16.96	2.838	1.882	40.621	111.14	13.389	66.25	454.058
84-85	72.66	12.05	0.141	11.56	3.185	43.444	51.781	65.273	16.45	1.656	2.551	43.748	165.97	18.159	53.83	562.457
85-86	34.39	15.08	0.225	6.958	5.33	10.327	36.278	61.177	15.41	3.023	5.882	46.129	173.22	21.438	58.2	493.066
86-87	41.17	16.33	0.225	10.01	7.38	10.988	99.665	66.296	21.83	5.802	9.276	59.997	321.43	38.323	32.61	741.327
87-88	42.06	24.41	2.041	26.53	9.568	9.938	115.95	57.058	27.42	8.108	15.92	73.027	356.46	61.797	36.01	866.294
88-89	53.17	16.66	4.103	35.04	8.397	10.085	105.67	55.016	29.17	7.744	13.21	75.703	346.08	70.693	32.25	862.986
89-90	62.64	22.24	5.192	62.37	9.567	19.606	131.37	55.6	38.12	8.198	17.56	97.148	444.58	84.559	28.54	1087.29
90-91	83.55	30.25	6.264	86.4	15.74	31.064	115.94	41.263	61.86	11.03	18.79	136.9	507.29	164.91	26.18	1337.43
91-92	82.08	27.64	9.168	116.1	30.88	2.074	147.29	40.601	81.33	19.83	14.54	130.4	673.82	180.34	23.7	1579.77
92-93	83.14	44.38	12.29	127.4	51.45	9.848	137.4	53.31	85.95	25.1	15.87	183.42	822.51	216.21	28.78	1897.01
93-94	98.41	57.23	34.68	157.7	72.1	16.806	170.61	61.024	104.9	29.56	14.63	259.26	734.82	275.21	21.06	2108
94-95	128.6	69.38	39.24	192.9	107.1	45.166	211.26	99.654	136.7	53.16	24.89	318.31	1184.3	300.26	26.74	2937.57
95-96	186.9	69.09	53	272.9	104.5	72.475	207.1	120.8	183.2	58.74	35.69	417.7	1197.5	369.19	43.08	3391.9
96-97	210.6	69.12	51.24	312.6	109.2	46.252	203.62	114.05	208.6	55.01	38.13	737.69	1432.1	428.29	38.97	4055.5
97-98	210.1	106.8	43.77	369.1	87.39	65.644	270.47	112	236.1	60.56	48.27	440	1929.2	510.93	44.67	4534.98
Wi	0.062	0.023	0.005	0.065	0.012	0.0232	0.0867	0.0309	0.046	0.008	0.014	0.1024	0.3793	0.1233	0.02	

Weights = share of export of a country in total export (in 1990).
Source: Export from Bangladesh 1972/73-1997/98,
Export Promotion Bureau.

Table A. 2 Exchange Rate of the fifteen Major Trading Partners of Bangladesh and the Exchange Rate Index

Exch Rate	Franc /$	Can$ /$	Frnc /$	Frnc /$	Dts /$	Rupee /$	Lire /$	Guildr /$	Rup /$	Peseta /$		$/ Pound	Pound /$	Yen /$		$/ $		
Year	Belg	Can	Den	Frnc	Ger	India	Italy	Nethl	Pak	Spain	Swed	$/UK	UK/$	Japan	HK	US	Wi*ERi	ERi Index
72-73	44.015	0.99	6.949	5.045	3.189	7.594	583.2	3.21	8.689	64.27	4.762	2.502	0.4	303.17	5.6	1	65.006	57.34
73-74	38.977	1	6.05	4.453	2.673	7.742	583	2.796	10.02	58.26	4.367	2.452	0.408	271.7	5.5	1	63.548	56.03
74-75	38.952	0.98	6.095	4.81	2.588	8.108	650.3	2.688	9.892	57.69	4.439	2.339	0.428	292.08	5.0	1	70.019	61.76
75-76	36.779	1.02	5.746	4.288	2.46	8.376	652.8	2.529	9.884	57.41	4.152	2.222	0.45	296.79	4.9	1	70.188	61.91
76-77	38.605	0.99	6.045	4.803	2.518	8.96	832.3	2.644	9.884	66.9	4.356	1.806	0.554	296.55	4.9	1	86.005	75.86
77-78	35.843	1.06	6.003	4.905	2.322	8.739	882.4	2.454	9.884	75.96	4.482	1.746	0.573	268.51	4.7	1	89.356	78.81
78-79	31.492	1.14	5.151	4.513	2.009	8.193	848.7	2.164	9.884	76.67	4.519	1.92	0.521	210.44	4.8	1	84.281	74.34
79-80	29.319	1.17	5.261	4.254	1.833	8.126	830.9	2.006	9.884	67.13	4.287	2.122	0.471	219.14	5.0	1	82.741	72.98
80-81	29.242	1.17	5.636	4.226	1.818	7.863	856.4	1.988	9.884	71.7	4.23	2.326	0.43	226.74	5.0	1	85.204	75.15
81-82	37.129	1.20	7.123	5.435	2.26	8.659	1137	2.495	9.884	92.32	5.063	2.028	0.493	220.54	5.6	1	110.19	97.19
82-83	45.691	1.23	8.332	6.572	2.427	9.455	1353	2.67	11.82	109.9	6.283	1.751	0.571	249.08	6.1	1	130.64	115.2
83-84	51.132	1.23	9.145	7.621	2.553	10.1	1519	2.854	13.1	143.4	7.667	1.517	0.659	237.51	7.3	1	145.49	128.3
84-85	57.784	1.29	10.36	8.739	2.846	11.36	1757	3.209	14.02	160.8	8.272	1.336	0.748	237.52	7.8	1	166.9	147.2
85-86	59.378	1.37	10.6	8.985	2.944	12.37	1909	3.321	15.9	170	8.604	1.296	0.771	238.54	7.8	1	180.42	159.1
86-87	44.672	1.39	8.091	6.926	2.172	12.61	1491	2.45	16.62	140.1	7.124	1.467	0.682	168.52	7.8	1	140.52	123.9
87-88	37.334	1.33	6.84	6.011	1.797	12.96	1296	2.026	17.37	123.5	6.34	1.639	0.61	144.64	7.8	1	122.19	107.8
88-89	36.768	1.23	6.732	5.957	1.756	13.92	1302	1.977	17.97	116.5	6.127	1.781	0.561	128.15	7.8	1	122.07	107.7
89-90	39.404	1.18	7.31	6.38	1.88	16.23	1372	2.121	20.51	118.4	6.447	1.64	0.61	137.96	7.8	1	128.83	113.6
90-91	33.418	1.17	6.189	5.445	1.616	17.5	1198	1.821	21.67	101.9	5.919	1.785	0.56	144.79	7.8	1	113.38	100
91-92	34.148	1.15	6.396	5.642	1.66	22.74	1241	1.87	23.76	103.9	6.048	1.769	0.565	134.71	7.8	1	117	103.2
92-93	32.15	1.21	6.036	5.294	1.562	25.92	1232	1.759	25.04	102.4	5.824	1.766	0.566	126.65	7.8	1	115.96	102.3
93-94	34.597	1.29	6.484	5.663	1.653	30.49	1574	1.857	28.06	127.3	7.783	1.502	0.666	111.2	7.7	1	145.67	128.5
94-95	33.456	1.37	6.361	5.552	1.623	31.37	1612	1.82	30.52	134	7.716	1.532	0.653	102.21	7.7	1	148.78	131.2
95-96	29.48	1.37	5.602	4.992	1.433	32.43	1629	1.606	31.59	124.7	7.133	1.579	0.634	94.06	7.7	1	149.6	131.9
96-97	30.962	1.36	5.799	5.116	1.505	35.43	1543	1.686	36.02	126.7	6.706	1.562	0.64	108.78	7.7	1	142.88	126.0
97-98	35.774	1.38	6.604	5.837	1.734	36.31	1703	1.951	41.04	146.4	7.635	1.638	0.611	120.99	7.7	1	157.83	139.2

Source: IFS Yearbook 1999, IMF

TABLE A.3 EXPORT SUPPLY: TOTAL EXPORTS (XS) AND EXPORTS TO FIFTEEN TRADING PARTNERS (XS15)

Year	X World	Xs15		ERI	Wpi	XS=(Xw*eri)/wpi		XS15
1972-73	348.42	191.23		57.336	13.991	**1428**		**783.7**
1973-74	371.76	168.96		56.049	19.558	**1065**		**484.2**
1974-75	382.68	155.52		61.757	31.252	**756.2**		**307.3**
1975-76	380.47	200.96		61.906	28.172	**836.1**		**441.6**
1976-77	417.01	219.25		75.857	28.356	**1116**		**586.5**
1977-78	493.74	239.09		78.812	31.961	**1218**		**589.6**
1978-79	618.82	320.26		74.336	34.981	**1315**		**680.6**
1979-80	749.44	358.35		72.978	39.303	**1392**		**665.4**
1980-81	709.86	294.25		75.151	42.332	**1260**		**522.4**
1981-82	625.89	281.6		97.187	47.727	**1274**		**573.4**
1982-83	686.6	340.31		115.23	50.392	**1570**		**778.1**
1983-84	811	454.06		128.33	50.705	**2052**		**1149**
1984-85	934.43	562.46		147.21	68.574	**2006**		**1207**
1985-86	891.21	493.07		159.13	71.63	**1980**		**1095**
1986-87	1073.8	741.33		123.94	77.429	**1719**		**1187**
1987-88	1231.2	866.29		107.77	82.132	**1616**		**1137**
1988-89	1291.6	862.99		107.67	88.48	**1572**		**1050**
1989-90	1523.7	1087.3		113.63	96.003	**1803**		**1287**
1990-91	1717.6	1337.4		100	100	**1718**		**1337**
1991-92	1993.9	1579.8		103.19	103.68	**1984**		**1572**
1992-93	2382.9	1897		102.27	105.49	**2310**		**1839**
1993-94	2533.9	2108		128.48	110.74	**2940**		**2446**
1994-95	3472.6	2937.6		131.23	115.91	**3932**		**3326**
1995-96	3882.4	3391.9		131.95	122.18	**4193**		**3663**
1996-97	4418.3	4055.5		126.02	122.88	**4531**		**4159**
1997-98	5161.2	4535		139.21	129.15	**5563**		**4888**
1998-99				142.24	0			

Source: Export in million dollar, Export from Bangladesh 1972/73-1997/98, Export Promotion Bureau (EPB)

WPI (Whole Sale Price Index) from BBS (Bangladesh Bureau Statistics)of 1998, Statistical Yearbook, with base 1969/70=100, converted to base 1990=100

ERI (Exchange Rate Index) calculated from IMF, IFS ; 1990=100

Table A. 4 SUPPLY PRICE OF EXPORTS IN BANGLADESH (PB)

Year	P, 1987=100	P base1990	ERli	WPIbd	wpi base 1990		PB=(p*eri)/wpi
1972-73	53.9	48.51485	57.33553	178.53	13.99138		**198.8099**
1973-74	65.4	58.86589	56.04922	249.56	19.55799		**168.6976**
1974-75	63	56.70567	61.75666	398.78	31.25235		**112.0541**
1975-76	65.4	58.86589	61.90626	359.47	28.17163		**129.3559**
1976-77	71.6	64.44644	75.85689	361.82	28.3558		**172.4059**
1977-78	76.5	68.85689	78.81226	407.82	31.96082		**169.7944**
1978-79	85.2	76.68767	74.33571	446.36	34.98119		**162.9628**
1979-80	102.5	92.25923	72.97791	501.51	39.30329		**171.3059**
1980-81	123.5	111.1611	75.15056	540.15	42.3315		**197.3429**
1981-82	102.5	92.25923	97.18654	609	47.72727		**187.8665**
1982-83	97.5	87.75878	115.2258	643	50.39185		**200.6689**
1983-84	93.8	84.42844	128.3257	647	50.70533		**213.6725**
1984-85	96.3	86.67867	147.2087	875	68.57367		**186.0751**
1985-86	113.6	102.2502	159.1336	914	71.63009		**227.1594**
1986-87	96.3	86.67867	123.9417	988	77.42947		**138.7469**
1987-88	100	90.009	107.7693	1048	82.13166		**118.1056**
1988-89	106.2	95.58956	107.7693	1129	88.47962		**116.4293**
1989-90	106.2	95.58956	107.6702	1225	96.00313		**107.2064**
1990-91	111.1	100	100	1276	100		**100**
1991-92	109.9	98.91989	103.1932	1323	103.6834		**98.45221**
1992-93	111.1	100	102.2747	1346	105.4859		**96.95581**
1993-94	104	93.60936	128.4806	1413	110.7367		**108.6089**
1994-95	106.6	95.94959	131.2287	1479	115.9091		**108.6312**
1995-96	109.22	98.30783	131.9489	1559	122.1787		**106.1691**
1996-97	112.31	101.0891	126.0226	1568	122.884		**103.671**
1997-98	123.7	111.3411	139.2054	1648	129.1536		**120.0066**
1998-99			142.2397				

Source:Export price f.o.b. from World Bank, World Tables 1995,1993, Statistical Yearbook, Bangladesh Bureau of Statistics 1998
World Tables 1995 (1973-92), 1992-97 converted from BBS base 1987=100

All series are converted to the same base with 1990=100

ERli calculated from IFS, IMF and WPI from BBS

TABLE A.5 PRODUCTION CAPACITY OF THE TRADABLE SECTOR (CP)

Year	Tradable Output	Y = log of Trd output	Time	Y1=c+a*time c = 10.773	Y2	WPIbd	WPI base 1990	CGDP=Y2/wpi
				a = 0.1077				
1972-73	30562	10.32751	1	10.8807	53152.96	178.53	13.99138	3798.979273
1973-74	49572	10.81118	2	10.9884	59199.56	249.56	19.55799	3026.872839
1974-75	91047	11.41913	3	11.0961	65934.08	398.78	31.25235	2109.731834
1975-76	71204	11.1733	4	11.2038	73434.65	359.47	28.17163	2606.687996
1976-77	69921	11.15512	5	11.3115	81788.47	361.82	28.3558	2884.364815
1977-78	97154	11.48405	6	11.4192	91092.7	407.82	31.96082	2850.136953
1978-79	113918	11.64323	7	11.5269	101455.3	446.36	34.98119	2900.28145
1979-80	126579	11.74862	8	11.6346	112996.8	501.51	39.30329	2874.995849
1980-81	127277	11.75412	9	11.7423	125851.1	540.15	42.3315	2972.989051
1981-82	142323	11.86585	10	11.85	140167.9	609	47.72727	2936.851238
1982-83	158156	11.97134	11	11.9577	156113.2	643	50.39185	3097.98512
1983-84	195227	12.18192	12	12.0654	173872.4	647	50.70533	3429.075462
1984-85	224004	12.31942	13	12.1731	193652.1	875	68.57367	2824.00091
1985-86	241738	12.39561	14	12.2808	215681.7	914	71.63009	3011.048678
1986-87	279236	12.53981	15	12.3885	240217.6	988	77.42947	3102.405441
1987-88	295888	12.59774	16	12.4962	267544.4	1048	82.13166	3257.506244
1988-89	322798	12.68478	17	12.6039	297979.8	1129	88.47962	3367.778785
1989-90	361790	12.79882	18	12.7116	331877.9	1225	96.00313	3456.948575
1990-91	403332	12.90752	19	12.8193	369631.9	1276	100	3696.319
1991-92	435886	12.98514	20	12.927	411681.1	1323	103.6834	3970.559967
1992-93	422288	12.95344	21	13.0347	458513.3	1346	105.4859	4346.678832
1993-94	454731	13.02746	22	13.1424	510673.7	1413	110.7367	4611.603972
1994-95	528227	13.17728	23	13.2501	562767.2	1479	115.9091	4855.246431
1995-96	576849	13.26534	24	13.3578	633469.3	1559	122.1787	5184.777593
1996-97	610143	13.32145	25	13.4655	705532.6	1568	122.884	5741.451515
1997-98	667112	13.41071	26	13.5732	785792.9	1648	129.1536	6084.173182

Source: Tradable output from BBS and World Bank Country Reports

Tradable output = Sum of Agriculture – forestry + Industry

(which is deemed as the tradable sector) the values of which are given in millions of taka (current prices)

wpi from BBS converted to base 1990=100

Y2 is the exponential of trend growth

CP = Production Capacity which is Y2/WPI

TABLE A.6 AVERAGE IMPORT WEIGHTED TARIFF (T_m), (T_{im})

Year	Intermediate inputs	Capital Goods	Ave import Weighted Tariff on inputs (T_{im})		Customs Duty (CD)	Total Imports (M)	Ave import weighted tariff (T_m)
1971-72							
1972-73					69.96	379	**18.4591**
1973-74					125.57	732	**17.15437**
1974-75					150.62	1084	**13.89483**
1975-76					281.66	1470	**19.16054**
1976-77					277.6	1399	**19.84274**
1977-78					398.37	1822	**21.86443**
1978-79					501.25	2207	**22.71183**
1979-80					625.76	3053	**20.49656**
1980-81					747.5	3729	**20.04559**
1981-82					789.79	3873	**20.3922**
1982-83					879.2	4527	**19.42125**
1983-84					953.51	5087	**18.74405**
1984-85					1188.1	6826	**17.40551**
1985-86					1339.17	6293	**21.28031**
1986-87					1541.88	6850	**22.5092**
1987-88					1696.51	7511	**22.58701**
1988-89					1845.13	10896	**16.93401**
1989-90					2137.18	12480	**17.12484**
1990-91					2374.13	12521	**18.96119**
1991-92	24.1	18.7	**21.4**		2746.02	13452	**20.41347**
1992-93	24.1	18.7	**21.4**		2875.72	15934	**18.0477**
1993-94	23.6	18.4	**21**		2983.58	16766	**17.79542**
1994-95	22.9	16.1	**19.5**		3676.94	23455	**15.67657**
1995-96	26.3	12.5	**19.4**		3772.58	28098	**13.42651**
1996-97	22.43	9.61	**16.02**		4013.05	30300	**13.24439**
1997-98	21.4	10.81	**16.105**		4539.1	34185	**13.27805**
1998-99	20.95	8.38	**14.665**				
1999-2000	21.45	8.57	**15.01**				
2000-2001	15.54	8.96	**12.25**				

Table:Average Weighted Import Tariff from Tariff Commission, (Dr Mustafa Abid)

CD (Customs Duty) and total import payments taken from Economic Trends 1988, 1999 , Bangladesh Bank.

CD values and import values are in crores of taka

Table A.7 NOMINAL AND REAL EFFECTIVE EXCHANGE RATE (NER, REER)

Year	NER	REER
1971-72	7.431	
1972-73	7.8763	Index 1990=100
1973/74	7.9664	199.85
1974/75	8.8752	223.53
1975/76	15.0541	127.63
1976/77	15.426	106.56
1977/78	15.1168	109.19
1978/79	15.2231	107.5
1979/80	15.49	113.53
1980/81	16.2586	111.455
1981/82	20.0652	111.278
1982/83	23.7953	105.927
1983/84	24.9437	105.032
1984/85	25.9634	116.743
1985/86	29.8861	119.697
1986/87	30.6294	104.006
1987/88	31.2422	100.181
1988/89	32.14	99.999
1989/90	32.92	106.697
1990/91	35.68	100
1991/92	38.15	98.329
1992/93	39.14	92.344
1993/94	40	91.984
1994/95	40.2	91.391
1995/96	40.84	92.57
1996/97	42.7	92.266
1997/98	45.46	96.863

Source: NER, Economic Trends 1972-1998, 1971 from IFS, IMF

Source: REER calculated from data available in IMF, IFS.
Data for 1973/74-84/85 calculated from World Development Report, Vol. 16. No. 12
(Foreign Exchange Regimes and Industrial Growth in Bangladesh)
REER= NEER *(Rel Price).
NEER= Nominal effective ER (nominal ER vis a vis trading partners' weighted average)
Rel price= Relative price (Bangladesh CPI/Partner CPI)

TABLE A.8 GENERALIZED SYSTEM OF PREFRENCES (GSP)

Year	GSP Covered	Total EU Import	GSP/Import	Percentage		$/ECU
1972-73	Na	na	na			na
1973-74	Na	96000	na			na
1974-75	Na	na	na			na
1975-76	Na	na	na			na
1976-77	Na	na	na			na
1977-78	Na	na	na			na
1978-79	Na	na	na			1.274
1979-80	Na	na	na			1.3706
1980-81	Na	151000	na			1.391
1981-82	Na	123000	na			1.1176
1982-83	Na	174000	na			0.9812
1983-84	127000	204000	0.6225	**62.25**		0.8913
1984-85	215000	325000	0.6615	**66.15**		0.789
1985-86	206000	292000	0.7054	**70.54**		0.7622
1986-87	180000	236000	0.7627	**76.27**		0.9812
1987-88		273000	na	**79.79**		1.1543
1988-89		na	na	**83.312**		1.1839
1989-90		na	na	**86.834**		1.1024
1990-91		na	na	**90.356**		1.273
1991-92	616.633	656.801	0.9388	**93.88**		1.2405
1992-93	649.761	747.206	0.8695	**86.95**		1.2968
1993-94	808.532	904.251	0.8941	**89.41**		1.1723
1994-95	1017.948	1097.105	0.9278	**92.78**		1.1886
1995-96	1208.116	1259.799	0.9589	**95.89**		1.3081
1996-97	1404.054	1474.362	0.9523	**95.23**		1.268
1997-98	1700.854	1771.641	0.96	**96**		1.1341

Table:GSP covered/Total EU Imports, (Values in millions of ECU)

Source:Eurostat,European Commission(different issues)
Europe Information, The European Community of BD 93/98, Dated May1998
IFS Yearbook 1999 (for $ per ECU), IMF
% data generated for the period 1988-90
formula used: 93.88(1991-92) - 76.27(1986-87) = 17.61, 17.61/5 = 3.522, 3.522 added with 1986/87 and so on

TABLE A.9 QUOTA FILL RATE (Q)

Year	US Quota Fill Rate	
1972-73	(% Released /	% Limit)
1973-74		
1974-75		
1975-76		
1976-77		
1977-78		
1978-79		
1979-80		
1980-81		
1981-82		
1982-83		
1983-84		
1984-85		
1985-86		
1986-87		
1987-88		
1988-89		
1989-90		
1990-91	61.59	
1991-92	54.87	
1992-93	80.56	
1993-94	79.15	
1994-95	93.27	
1995-96	82.8	
1996-97	86.46	
1997-98	88.67	
1998/99	92.12	
1999/00	87.72	

Source: US textile Status Report

Table A.10 Exports to USA (X_{US})

Year	X USA	WPI	wpi1990=100	ERTk/$	(usx*er)/wpi
1972-73	71.392	178.53	13.99	7.88	40.19
1973-74	60.047	249.56	19.56	7.97	24.46
1974-75	56.909	398.78	31.25	8.88	16.16
1975-76	61.918	359.47	28.17	15.05	33.09
1976-77	53.44	361.82	28.36	15.43	29.07
1977-78	64.915	407.82	31.96	15.12	30.70
1978-79	83.215	446.36	34.98	15.22	36.21
1979-80	87.505	501.51	39.30	15.49	34.49
1980-81	83.516	540.15	42.33	16.26	32.08
1981-82	50.43	609	47.73	20.07	21.20
1982-83	78.856	643	50.39	23.80	37.24
1983-84	111.136	647	50.71	24.94	54.67
1984-85	165.974	875	68.57	25.96	62.84
1985-86	173.221	914	71.63	29.89	72.27
1986-87	321.428	988	77.43	30.63	127.15
1987-88	356.46	1048	82.13	31.24	135.59
1988-89	346.077	1129	88.48	32.14	125.71
1989-90	444.575	1225	96.00	32.92	152.45
1990-91	507.285	1276	100.00	35.68	181.00
1991-92	673.815	1323	103.68	38.15	247.93
1992-93	822.507	1346	105.49	39.14	305.19
1993-94	734.817	1413	110.74	40.00	265.43
1994-95	1184.279	1479	115.91	40.20	410.74
1995-96	1197.539	1559	122.18	40.84	400.29
1996-97	1432.146	1568	122.88	42.70	497.65
1997-98	1929.212	1648	129.15	45.46	679.05

Source: Export from Bangladesh 1972/73-1997/98,
Export Promotion Bureau
ER Tk/$ from Economic Trends,
Bangladesh Bank

Statistical Yearbook 1998
(for WPI)
Bangladesh Bureau of
Statistics

Table A.11 Export to 12 EU GSP giving countries
(in million dollars)

Year	Belgium	Denmark	France	Germany	Greece	Ireland	Italy	Luxemburg	Netherland	Portugal	Spain	UK	Sum of 12 EC	ER12 INDEX WPI		X12EC*er/ WPI
1972-73	22.99	0.48	8.74	10.9	0.97	0.43	14.4		8.139	7.37	5	26.55	105.9	50.718	13.99	**383.8939**
1973-74	15.83	0.86	8.05	7.1	0.51	0.35	11		8.898	6.98	4.22	25.16	88.998	48.526	19.56	**220.8161**
1974-75	11.63	4.87	4.84	8.29	0.92	0.15	12.4		9.064	0.1	1.03	23.55	76.833	53.727	31.25	**132.0868**
1975-76	17.25	2.05	8.89	8.2	1.27	0.45	23.2		8.162	1.68	1.82	29.48	102.48	53.76	28.17	**195.5621**
1976-77	15.98	0.38	9.42	10.2	1.61	0.32	23.6		9.028	2.93	2.77	40.69	116.89	52.245	28.36	**215.3587**
1977-78	15.95	0.58	6.22	8.92	1.48	0.36	18.6		8.956	3.42	1.38	40.98	106.81	71.753	31.96	**239.8008**
1978-79	18.46	0.48	6.1	4.13	1.29	0.05	43.4		9.643	2.86	2.87	45.71	135	68.871	34.98	**265.7969**
1979-80	26.02	0.39	7.65	16.6	2.08	0.04	31.6		15.35	4.17	2.73	48.8	155.38	48.28	39.3	**190.87**
1980-81	14.3	0.23	5.43	9.79	1.29	0.06	27.4	0.003	11.42	3.6	1.33	24.75	99.545	69.259	42.33	**162.866**
1981-82	15.89	0.33	7.26	12.6	2.12	0.12	31.4	0.009	13.3	1.71	1.43	28.36	114.5	91.762	47.73	**220.15**
1982-83	30.29	0.32	7.26	13.9	2.8	0.07	32.1		12.79	0.59	2.06	30.96	133.18	109.21	50.39	**288.6261**
1983-84	47.02	0.2	10.9	13.7	1.77		69.1		16.96	1.2	2.84	42.62	206.37	122.92	50.71	**500.2895**
1984-85	72.66	0.14	11.6	18.2	2.66	0.18	51.8		164.5	1.41	1.66	43.75	368.41	142.08	68.57	**763.3045**
1985-86	34.39	0.23	6.96	21.4	1.25		36.3		15.41	0.84	3.02	45.13	164.94	154.15	71.63	**354.9368**
1986-87	41.17	0.23	10	38.3	2.65		99.7		21.83	2.64	5.8	60	282.31	120.42	77.43	**439.0558**
1987-88	42.06	2.04	26.5	61.8	4.71		116		27.42	1.22	8.11	73.03	362.86	104.67	82.13	**462.4228**
1988-89	53.17	4.1	35	70.7	1.69	0.03	106		29.17	2.62	7.74	75.7	385.62	104.97	88.48	**457.4752**
1989-90	62.64	5.19	62.4	84.6	2.04	0.2	131		38.12	1.9	8.2	97.15	493.73	110.67	96	**569.1558**
1990-91	83.55	6.26	86.4	165	1.79	1.2	116		61.86	0.7	11	136.9	670.56	96.591	100	**647.7026**
1991-92	82.08	9.17	116	180	2.12	1.93	147		81.33	1.56	19.8	130.4	772.13	100	103.7	**744.6998**
1992-93	83.14	12.3	127	216	1.92	2.64	137		85.8	2.2	25.1	183.4	877.44	99.216	105.5	**825.2866**
1993-94	98.41	34.7	158	275	3.86	2.8	171	0.158	104.9	1.94	29.6	259.3	1139.1	126.16	110.7	**1297.736**
1994-95	128.6	39.2	193	300	6.34	4.15	211		136.7	3	53.2	318.3	1393.9	129.2	115.9	**1553.648**
1995-96	186.9	53	273	369	6.91	3.54	207		183.2	3.26	58.7	417.7	1762.5	129.97	122.2	**1874.958**
1996-97	210.6	51.2	313	428	7.52	5.52	204		208.6	2.98	55	437.7	1923.7	123.54	122.9	**1934.016**
1997-98	210.1	43.8	369	510	7.15	8.92	270		236.1	4.54	60.6	440	2161.1	136.57	129.2	**2285.128**
Weight	**0.086**	**0.03**	**0.14**	**0.24**	**0**	**0**	**0.15**	**1E-04**	**0.092**	**0**	**0.03**	**0.228**	1			

Source: Export Promotion Bureau

Table A.12 SECTORAL GROSS OUTPUT (in million taka)

Year	Wearing Apparel	Leather & Product, footwear	Fish and Sea Foods	Jute Goods			Jute goods Total
				Jute textile	carpet, rugs	cord, rope, twine	
	code: 322	code: 323, 3241	code: 3114	code: 3213	code: 3224	code: 3225	code: 3213
1973-74		73.36					3224
1974-75		135.488					3225
1975-76		185.52					
1976-77	2.193	714.095	252.512	2913.636			2913.636
1977-78	3.105	953.439	206.906	4243.7173			4244.684667
1978-79	3.347	1513.285	349.401	5120.0879			5133.225444
1979-80	4.014	1461.964	291.126	6903.88	2.902		6906.782
1980-81	14.066	1359.133	303.756	6872.829	35.007	2.471	6910.307
1981-82	148.908	1588.195	789.308	6937.977	101.728	1.499	7041.204
1982-83	295.912	1929.558	1247.434	8503.928	93.989	11.487	8609.404
1983-84	660.783	2932.292	1396.963	9525.139	133.959	13.514	9672.612
1984-85	692.377	3108.931	1699.23	12992.967	136.658	14.774	13144.399
1985-86	794.306	3801.336	2045.773	11385.584	122.304	14.411	11522.299
1986-87	1339	4889	2520.6085	12504.638	134.338	15.2695	12654.2455
1987-88	2194.502	5594.051	2995.444	13623.692	146.372	16.128	13786.192
1988-89	17593.307	10229.788	3490.634	16123.665	248.892	498.321	16870.878
1989-90	20922	11281	3985.824	17635.777	1035.4725	530.42	19201.669
1990-91	27460.382	10368.398	4481.014	19147.888	1822.053	562.519	21532.46
1991-92	30243.21	11405.09	5207.585	15734.521	725.717	449.897	16910.135
1992-93	46265.61	9988.648	5778.023	8123.301	1295.387	280.017	9698.705
1993-94	77452.633	19144.04467	9497.994333	13069.237	1744.9757	1196.683333	16010.89567
1994-95	108639.656	28299.44133	13217.96567	18015.172	2194.5643	2113.349667	22323.08633
1995-96	139826.679	37454.838	16937.937	22961.108	2644.153	3030.016	28635.277

Source of data: Census of Manufacturing Industries

Note: Data for the period 1993-94, 1994-95 have been generated as there was no publication for these two years

Formula: Output 1993-94 = (output 1995-96 - output 1992-93)/3 + output of 1992-93

For fish and sea food, data for the period 1988-89, 1989-90 had to be generated using the above formula

For jute goods, data for the period 1977-78, 1978-79, had to be generated using the above formula

Table A.13 Unit Price Index of Apparel and Leather Goods

year	WPIm 1969/70=100	Conversion to 1988/89=100	RMG 1988-89=100	PRMG price/WPIm		PLG 1976/77=100	PLG 1988-89=100	Conversion to base 1988/89=100	PLG price/wpim
1972-73									
1973-74									
1974-75	466	47.7948718							
1975-76	406	41.6410256							
1976-77	395	40.5128205				100			
1977-78	418	42.8717949							
1978-79	449	46.0512821							
1979-80	576	59.0769231							
1980-81	645	66.1538462				109		42.41245	**64.11185**
1981-82	712	73.025641				97		37.74319	**51.68485**
1982-83	717	73.5384615				105		40.85603	**55.55736**
1983-84	747	76.6153846				142		55.25292	**72.11726**
1984-85	794	81.4358974				153		59.53307	**73.10422**
1985-86	848	86.974359				153		59.53307	**68.44899**
1986-87	892	91.4871795				169		65.75875	**71.87756**
1987-88	925	94.8717949				239		92.99611	**98.02293**
1988-89	975	100	100	**100**		257	**100**	100	**100**
1989-90	1081	110.871795	120	**108.233117**		248		96.49805	**87.03571**
1990-91	1129	115.794872	140.83	**121.620239**		276		107.393	**92.74417**
1991-92	1210	124.102564	144.65	**116.556818**			166.05	166.05	**133.8006**
1992-93	1258	129.025641	149.58	**115.930445**			192.48	192.48	**149.1797**
1993-94	1280	131.282051	153.47	**116.900977**			186.61	186.61	**142.1443**
1994-95	1331	136.512821	159.7	**116.985349**			191.84	191.84	**140.5289**
1995-96	1459	149.641026	158.35	**105.819911**			179.54	179.54	**119.9805**
1996-97	1426	146.25641	172.4	**117.875175**			176.14	176.14	**120.4323**
1997-98	1420	145.641026	200.79	**137.866373**			173.54	173.54	**119.156**

Calculation of unit price index of RMG and Leather Goods

Source of data: Unit price of Rmg from Statistical Yearbook, BBS

Unit price index of Leather Goods from Statistical Yearbook, BBS

Wholesale price index of manufacture from Statistical Yearbook, BBS with base 1969/70=100 is converted to base 1988/89=100

Table A.14 Unit Price Index of Jute Goods and Frozen Food

year	WPIm 1969/70=100	Conversion to 1988/89=100	PJG 1976/77=100	Conversion to 1988/89=100	PJG	PJG/wpim	PFF	PFF 1988-89=100	Conversion to 1988/89=100	PFF price/wpim
1972-73										
1973-74										
1974-75	466	47.79								
1975-76	406	41.64								
1976-77	395	40.51	100.00				100		31.45	
1977-78	418	42.87								
1978-79	449	46.05								
1979-80	576	59.08								
1980-81	645	66.15	206.00	74.37	74.37	112.42	113		35.53	53.72
1981-82	712	73.03	178.00	64.26	64.26	88.00	146		45.91	62.87
1982-83	717	73.54	211.00	76.17	76.17	103.58	177		55.66	75.69
1983-84	747	76.62	237.00	85.56	85.56	111.67	201		63.21	82.50
1984-85	794	81.44	334.00	120.58	120.58	148.06	218		68.55	84.18
1985-86	848	86.97	296.00	106.86	106.86	122.86	226		71.07	81.71
1986-87	892	91.49	273.00	98.56	98.56	107.73	242		76.10	83.18
1987-88	925	94.87	289.00	104.33	104.33	109.97	286		89.94	94.80
1988-89	975	100.00	277.00	100.00	100.00	100.00	318	100.00	100.00	100.00
1989-90	1081	110.87	306.00	110.47	110.47	99.64	197		61.95	55.88
1990-91	1129	115.79	331.00	119.49	119.49	103.20	248		77.99	67.35
1991-92	1210	124.10			127.66	102.87		102.33	102.33	82.46
1992-93	1258	129.03			134.50	104.24		122.08	122.08	94.62
1993-94	1280	131.28			139.86	106.53		142.99	142.99	108.92
1994-95	1331	136.51			143.84	105.37		167.45	167.45	122.66
1995-96	1459	149.64			146.69	98.03		178.19	178.19	119.08
1996-97	1426	146.26			148.67	101.65		143.81	143.81	98.33
1997-98	1420	145.64			150.01	103.00		214.68	214.68	147.40

Calculation of unit price index of jute goods and frozen food

Source of data: Unit price of Jute Goods from Statistical Yearbook, BBS

Unit price of Frozen Foods from Statistical Yearbook, BBS

Wholesale price index of manufacture from Statistical Yearbook, BBS

with base 1969/70=100 is converted to base 1988/89=100