

Global Agricultural Trade Liberalization: Its Impacts on Bangladesh

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Statement of the Candidate

This thesis is submitted to the Faculty of Arts, Law School, Macquarie University in fulfillment of the requirements for the degree of Doctor of Philosophy in Law.

The work presented in this thesis has not been submitted for a higher degree to any other university or institution. The sources of information used and the extent to which the work of others has been utilized are acknowledged in this thesis.

Shafiqur Rahman Khan

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Abstract

Handful of policy concerns evokes as contentious a controversy in developing economies as trade liberalization, openness and globalization. Critics comprising of politicians, labor unions, enterprise and intellectuals see the community economic system as inherently unequal, produced a whole lot worse by advocates of openness to trade and finance. Trade liberalization and economic integration in Bangladesh has led to substandard advancement with commercial development and even resulting in de-industrialization. Consequently growth and employment prospects have suffered. Cheap agricultural imports have overloaded Bangladeshi marketplaces, which make it out of the question for domestic enterprises and farmers to increase and survive. This view prevails because business efficiency under trade protection is quite dismal.

This dissertation aims to gauge the impacts of trade liberalization and connects contrasting policies on agricultural trade and expansion, poverty and food security in Bangladesh. Agricultural trade accelerates agricultural improvement a lot more than domestic marketplaces by bringing income earnings and creating job opportunities. On the other hand, the contribution of agriculture in trade and GDP is regressing as time passes despite the fact that Bangladesh has a comparative advantage in producing agricultural products. For this reason, one of the greatest obstacles that Bangladesh encounters would be to boost living standards of rural poor while keeping up with the trade reform procedures at the international level. Therefore, the principal objective of this research is to examine the effect of agricultural trade liberalization and its ability to play a role in economic expansion and poverty reduction in Bangladesh.

The study has found that the impact of agricultural trade liberalization on developing countries is very uneven. It has been established that the effects of agricultural trade liberalization are small overall and likely to be negative for a significant number of developing countries including Bangladesh. For net food importing countries, including most of the LDCs and the small island developing states and for cotton importing countries (Bangladesh), agricultural trade liberalization may have overall negative consequences because of terms of trade effects.

It is important to note that, at the WTO, Bangladesh as an LDC is not bound to undertake any liberalization in its domestic agricultural sector in terms of tariff cut or subsidy withdrawal. This study establishes that the growth in the domestic agricultural sector does not only rely on the domestic policies and programs, rather global and regional trade policies have important implications for this sector.

Lastly, the study identifies that; agricultural trade liberalization has adversely impacted the environment as reduction in soil infertility, exploitation of biodiversity, and environmental contamination. The study argues that agricultural trade reform guidelines/policies are not enough to confer positive aspects based on agricultural trade liberalization towards the poor. Suggestions have been offered for Bangladesh to formulate and implement complementary policies to reduce inequality and translate the growth into poverty reduction, food security, and environmental protection.

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List of Acronyms and Abbreviations

ADLI:	Agricultural Demand Led Industrialization
ADP:	Annual Development Programme
AMS:	Aggregate Measurement of Support
AMS:	Agricultural Marketing Service
AOA:	Agreement on Agriculture
ASEAN:	Association of South East Asian Nations
AWD:	Alternate Wetting and Drying
BADC:	Bangladesh Agricultural Development Corporation
BAEA:	Bangladesh Agricultural Economists Association
BB:	Bangladesh Bank
BBS:	Bangladesh Bureau of Statistics
BCCSAP:	Bangladesh Climate Change Strategy and Adaptation Plan
BDT:	Bangladesh Taka
BER:	Bangladesh Economic Review
BOI:	Bangladesh Board of Investment
CBD:	Customs Bond Directive
CBN:	Cost of Basic Need
CDMP:	Comprehensive Disaster Management Programme
CS :	Cadastral Survey
CUTS:	Centre for International Trade, Economics and Environment
CY:	Calendar Year
DAE :	Department of Agricultural Extension

DAP:	Diammonium Phosphate
DDA:	Doha Development Agenda
DDT:	Dichlorodiphenyltrichloroethane
DFQF:	Duty-Free and Quota-Free
DOF:	Directorate of Fisheries
DTW:	Deep Tube Well
EPZ:	Export Processing Zone
ESAP:	Environmental Sampling and Analysis Plan
EU:	European Union
FAO:	Food and Agriculture Organization
FDI:	Foreign Direct Investment
FPMU:	Food Planning and Monitoring Unit
FRSS:	Fisheries Resources Survey System
FTA:	Free Trade Agreement
FY:	Financial Year
FYP:	Financial Year Plan
GATS:	General Agreement on Trade in Services
GATT:	General Agreement on Tariffs and Trade
GDP:	Gross Domestic Product
GNI:	Gross National Income
GoB:	Government of Bangladesh
HCR:	Head Count Rate
HIES:	Household Income and Expenditure Surveys
HYV:	High Yielding Variety
IAAE:	International Association of Agricultural Economists
IBRD:	International Bank for Reconstruction and Development
IISD:	International Institute of Sustainable Development

IMF:	International Monetary Fund
IPM:	Integrated Pest Management
IPO:	Import Policy Order
ITC:	International Trade Centre
ITO:	International Trade Organization
LDC:	Least Developed Countries
MDG:	Millennium Development Goal
MEA:	Multilateral Environmental Agreements
MFN:	Most Favoured Nations
MLJP:	Ministry of Law, Justice and Parliamentary Affairs
MoFDM:	Ministry of Food and Disaster Management
MoL:	Ministry of Land
MOP:	Muriate of Potash
MPI:	Multidimensional Poverty Index
MT:	Metric Ton
NAMA:	Non-Agricultural Market Access
NAP:	National Agriculture Policy
NFP:	National Fisheries Policy
NGO:	Non-Governmental Organization
NTB:	Non-Tariff Barrier
OECD:	Organization of Economic Cooperation and Development
OMS:	Open Market System
POPs:	Stockholm Convention on Persistent Organic Pollutants
PPP:	Public Private Partnership
PTA:	Preferential Trade Agreement
QR:	Quantitative Restrictions
RMG:	Ready Made Garments

RoO:	Rules of Origin
RS:	Revisionary Settlement Survey
SA:	State Acquisition Survey
SAARC:	South Asian Association for Regional Cooperation
SAFTA:	South Asian Free Trade Area
SAP:	Structural Adjustment Program
SAPTA:	South Asian Preferential Trade Agreement
SAR:	Structural Adjustment Reforms
SDT:	Special and Differential Treatment
SDT:	Special and Differential Treatment
SRDI:	Soil Resources Development Institute
TF:	Trade Facilitation
TFP:	Total Factor Productivity
TRIPS:	Trade Related Intellectual Rights
TRQ:	Tariff Rate Quotas
TSP:	Triple Super Phosphate
UNDP:	United Nations Development Programme
UNICEF:	United Nations Children's Fund
UR:	Uruguay Round
URAA:	Uruguay Round Agreement on Agriculture
USD:	United States Dollar
USDA:	United States Department of Agriculture
WFS:	World Food Summit
WRI:	World Resources Institute
WTO:	World Trade Organization

Chapter One

Introduction and Background of the Study

1.1 Introduction

Within the globalized arena of today, trade liberalization is meant to encourage financial/economic progress. Even so the link amongst financial development and trade liberalization is becoming the topic of controversies in modern time.¹ The truth is, the expansion argument for trade liberalization has become challenged in many methods, despite the fact that the proponents of liberalization have their reliable arguments inside their favour at the same time. In such a context, a critical question to be addressed whether, the current trade regimes followed by Bangladesh, and in particular in the agricultural sector, culminated in the necessary economic growth. In order to answer this question it is necessary to examine the current policies adopted by Bangladesh and analyze the impacts of it in economic growth in order to construct an appropriate framework for balancing/regulatory framework/recommendations to reform the existing trade policies. The purpose of the present thesis is therefore to examine whether, those policies adopted by Bangladesh are sufficiently sequenced and linked to provide support to an open trade regime.

¹ Badi H Baltagi, Panicos O Demetriades and Siong Hook Law, 'Financial development and openness: Evidence from panel data' (2009) 89(2) *Journal of development economics* 285.

Bangladesh is undoubtedly an agricultural state. Approximately, more than 80% of its human inhabitants are dependent, directly or indirectly, on agriculture with regards to their livelihoods. This segment within the inhabitants is usually predominantly consisting of rural households. The agricultural sector attributes around 20 percent to gross domestic products (GDP) and employs around sixty percent of total labor force of the economy.² Agriculture and rural sector have been a major source of employment in Bangladesh.³ Agriculture was the most crucial financial sector in Bangladesh dealing with 95percent of full inhabitants, which has a share of seventy eight percent of Gross Domestic Product (GDP) in 1971.⁴ Now, 75percent within the populations' professions are agriculture or agro sector and contribution to GDP is barely 22percent. Though the declining of employment is not markedly decreased, contribution to GDP shared by agriculture sector is radically descended.

Bangladesh has become a salesmanship country that neither produces scientific products nor agricultural products in order to earn foreign currency with some exception of garments products forcing the country to depend on foreign aids.⁵ Bangladesh's accomplishments in transforming its devastated agricultural sector

² Mahabub Hossain, 'Poverty alleviation through agriculture and rural development in Bangladesh' (2004) 39 *CPD Occasional Paper Series*
<https://www.researchgate.net/profile/Mahabub_Hossain2/publication/5224212_Poverty_Alleviation_Through_Agriculture_and_Rural_Development_in_Bangladesh/links/551c0d8c0cf20d5fbde25113.pdf>. (Accessed on 10 October 2013).

³ DS Prasada Rao, Timothy J Coelli and Mohammad Alauddin, *Agricultural productivity growth, employment and poverty in developing countries, 1970-2000* (International Labour Office, 2005) 15.

⁴ Rashid Faruquee, *Bangladesh agriculture in the 21st century* (University Press, 1998) 145.

⁵ Gazi Mahabubul Alam, 'The role of science and technology education at network age population for sustainable development of Bangladesh through human resource advancement' (2009) 4(11) *Sci. Res. Essays* 1260.

into one of the most productive farm economies in all of South Asia is a major development success story. Once racked by famine and dependent on food imports, the country is now essentially self-sufficient in rice, is emerging as a significant exporter of high-value agricultural products, and enjoys the second highest percentage growth in per capita income in South Asia. Bangladesh cannot meet its own increasing food demand let alone exporting. There are many constraints (notably, political, natural calamity, people choice, ostensible modernization and globalization) that hinder the development of agriculture sector. However, the lack of multi diversified quality agriculture education, training and research is the greatest challenge.⁶ If the country continuously fails to ensure a greater GDP share through agriculture sector, the life of majority of the population will remain miserable and continuously deteriorating.

According to the Ministry of Agriculture⁷, agriculture is regarded as one of the means to reduce poverty, firstly through its contribution to total GDP and employment, and secondly because it's small farmers provide a livelihood to millions of family members and to occasional workers. Furthermore, the farmers, mostly in the rural areas produce food primarily to meet their families' needs and almost all of the productive and social activities of rural towns and service centers are dependent on primary agriculture and related activities. In addition, agriculture utilizes the largest portion of Bangladesh's land and therefore forms the backbone of the rural economy. It is therefore clear that agriculture is

⁶ Gazi Mahabubul Alam, 'The role of technical and vocational education in the national development of Bangladesh' (2008) 9(1) *Asia-Pacific Journal of cooperative education* 25.

⁷ Ministry of Agriculture, 'Bangladesh Agriculture at a Glance' (2012) <<http://www.moa.gov.bd/statistics/bag.htm>>.(Accessed on 20 May 2014).

regarded as one of the means through which the Government can reach its growth objectives.

During the last decade, trade policies in Bangladesh and other South Asian countries have undergone a number of modifications. These modifications include multilateral reductions in tariffs and subsidies through the country's World Trade Organization (WTO) commitments, the signing of Free Trade Agreements (FTAs) and more recently, negotiations around future commitments to liberalization both at multilateral level as well as regional level. These simultaneous developments have had an important influence on both *de facto* protections in the South Asian economy, as well as on welfare improvement.⁸

Bangladesh has taken on various sizeable economic reforms and, among these, import liberalization was a principal component. This reform, along with complementary changes in industrial policy and technology, was aimed at making Bangladeshi industries more efficient, updating technology and competitiveness.⁹ Given the fact that the main objective of import liberalization was to improve industrial productivity, it is appropriate to ask how much import liberalization has contributed to economic growth, better productivity and the improved performance of agricultural industries.

Bangladesh's decision, to liberalize its food import policy is yet another substantial component in the direction of the country's achievement tale. The

⁸ Pramod K Joshi et al, 'Agriculture diversification in South Asia: patterns, determinants and policy implications' (2004) *Economic and Political Weekly* 2457.

⁹ Bodrun Nahar and Mahinda Siriwardana, 'Impact of Trade Liberalization on Poverty in Bangladesh A Quantitative Assessment' (2009) 10(2) *South Asia Economic Journal* 325.

government has eliminated many agricultural subsidies, eliminated quantitative restrictions, reduced tariff levels, and created an open-market economy that makes agricultural inputs readily available for farmers and guarantees fair commodity prices. Today, Bangladesh's agricultural sector is the most open and least subsidized of South Asia.¹⁰

One of the keys to this success has been the decision by the government to liberalize the import of food. Over the last 10 years, private traders have stepped in to import food grains during times of domestic shortfall, often driven by floods. These actions by private traders have provided both supply and price stabilization and have removed a major financial burden from the government. During fiscal year 1999, private sector food imports to address needs arising from the 1998 flood reached 2.26 million metric tons, mainly from India. Had the government of Bangladesh imported this grain itself, the total fiscal cost would have been about \$185 million. The private sector's share in food imports climbed from zero in 1991 to 50 percent in 1996 and 100 percent in 2000.¹¹

Bangladesh underwent a series of deregulation and agricultural trade liberalization measures in the late 1980s and early 1990s. It experienced significant productivity growth in agriculture over the last two decades (1990-2010) as a result of agricultural trade liberalization. This study endeavors to identify the impact of agricultural trade liberalization on the welfare of the people in Bangladesh as well as the economic growth.

¹⁰ Gordon West, 'Food and Agriculture in Bangladesh: A success story' (2002) 7 *Economic Perspectives: An electronic journal of the US Department of State* 12.

¹¹ Ibid.

1.2 Background

The progression of strategies pertaining to international trade from protectionisms to liberalization is definitely the journey from Mercantilism to the so-called doctrine of free trade. From the 16th to 18th century, Mercantilism in Europe advocated for high degree of protection for domestic industries arguing that countries should simultaneously encourage exports and discourages imports. The Mercantilists viewed trade as a zero sum game where if one country gains other would be the loser in bilateral exchanges.¹² But Mercantilism was challenged and debated much and was considered as one of the discredited doctrines on international trade horizon. In this backdrop, in 1776, Adam Smith came up with the theory of 'absolute advantage', which was one of the foremost strides in favour of unrestricted free trade economy.

Later, David Ricardo, an English economist, pioneered the theory of 'comparative advantage', which was even stronger advocate of free trade. Dismissing the idea of zero-sum game, Ricardo introduced a positive-sum game in international trading which defined trade as a tool for mutual benefits for the countries engaged in trading. Heckscher-Ohlin theory (a theory refined by Swedish economists Eli Heckscher and Bertil Ohlin) also enhanced the idea of free trade.¹³ It differentiated the idea of 'comparative advantage' sketched by Ricardo by pointing national factors endowment (land, labour, and capital) for

¹² Avinash K Dixit, '12 Trade Policy: An Agenda for Research' (1986) *Strategic trade policy and the new international economics* 283.

¹³ Nien Fan Zhang, 'Statistical process monitoring for autocorrelated data' (2000) 2 *From Adam Smith to Michael Porter: The Evolution of Competitiveness Theory* 383.

getting comparative advantage rather than Ricardo's labour productivity factor. However, all of these theories and ideas are centered on defining the benefits of trade liberalization or free trade in international trade and broadly 'protectionism'.

Historically, the agricultural sector has been highly protected both in developed and developing economies. However, since the 1980s with the re-emergence of the neoclassical orthodoxy as the 'new' development paradigm, many developing countries adopted market reform and trade liberalization programmes. The aims of these programmes were to reduce government control in both agricultural input and output market, lowering tariffs and non-tariff barriers (NTBs) and allowing market forces work in agriculture. These programmes often came as a part of SAP with the conditions attached by the international donor agencies, such as the World Bank and the IMF. Like many other developing countries, Bangladesh maintained very tough restrictive measures in the agriculture sector in comparison to other sectors.

The purpose of this chapter is to present an analytical framework including background and theoretical contexts, and the structure of the study. The lack of a theoretical framework regarding the impact of agricultural trade liberalization on poverty reduction, economic growth and the conflicting evidence that has emerged over recent years indicates a need to do more focused research on the implications that an open trade regime has on the agricultural sector and on its role in fostering economic growth. This study seeks to contribute to the discussions and debates on the impact of the agricultural trade liberalization

process through conceptual and theoretical analysis of the experience of Bangladesh. This will help enrich the conceptual and contextual knowledge regarding the impact of agricultural trade liberalization on the necessary economic growth of Bangladesh.

1.3 Agricultural Trade Liberalization Scenarios in South Asia and Bangladesh in Context

Over the past decade, major changes in the agricultural business environment have taken place. These changes have affected agriculturalists and others who are either directly or indirectly involved in agricultural activities. The introduction of free trade has resulted in price fluctuations, which brought about a whole new dimension of risk. Bangladesh's agriculturalists were not always prepared to manage the resulting external competition.¹⁴

In the 1960s and 1970s, South Asian countries have been very skeptical about the virtues of free trade. Since the late 1980s, they have shown more interest in multilateral trade as well as negotiations. This reflects the combined effect of the following three factors, namely: dissatisfaction with the slow pace of regional integration; the belief that trade (if well managed), could play a critical role in confronting the development challenges facing the continent, and lastly, the widespread view that multilateral trade could promote as well as spur regional

¹⁴ David J Connor, Robert S Loomis and Kenneth G Cassman, *Crop ecology: productivity and management in agricultural systems* (Cambridge University Press, 2011) 546; Sultan Hafeez Rahman, *The impact of trade and exchange rate policies on economic incentives in Bangladesh agriculture* (International Food Policy Research Institute, 1994).117.

integration efforts. By increasing competition, multilateral trade liberalization could force Asian governments to intensify regional integration efforts so as to reduce transactions costs through the development of regional infrastructure.¹⁵

The strategy of restricting imports and exports and providing heavy protection to domestic industries for promoting overall development of the economy fitted well with the nationalist aspirations of successive political regimes up to the early 1980s. Import-substitution, therefore, became the cornerstone of the country's development strategy and has remained so until the recent spate of policy reforms. An excessively high and complex structure of import tariffs, pervasive import controls, exports taxes (jute tax up to the late 1970s), exports restrictions and fixed and multiple exchange rates characterized the external trade regime.¹⁶

Bangladesh started liberalization reform under the SAP programme in the early 1980s. Since then the country eased many restrictive measures previously imposed on agriculture. However, the result or outcome did not reflect much of reaping of the benefits. For example, the yield per hectare remains lower in Bangladesh than in other Asian countries with comparable environment even after the implementation of market reform and trade liberalization nearly two decades ago. In 2001, average paddy production per hectare was 6062 kg in China, 4515 kg in Indonesia, 3129 kg in Malaysia, 2856 kg in the Philippines,

¹⁵ Maurice Schiff and L. Alan Winters, *Regional Integration and Development* (World Bank, 2003) 299.

¹⁶ Hafeez, above n 14, 1.

2811 kg in India and 2792 kg in Bangladesh.¹⁷ The logical question arises whether market reforms and trade liberalization indeed stimulated production environment and production efficiency in agriculture. Till now, approximately 77 percent of the population lives in rural areas, and about 63 percent of the labour force is employed in agriculture, forestry and fisheries. And agriculture remains the single largest contributor to the GDP, i.e. 21.11 percent.¹⁸

Immediately after the independence, Bangladesh was highly influenced by the political and economic philosophy of the socialist block of that time. The country immediately went for a huge drive to nationalize about 92 percent of its total fixed assets abandoned by the Pakistani Entrepreneurs.¹⁹ Since then, Bangladesh economy was extremely protected and inward looking until the end of the 1970s. Imports were highly restricted in the form of rigid tariff line. In 1978, for example, there were 36 percent tariff rates ranging from zero to 400 percent.²⁰ The reason for pursuing such a restrictive trade policy was to protect domestic industries and to raise revenue. These policies involved high government interventions in almost all economic activities including

¹⁷ RB Singh, T Woodhead and MK Papademetriou, 'Strategies to sustain and enhance Asia-Pacific rice production' (2002) *Proc of the 20th session of the international rice commission, Bangkok, Thailand* 10.

¹⁸ BBS, *GDP 2011 data*, Bangladesh Bureau of Statistics No (2011). Bodrun Nahar and Mahinda Siriwardana, 'Trade Opening, Fiscal Reforms, Poverty, and Inequality: A CGE Analysis for Bangladesh' (2013) 51(2) *The Developing Economies* 145.

¹⁹ Sultan Hafeez Rahman, 'Trade and industrialisation in Bangladesh' (1994) *Trade Policy and Industrialisation in Turbulent Times, London: Routledge* 415.

²⁰ Ibid.

agriculture.²¹ Bangladesh encouraged cooperative farming with a view to developing a socialist system of agriculture during the 1970s. The government controlled the procurement and distribution of seeds, fertilizers, pesticides and all other agricultural inputs and equipment.²² This, however, resulted in an expansion of inefficient industries and misallocation of resources with adverse consequences on the export sector and the economy.²³

The government implemented import substitution policies with limitations on imports to safeguard and support domestic production. It controlled the foreign trade and exchange rate system for making interventions effective.²⁴ Some measures which consist of quantitative restrictions, highly differentiated tariff rates (ranging from 0 to 400 percent), huge production subsidies, and overvalued exchange rates were put in place to protect domestic production from world competition.²⁵

²¹ Nazneen Ahmed et al, *Distortions to agricultural incentives in Bangladesh*, World Bank No (2007); Peter Draper and Razeen Sally, 'Developing country coalitions in multilateral trade negotiations: aligning the majors?' (2011). Mohammad Monjurul Hoque and Zulkornain Yusop, 'Impacts of trade liberalisation on aggregate import in Bangladesh: An ARDL Bounds test approach' (2010) 21(1) *Journal of Asian Economics* 37.. T Rahman, *Political Economy of Trade Liberalisation in Bangladesh: Impact of Trade Liberalisation on Bangladesh Agriculture*, CUTS International No (2008).

²² Ahmed et al, World Bank No (2007).13. Sadiq Ahmed and Zaidi Sattar, *Trade liberalization, growth and poverty reduction: The case of Bangladesh* (World Bank Washington, DC, 2004). Ruhul Salim and Amzad Hossain, 'Market deregulation, trade liberalization and productive efficiency in Bangladesh agriculture: an empirical analysis' (2006) 38(21) *Applied Economics* 2567.

²³ CPD (Centre for Policy Dialogue), *Growth or Stagnation? A Review of Bangladesh's Development 1996* (University Press Limited, 1997).

²⁴ Sadiq Ahmed and Zaidi Sattar, *Trade liberalization, growth and poverty reduction: the case of Bangladesh* (World Bank Washington, DC, 2004). Above n 22, 46. Anne O Krueger, 'Trade liberalization and growth in developing countries' (2010) *Better Living Through Economics* 110; Nahar and Siriwardana, 'Impact of Trade Liberalization on Poverty in Bangladesh A Quantitative Assessment', above n 9, 326. Salim and Hossain, above n 22, 6.

²⁵ Ahmed and Sattar, above n 22, 24 . Nahar and Siriwardana, 'Impact of Trade Liberalization on Poverty in Bangladesh A Quantitative Assessment', above n 9, 327. Salim and Hossain, above n 22, 7.

The government strengthened this protective atmosphere with domestic market policy interventions in the form of credit ceilings, price controls, and arbitrary licensing such as import license. These licenses were granted only when there was no domestic source of supply available.²⁶ Moreover, traditionally, a government department – the Bangladesh Agricultural Development Corporation (BADC) had the sole authority and responsibility for procurement and distribution of agricultural inputs including fertilizers, irrigation equipment, pesticides and seeds.²⁷

Nevertheless, these inward-oriented trade policies were not effective when it comes to trade expansion as well as import substitution. These policies did not result in a sustained increase in production and productive efficiency. Rather, the gap between demand for and supply of agricultural goods widened over the years.²⁸ Having a growing dissatisfaction regarding inward-looking trade and development policies, the sustainability of the government interventions towards long-term food-grain availability was questioned due to the increased

²⁶ MJ Islam and SMA Habib, *International Financial Institutions in Bangladesh: Implications of Selected Policies for Agriculture Sector and Rural Livelihood*, Dhaka: Development Research Network No (2007); Salim and Hossain, above n 22, 7.

²⁷ Ahmed, N., Bakht, Z., Dorosh, P., and Shahabuddin, Q. 2007. *Distortion to Agricultural Incentives in Bangladesh*. Agricultural Distortion Working Paper No 32, Washington DC: the World Bank. Islam, M. J., and Habib, S. M. A. 2007. *International Financial Institutions in Bangladesh: Implications of Selected Policies for Agriculture Sector and Rural Livelihood*. Dhaka: Development Research Network. Rahman, T. 2008. *Political Economy of Trade Liberalisation in Bangladesh: Impact of Trade Liberalisation on Bangladesh Agriculture*. Jaipur: CUTS International. Salim, R., and Hossain, A. 2006. Market Deregulation, Trade Liberalization and Productive Efficiency in Bangladesh Agriculture: An Empirical analysis. *Applied Economics*, 38(21): 2567-2580.

²⁸ Ahmed, N., Bakht, Z., Dorosh, P., and Shahabuddin, Q. 2007. *Distortion to Agricultural Incentives in Bangladesh*. Agricultural Distortion Working Paper No 32, Washington DC: the World Bank. Salim, R., and Hossain, A. 2006. Market Deregulation, Trade Liberalization and Productive Efficiency in Bangladesh Agriculture: An Empirical analysis. *Applied Economics*, 38(21): 2567-2580.

inefficiency and corruption in the public management system and the heavy budgetary burden imposed by these operations.²⁹

Acknowledging this sort of inefficiencies in addition to constant pressures from the donor countries and international development agencies such as the World Bank and the IMF, the government started to pursue a policy-shift from state intervention to more market-oriented policies in the mid 1980s with a view to achieving high economic growth and reducing poverty.³⁰ Deregulation and agricultural trade liberalization generated a momentum that began in the late 1980s and peaked in the early 1990s. Major reforms in agricultural policy included liberalization of input markets, shrinking the role of government agencies in distribution of inputs, substantial reduction and rationalization of

²⁹ Ahmed, N., Bakht, Z., Dorosh, P., and Shahabuddin, Q. 2007. *Distortion to Agricultural Incentives in Bangladesh*. Agricultural Distortion Working Paper No 32, Washington DC: the World Bank. Dorosh, P., and Shahabuddin, Q. 2002. *Rice Price Stabilization on Bangladesh: An Analysis of Policy Options*. MSSD Discussion Paper No. 46, Markets and Structural Studies Division, International Food Policy Research Institute. Krueger, A. O. 2010. Trade Liberalization and Growth in Developing Countries. In J. J. Siegfried (Ed.), *Better Living Through Economics*. Cambridge, MA: Harvard University Press. Salim, R., and Hossain, A. 2006. Market Deregulation, Trade Liberalization and Productive Efficiency in Bangladesh Agriculture: An Empirical analysis. *Applied Economics*, 38(21): 2567-2580.

³⁰ Ahmed, N., Bakht, Z., Dorosh, P., and Shahabuddin, Q. 2007. *Distortion to Agricultural Incentives in Bangladesh*. Agricultural Distortion Working Paper No 32, Washington DC: the World Bank. Mohammad Ismail Hossain and Wim Verbeke, 'Evaluation of rice markets integration in Bangladesh' (2010) 15(2) *Lahore Journal of Economics* 77.. Islam, M. J., and Habib, S. M. A. 2007. *International Financial Institutions in Bangladesh: Implications of Selected Policies for Agriculture Sector and Rural Livelihood*. Dhaka: Development Research Network. Nahar, B., and Siriwardana, M. 2009. Impact of Trade Liberalization on Poverty in Bangladesh. *South Asia Economic Journal*, 10(2): 325-369. Rahman, T. 2008. *Political Economy of Trade Liberalisation in Bangladesh: Impact of Trade Liberalisation on Bangladesh Agriculture*. Jaipur: CUTS International. Salim, R., and Hossain, A. 2006. Market Deregulation, Trade Liberalization and Productive Efficiency in Bangladesh Agriculture: An Empirical analysis. *Applied Economics*, 38(21): 2567-2580.

tariffs, removal of quantitative restrictions, moving from multiple to a unified exchange rate, and from fixed to a flexible exchange rate system.³¹

Analogously, the government pursued a wide range of policy reforms to liberalize agricultural input markets including privatization of the distribution system of key agricultural inputs, initiatives for deregulation measures to improve the investment climate for private enterprises, gradual elimination of subsidies on fertilizers and small irrigation equipment, and improving the maintenance of agricultural equipment through encouraging participation of the private sector.³²

Triggered by these reforms, the fertilizer trade was almost entirely handled by the private sector in 2005.³³ Further policy reforms included rationalization or

³¹ Ahmed, N., Bakht, Z., Dorosh, P., and Shahabuddin, Q. 2007. *Distortion to Agricultural Incentives in Bangladesh*. Agricultural Distortion Working Paper No 32, Washington DC: the World Bank. Ahmed, S., and Sattar, Z. 2004. *Trade Liberalization, Growth and Poverty Reduction: The Case of Bangladesh*. World Bank Policy Research Working Paper 34204, Washington DC: The World Bank. Hoque, M. M., and Yusop, Z. 2010. Impacts of Trade Liberalisation on Aggregate Import in Bangladesh: An ARDL Bounds Test Approach. *Journal of Asian Economics*, 21(1): 37-52. Hossain, M. I., and Verbeke, W. 2010. Evaluation of Rice Markets Integration in Bangladesh. *The Lahore Journal of Economics*, 15(2, Winter 2010): 77-96. Islam, M. J., and Habib, S. M. A. 2007. *International Financial Institutions in Bangladesh: Implications of Selected Policies for Agriculture Sector and Rural Livelihood*. Dhaka: Development Research Network. Salim, R., and Hossain, A. 2006. Market Deregulation, Trade Liberalization and Productive Efficiency in Bangladesh Agriculture: An Empirical analysis. *Applied Economics*, 38(21): 2567-2580. Dayal Talukder, *Impact of Agricultural Trade Liberalisation on the welfare of rural communities in Bangladesh* (Auckland University of Technology, 2011).

³² Ahmed, M. U. 2004. Socio-Demographic Correlates of Rural Poverty in Bangladesh: A Case Study of Gaibandha Sadar and Tanore Upazilas. *Bangladesh e-Journal of Sociology*, 1(2). Ahmed, N., Bakht, Z., Dorosh, P., and Shahabuddin, Q. 2007. *Distortion to Agricultural Incentives in Bangladesh*. Agricultural Distortion Working Paper No 32, Washington DC: the World Bank. Klytchnikova, I., and Diop, N. 2006. *Trade Reforms, Farms Productivity, and Poverty in Bangladesh*. World Bank Policy Research Working Paper 3980, Washington DC: the World Bank. Salim, R., and Hossain, A. 2006. Market Deregulation, Trade Liberalization and Productive Efficiency in Bangladesh Agriculture: An Empirical analysis. *Applied Economics*, 38(21): 2567-2580. Talukder, above n. 31.

³³ Ahmed, N., Bakht, Z., Dorosh, P., and Shahabuddin, Q. 2007. *Distortion to Agricultural Incentives in Bangladesh*. Agricultural Distortion Working Paper No 32, Washington DC: the World Bank. Ahmed, S., and Sattar, Z. 2004. *Trade Liberalization, Growth and Poverty Reduction: The Case of Bangladesh*. World Bank Policy Research Working Paper 34204, Washington DC: The World Bank. Klytchnikova, I., and Diop, N. 2006. *Trade Reforms, Farms Productivity, and*

elimination of import duties on agricultural inputs and spare parts; elimination of the government monopoly in fertilizer imports; and abolition of standardization requirements.³⁴

There were emboldening reactions to these reforms and liberalization initiatives from market forces. As a result, the private sector participation in the input market increased sharply. Irrigation equipment became cheaper and farmers had easy access to the equipment. Different types of high yielding variety (HYV) seeds were available to farmers, thereby promoting both extensive and intensive cultivation by increasing the irrigated area and use of fertilizers.³⁵

Irrespective of this remarkable progress efficiency, the rate of decline in the incidence of poverty over the two decades 1990-2010 was somewhat insignificant. The decline in poverty was an average of less than 1 percent (over the twenty-year period), leaving poverty at a remarkably high level – with more than 40 percent of the country's population and the majority of them in rural areas.³⁶ Due to this fact, a major question develops – to what extent has agricultural trade liberalization influenced the economic growth of Bangladesh?

Poverty in Bangladesh. World Bank Policy Research Working Paper 3980, Washington DC: the World Bank. Salim, R., and Hossain, A. 2006. Market Deregulation, Trade Liberalization and Productive Efficiency in Bangladesh Agriculture: An Empirical analysis. *Applied Economics*, 38(21): 2567-2580. Talukder, above n 31.

³⁴ Ibid.

³⁵ Klytchnikova, I., and Diop, N. 2006. *Trade Reforms, Farms Productivity, and Poverty in Bangladesh.* World Bank Policy Research Working Paper 3980, Washington DC: the World Bank. Salim, R., and Hossain, A. 2006. Market Deregulation, Trade Liberalization and Productive Efficiency in Bangladesh Agriculture: An Empirical analysis. *Applied Economics*, 38(21): 2567-2580.

³⁶ Ahmed, S., and Sattar, Z. 2004. *Trade Liberalization, Growth and Poverty Reduction: The Case of Bangladesh.* World Bank Policy Research Working Paper 34204, Washington DC: The World

1.4 Problem Statement and Motivation

“Openness to trade increases poverty” is a statement made by anti-globalization advocates.³⁷ They argue that trade liberalization is the organized dismantling of trade barriers, which results in substantial joblessness, less economic growth and high food prices. Conversely, advocates of trade liberalization have prompt that it ensures accessibility of food and boosts rural incomes, thereby reducing poverty in the poorest countries.³⁸

The accomplishments of trade reform (trade liberalization) in South Asia have resulted in mixed tendencies in economic growth. It is essentially apparent that output has grown but at a slow pace, and that output growth was not enough to generate an export-led growth boom similar to what has been seen in the East Asian manufacturing sector, in Latin America’s agriculture and in other dynamic emerging economies.³⁹

Despite significant structural transformation and policy changes, to date, there have been no systematic and dynamic attempts to evaluate and analyze the impact of agricultural trade liberalization on productivity, price change, income

Bank. BBS. 2007. *Report of the Household Income and Expenditure Survey 2005*. Dhaka: Bangladesh Bureau of Statistics. Klychnikova, I., and Diop, N. 2006. *Trade Reforms, Farms Productivity, and Poverty in Bangladesh*. World Bank Policy Research Working Paper 3980, Washington DC: the World Bank. Ministry of Finance. 2010. *Bangladesh Economic Review 2010*. Dhaka: Ministry of Finance, the Government of Bangladesh.

³⁷ Neil McCulloch, L Alan Winters and Xavier Cirera, *Trade liberalization and poverty: A handbook* (Cambridge Univ Press, 2001).

³⁸ Miriam Manchin, 'Preference utilization and tariff reduction in European Union imports from African, Caribbean, and Pacific countries' (2005).

³⁹ Lawrence Edwards, *Trade liberalisation and factor returns in South Africa, 1988-2002*, Conference on “African development and poverty reduction: The macro-micro linkage”, Cape Town.

distribution, and poverty. Studies that have attempted to shed light on these issues have focused rather narrowly on the overall economic impact of agricultural trade liberalization. None of these studies has focused specifically on 'how agricultural trade liberalization has impacted on the economic growth and poverty reduction of Bangladesh', which is the focus of this PhD study. Therefore, there is a strong case for rigorous and critical investigation into its consequences and implications, either in broad spectrum or with specific reference to a particular group of individuals of the economy.

A great deal of the studies have been essentially taken on as development projects of donor agencies with a target of achieving specific results to introduce new technologies, some of which were not suitable for the local economy and environment. For instance, the introduction of tube-well technology by UNICEF and the UNDP for safe drinking water in rural areas in the 1980s resulted in arsenic pollution leading to serious health hazards and environmental catastrophes in Bangladesh.⁴⁰ Similarly, with the recommendations of the OECD's Development Assistance Committee and under the Structural Adjustment Reforms (SAR) programme of the World Bank, the donor agencies led by the World Bank spent billions of dollars on poverty projects in Bangladesh but the impact of these efforts on poverty reduction was considered as

⁴⁰ Zafar Adeel, *Policy dimensions of the arsenic pollution problem in Bangladesh*, Technologies for Arsenic Removal from Drinking Water, workshop on Technologies for Arsenic Removal from Drinking Water organized by Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh and The United Nations University (UNU), Tokyo, Japan. Debapriya Bhattacharya, Mustafizur Rahman and Fahmida Khatun, *Environmental Consequences of Structural Adjustment: towards sustainable shrimp culture in Bangladesh*, Centre for Policy Dialogue (CPD) No (1999); MJ Islam and SMA Habib, 'International financial institutions in Bangladesh: implications of selected policies for agriculture sector and rural livelihood' (2007) *Dhaka: Development Research Network*.

insignificant. It is argued that the absence of an adequate national framework and the abundance of donors' strategies without local experience created a big gap of knowledge, which caused these programmes to be unsuccessful.⁴¹ In the same way, an embankment technology was applied to shrimp cultivation projects for developing commercial shrimp farms in the coastal areas of Bangladesh. While the commercial shrimp sector was developed there was little sensitivity to local knowledge, practices, preferences and resource use, leading to negative consequences in terms of loss of bio-diversity, increased salinity, destruction of mangroves and other negative socio-economic effects.⁴²

Thinking about the above practical experience, it is important to evaluate the impacts of agricultural trade liberalization cautiously with special attention to local sensitivity and experience, which is the focus of this study. In addition, given the considerable impact of agricultural trade liberalization policy-exercise on more than 80 percent of the country's population (dependent on agriculture and predominantly rural households), there is a strong justification for the strenuous study into its consequences and implications of such liberalization.

⁴¹ Mohammad Alauddin and John Quiggin, 'Agricultural intensification, irrigation and the environment in South Asia: Issues and policy options' (2008) 65(1) *Ecological Economics* 111. Debapriya Bhattacharya and Rashed AM Titumir, *Poverty Reduction In Bangladesh: Absence Of A National Framework, An Abundance Of Donors' Strategies*, Centre for Policy Dialogue (CPD) No (2000); Islam and Habib, 'International financial institutions in Bangladesh: implications of selected policies for agriculture sector and rural livelihood', above n 40.

⁴² Ibid.

Thus, the study addresses the following issues:

- a) issues ensuing from agricultural trade liberalization: productivity growth in agriculture; price changes; income distribution, inequality and poverty; and other socio-economic issues such as the use of natural resources, environment, externalities, market failure, infrastructure improvement, non-farm sector development, and changes in social relationship with a view to developing policy frameworks and undertaking relevant measures for increasing the welfare of rural households;
- b) issues concerning to welfare such as: such issues as income distribution, inequality and poverty and suggested policies and relevant measures to address these issues and also attempted to focus on some important issues such as operation of local rice markets, development of rural infrastructure, and storage facilities and identified policies and measures related to these issues; and
- c) role of socio-economic factors such as environment, externalities, market failure etc. and indicated related policy dimensions to address these issues.

1.5 Objectives of the Study

The principal aim of this study will be to analyze the impact of agricultural trade liberalization on the economic growth of Bangladesh. Streaming from the above mentioned, the overall objective of the study will likely be to consider the impact of trade liberalization and different Free Trade Agreements (FTAs) on agriculture's ability to contribute to economic growth; specifically, it will examine

the correlation between trade liberalization, international trade flow in the agricultural industry.

Extending from the overall objective, the following sub-objectives are addressed:

- a. The outcome of trade liberalization on agriculture's capacity to lead to export earning,
- b. The extent of international market access and trade balance within the agricultural sector,
- c. An evaluation of various regional trading block agreements and their trade flows in agricultural products (on selected agricultural products), including the impact of a trading partner's distance from Bangladesh and the exchange rate,
- d. The connection between trade liberalization and total agricultural factor productivity is examined by observing at the impact on third world economic growth,
- e. The primary determinants of agricultural economic growth in the South Asian agricultural industry.

1.6 Research Questions

The current emerging and conflicting evidence underscores the necessity to do more focused research on the implications of an open trade regime in the agricultural sector and its role in fostering economic growth. It is because no one can merely derive any guarantee from the literature that a more open trade

regime for agriculture alone will foster economic growth in South Asia in general and Bangladesh in particular.

Therefore, it is necessary to provide answers to the following questions:

- a. Have the current open trade regimes adopted by Bangladesh, and especially within the agricultural sector, culminated within the necessary economic growth?
- b. Would the current policies sufficiently sequenced and concomitant to provide support to an open trade regime?
- c. To which regional trading block must Bangladesh give more weight because of its agricultural products, and what could the impact of a trading partner's distance and the exchange rate regime be?

This research is pertinent from the policy perspective, as trade liberalization constitutes a part of an important policy aspect in the Bangladesh government's current efforts to enhance the underlying supply capacity of the economy.

1.7 Data and Methodology

The research methodology of this study is qualitative in its approach. This method is important to study the implication of WTO on agriculture sector of LDCs for various reasons. First, this approach is suited for the collection and analysis of relevant data on the experience of some selected countries. Since the

research is mainly based on different literature (both primary and secondary), it helps to improve the validity of the finding. Second, there are some aspects of the object under investigation whose data cannot be expressed and analyzed through quantitative methods. According to Creswell⁴³, the qualitative approach is best suited for detailed and complex analysis of a given issue as well as for problems that cannot easily be quantified. Since the research is not concerned with quantifying its results through statistical summary or analysis, it is best to use the qualitative approach. The other reason for adapting the qualitative approach is that this research seeks to describe the implication of WTO's AOA on the agriculture sector of selected LDCs and explains the reason why LDCs are not benefited from the WTO. Hence, it is largely an analytical and explanatory research, which tries to understand and articulate the implication of WTO membership for LDCs.

To investigate the object of the study and draw lessons for Bangladesh, the researcher has chosen the experience of India. The country has been selected based on its similar context with Bangladesh's agriculture, the availability of resources and geographical representation. Agriculture is the main source of Indian economy and about 80 percent of their population earns its livelihood from this sector. In addition to this, the sector is the basic source of their foreign exchange and GDP. The other reason is the availability of resources. Although there are other LDCs, which have similar context with Bangladesh's agriculture, there is no sufficient literature on the implication of WTO on their agricultural

⁴³ John W Creswell, *Research design: Qualitative, quantitative, and mixed methods approaches* (Sage Publications, Incorporated, 2013) 211.

sector and this creates difficulties to see their experience. Finally, since LDCs are existing in different continents, it is important to see the experience of neighboring countries.

To gather data about the experience of those countries, the researcher has collected, organized and interpreted the available primary and secondary sources. Primary sources of data are collected from official websites of their respective government and the WTO. While the secondary source of the study was collected from different sources like books, journal articles and relevant official documents. And communication medias, such as newspaper and magazines, and different websites are also employed. Based on the experience of those selected countries, those primary and secondary sources are analyzed and the research tries to draw lessons that Bangladesh could have to consider in its WTO accession process.

1.8 Contributions of the Study

The study is directive from a policy perspective, as trade liberalization constitutes an important element in the government's efforts to boost the underlying supply capacity of the economy. From a research perspective, the findings of this study would be timeous as Bangladesh affords the opportunity for an in-depth case study on account of significant variation in trade policy orientation and productivity performance across the agriculture sector. Bangladesh also has a wide variation in its degree of openness; owing to trade liberalization and this make the study more comprehensive.

The study results show how the Bangladeshi agricultural sector benefited from trade liberalization and leads to a forward-looking assessment with respect to how the sector should be handled. It also considers the question of which regional trading block Bangladesh should give more emphasis to in order to promote economic growth and poverty reduction. Furthermore, the study aims to provide a policy formulation base that may benefit the agricultural sector.

Specific changes in trade volumes, patterns and prices offer interest to many stakeholders in agriculture. Results of this study can indicate sectors within the industry that could potentially gain from trade liberalization. Thus, it can be useful to trade with participants in exporting and importing countries, including producers, processors, shippers, and policy-makers.

At the outset of the study, the following contributions can be categorized:

- (i) **Specific contribution to Bangladesh** - The finding of this research has relevance in producing information to the government of Bangladesh, which has acceded to the WTO. It would help agricultural policy makers, strategists and negotiators to react proactively for the possible impact of AOA on the agriculture sector of the country. Since there are few researches on Bangladesh's accession to the WTO, it will contribute in filling the gap in the area understudy.
- (ii) **Contribution to the wider context** - This study also is of interest to other researchers whose areas of study are in commodity trade, regional integration or international trade. Governmental and non-governmental trade related agencies would find the results of this study

useful in trade negotiations and analysis. Furthermore, it could also be used as a springboard for further study on the issue raised. I will create awareness among the public on how Bangladesh's accession could affect the agricultural sector of the country.

Through this in-depth and comprehensive analysis of the experience of Bangladesh in agricultural trade liberalization, the study seeks to contribute to wider debates around surrounding the role of agricultural trade liberalization on the economy of particularly agricultural produces, exports of developing countries and LDCs. The analysis of impacts (methodological and analytical) aspects of agricultural trade liberalization, pursuit of a reformist policy framework, appropriate tailored trade liberalization implementation programmes would assist agricultural trade policy makers, strategists and negotiators in Bangladesh in particular and other countries with features similar in general. The Bangladesh experience may well contribute to a better understanding of the WTO multilateral agricultural trade liberalization.

1.9 Structure of the Study

The research is predominantly dedicated to the role of trade liberalization and different Free Trade Agreements (FTAs) on agriculture's capability to contribute to economic growth; more specifically, it examines the relationship between trade liberalization and international trade flow in the agricultural industry in light of Bangladesh's effort to integrate its economy with the rest of the world's. To

sufficiently address this objective, **Chapter One** provides a review of relevant literature regarding the role of international trade agreements in creating market access to third world countries, further highlighting how some processes and policy changes that Bangladesh follows have led to the prevailing situation with respect to market access. It also presents factors that explicitly have an influence in the success and potential of trade agreements understood to influence market access. Further, it provides an overview of the current debate on trade liberalization in the context of economic growth and poverty alleviation. Along with that, Chapter One provides a general introduction to the study and presents the rationale and significance of this study, the objectives, research questions, and scope and limitation of the study.

Chapter Two analyses the socio-economic framework of Bangladesh with a view to drawing a socio-economic depiction of the study-country as a basis for understanding the socio-economic situations and characteristics of the society. It provides an impression of the Bangladesh economy including its structure, the state of public ownership, the development of private sector, government and administrative structure, and the agricultural trade structure. It has overviewed the population structure of the economy. It concludes by highlighting some of the fundamental issues of the economy such as land reforms, poverty, inequality, and income distribution.

Chapter Three presents overview of the appropriate theories, concentrating on the primary arguments for and against the advocates and also the critics of trade liberalization, in addition to evidence on impacts of trade liberalization. A few of

the key themes examined within the research include debate on gains and losses from agricultural trade liberalization growth and distributional effects caused by agricultural trade liberalization; the theoretical facets of welfare dynamics and alterations in the economic growth because of technological improvement of agricultural trade liberalization. The review focuses mainly about how agricultural trade liberalization can impact economic growth, welfare of rural farmers and poverty alleviation. It concludes by presenting Bangladesh's agricultural trade liberalization process and issues, and critically analyzing a few of the major studies associated with agricultural trade liberalization in Bangladesh.

Chapter Four examines the role of agriculture in Bangladesh's economy, the Bangladeshi agricultural output compositions and its trade flow. Additionally, it presents the current challenges the Bangladeshi agricultural sector is facing. It continues to examine the relationship between trade liberalization and international trade flow within the agricultural industry, addressing their contribution towards the economy. Further, it analyses the trade policies that Bangladesh now utilize in numerous phases and also the economic challenges Bangladesh have observed through regional integration.

Chapter Five gives insights into the historical development of WTO system. It also treats the aim, principle and objectives of the WTO. It further discusses AOA (Agreement on Agriculture) and its three principles in the context of the experience of Bangladesh as member of WTO. In this part, there is a discussion

on the agriculture sector, agriculture policy of Bangladesh and the implication/challenge that Bangladesh faces after being a member of WTO.

Chapter Six analyses food security is crucial for health and well-being of all, and the need to improve it is central to the first Millennium Development Goal of reducing the number who suffers from hunger. While food security has improved in some developing countries, in others increasing numbers suffer from undernourishment. It is suggested that liberalizing trade in agricultural markets could boost food security in developing countries. The issue of the links between reducing trade barriers and food security has added significance in the context of the current World Trade Organization Doha Round negotiations and the recent commodity price spikes in world markets, in terms of predicting the implications of further trade liberalization in a more uncertain world have also been addressed. This chapter also tries to address the evidence of how agricultural trade liberalization impacts on food security in developing countries, i.e. Bangladesh.

Chapter Seven examines the environmental along with other socio-economic impacts; impacts on land and water through the application of agricultural inputs such as chemical fertilizers and pesticides to rice cultivation; changes in social relationships; changes in infrastructure; and the development of the rural non-farm sector in the economy.

Chapter Eight concludes with recommendations on policy implications including measures and capacity-sensitive trade policies needed to enhance the welfare of

the people of Bangladesh. It also indicates dimensions and scopes of future research related to this study.

Chapter Two

Overview of Agricultural Trade Liberalization and the Economic System of Bangladesh

2.1 Introduction

In order to properly analyze the implications of an open trade regime in the agricultural sector adopted by Bangladesh and its role in fostering economic growth it is necessary to examine the economic system of Bangladesh. The purpose of the present chapter is hence to provide a review of the fundamental socio-economic characteristics of the study nation, which is Bangladesh and investigate the current growth developments in addition to standard characteristics from the overall economy. It also revisits the trade composition; government and admin composition; features of agricultural trade; agriculture and land reform; population composition; and poverty and income distribution. The analyses and discussion posts in the socio-economical circumstance of Bangladesh in this particular chapter is going to be ideal for understanding the context of study country.

2.2 Socio-Economic Composition of Bangladesh: A Synopsis

2.2.1 Historical Backdrop: Emergence of Bangladesh

The emergence of Bangladesh as a sovereign state is a landmark in contemporary history. The struggle of Bangladesh was not only a struggle for the emancipation

of a people; it was a struggle for the preservation of democratic and human values, which were trampled underfoot by a ruthless military dictatorship. The struggles for the preservation of democratic and human values in Bangladesh as in other parts of the world have developed through a historical process.¹ The sixteenth of December 1971 was a moment of supreme emotion. The day of Pakistan's capitulation became Bangladesh's Victory day. As liberation and independent statehood became realities, a mood of exuberance took hold of the delta. It was also a turbulent and difficult time. All over Bangladesh, people were violently settling scores, and millions of displaced people were returning to often devastated and looted homes.² The Muslims who form the bulk of the population of Bangladesh have long been faced with a dilemma regarding their cultural identity. The tendency to regard the Muslims of the Indian Subcontinent as one single community with a distinct social outlook and culture has proved to be misleading. Thus soon after the creation of Pakistan Jinnah and the Muslim League government tried to make 'Urdu' as the state language of unified Pakistan (East and West Pakistan).³ The Bengali speaking East Pakistani (Bangladesh) people vehemently resisted that and since then the struggle for independence started its journey since 1951. The colonial attitude of the West Pakistani politicians, bureaucrats, capitalists and military leaders, greatly strengthened regionalist feeling in East Pakistan. It was out of this feeling that Bangladesh

¹ A.F. Salahuddin Ahmed, 'The Emergence of Bangladesh Historical Background' in SR Narain Chakravarty, Virendra (ed), *Bangladesh: History and Culture* (New Delhi: South Asian, 1986) vol 1, 133.

² Willem Van Schendel, *A History of Bangladesh* (Cambridge University Press, 2009). 172.

³ Ahmed, above n 1.

nationalism was born.⁴

With the emergence of Bangladesh as a nation state the entire perspective of the history of the subcontinent has changed. The rise of Bengali nationalism cutting across religious barriers has added a new dimension to social and political reality. During the four decades that put into practice what was a tumultuous episode in twentieth-century postcolonial history, Bangladesh has continued to change and alter. The country has encountered serious troubles through its background: from the terrible cost in individual life inflicted with the Pakistan army while in its bloody inception, extensive and pervasive poverty, and environmentally friendly weakness, to some continuing set of troubles in relation to governmental instability and bad governance. Yet Bangladesh has produced substantial progress during this time, challenging those that prophesied that this new express would be unviable. Bangladesh has revealed the globe that it really has been able to increase its food manufacturing significantly, build essential new export market sectors like completely ready-made garments and shrimp, increase parts of its healthcare and training interpersonal areas by means of concerted federal government action and level the right way to new probable answers to global poverty problems throughout the impressive job of a few of its NGOs. It is precisely because of the scale of problems that Bangladesh has experienced, and the resilience and creativity that this has instilled in its people, that many now see the country as a "laboratory for innovative solutions in the developing world".⁵

⁴ Richard D Lambert, 'Factors in Bengali regionalism in Pakistan' (1959) 28(4) *Far Eastern Survey* 49.

⁵ Don Belt, 'The coming storm' (2011) 219(5) *National Geographic* 58.

Bangladesh has a geographical area of 143,998 sq km. Bangladesh, a nation of rivers, is in essence a large delta comprised of three significant rivers; the Ganges, Brahmaputra and Meghna. Subsequently, Bangladesh is also one of the most flood-prone countries in the world. When the spring snows melt in the Himalayan Mountains the rivers often overflow running south to the sea. Replete with mangrove forests and tropical rain forests, the overall land is mostly flat, with a few hilly areas in the east and southeast.

Figure 2.1: Map of Bangladesh



Source: Google Online <http://www.infoplease.com/country/bangladesh.html>

[Accessed on 11 Nov. 2013]

2.2.2 Bangladesh Society

Bangladesh has a populace, estimated at about 162 million individuals, found within a property part of 57,000 square miles, which happens to be not a whole lot bigger compared to Great Britain. This may cause Bangladesh by far the most densely populated nation on earth, beyond the modest metropolis of Singapore or Hong Kong. Many of the population lives in rural areas, where territory is fruitful but in short supply along with the overall ecology is quite vulnerable. Even though the majority of the human population is Bengali Muslims, there are substantial Hindu, minorities and Christian that, it is predicted, make up around 15 % of the populace.

Bangladesh is a riverine, or riparian, state, located within a lowland alluvial plain that forms the lower part of the massive river-delta area formed by the confluence of the great Ganges, Brahmaputra and Meghna river systems. These rivers flow down from the Himalayas through the Indian-subcontinent into the area that is now Bangladesh, merging within its borders before flowing southwards into the Bay of Bengal. For thousands of years, the country's position within this highly fertile deltaic ecosystem has attracted people to an area offering high levels of agricultural productivity. At the same time, its location makes it highly vulnerable to natural disasters with destructive cyclones, perpetual land erosion from river and sea and floods that routinely cover one-fifth of the land and, during a bad year, may engulf two-thirds of the entire country.

When it emerged as an independent country, Bangladesh was a predominantly rural society populated by peasant smallholders. The previous feudal order fell apart after partition compelled many of those who had formed part of what was a predominantly Hindu zamindar landlord class to leave for India, and their lands were taken over or redistributed by the government.⁶

After 1971, the small new political class that began to emerge was drawn primarily from the party leaders and activists around Sheikh Mujibur Rahman who had challenged the dominance of what was sometimes termed the "Punjabi bureaucracy" that had ruled Pakistan.⁷

For the bulk of its population, access to land has been the key structural asset that has mainly defined social class. Most of the countryside was "minifundist" in character, that is, with the majority of people building livelihoods as smallholder farmers, and there were few of the large landlord-run estates found in many other areas of the subcontinent.⁸ Yet rural Bangladesh was far from being an idyllic picture of small-farm peasant life because landholding was highly unequal. Ramkrishna Mukherjee's seminal study *Six Villages of Bengal*⁹, conducted during the early 1940s, had earlier emphasized land ownership as the key to economic differentiation between households. By the 1970s, large sections of the rural population owned little or no agricultural land of their own. Some worked as

⁶ Betsy Hartmann and James K Boyce, *A quiet violence: view from a Bangladesh village* (Zed Books, 1983) 268.

⁷ Tushar Kanti Barua, *Political elite in Bangladesh: a socio-anthropological and historical analysis of the processes of their formation* (Peter Lang Pub Inc, 1978) vol 4, 7.

⁸ Geoffret D Wood, 'Class differentiation and power in Bandakgram: The minifundist case' (1976) *Exploitation and the Rural Poor*. Comilla: BARD.

⁹ Ramkrishna Mukherjee, *Six villages of Bengal* (Popular Prakashan, 1971) 135.

sharecroppers or leased in small plots, while many others were forced to labour on other people's land or undertake paid employment as day labourers or rickshaw pullers.¹⁰ By the 1980s, landholding census data indicated that at least half of Bangladesh's rural households were now identified as "functionally landless," meaning that what small landholdings they once may have owned had now been lost, either through forced or distress sale, or fragmented into largely unviable units through the endless process of subdivision that is required by family inheritance norms.¹¹

2.2.3 Economy of Bangladesh

Agriculture plays a key role in Bangladesh's economic growth. Extensive irrigation, high-yielding crop varieties, more efficient markets, and mechanization, enabled by policy reforms and investments in agriculture research, human capital, and roads have driven agriculture sector's growth.¹²

Agriculture is a major source of rural jobs in Bangladesh. Over 87 percent rural people derive at least some income from agriculture. However, two thirds of rural households rely on both farm and non-farm incomes. Pro-poor agriculture growth has stimulated the non-farm economy in Bangladesh: a 10 percent rise in farm incomes generates a 6 percent rise in non-farm incomes. As non-farm incomes

¹⁰ Hartmann and Boyce, above n 6.

¹¹ F Tomasson Jannuzi and James T Peach, 'The agrarian structure of Bangladesh: an impediment to development' (1980) *Westview special studies on South and Southeast Asia(USA)*.

¹² World Bank, *Agriculture Growth Reduces Poverty in Bangladesh* World Bank <<http://www.worldbank.org/en/news/feature/2016/05/17/bangladeshs-agriculture-a-poverty-reducer-in-need-of-modernization>>. (Accessed on 17 June 2016).

continue to grow, the government needs to focus on fostering a more robust rural non-farm economy.¹³

In Bangladesh, food security of the vast population is associated with the development of agriculture. Besides this, agriculture has a direct link to the issues like poverty alleviation, improved standard of living and employment generation. According to the provisional estimate of BBS (Bangladesh Bureau of Statistics), the overall contribution of the broad agriculture sector was 16.96 percent of GDP. The growth of broad service sector, particularly the growth of wholesale and retail trade, hotel and restaurants, transport and communication sector is substantially supported by the agriculture sector. Besides, agriculture sector absorbs around 47.30 percent of the total labour force of the country. In FY 2014-15, Bangladesh earned US\$ 1,154.80 million by exporting agricultural products, which was 3.70 percent of total export earnings. In addition to the exports of main agricultural commodities such as, raw jute, jute goods, tea, frozen foods, the Government has taken steps to increase exports of non-traditional agricultural commodities.¹⁴

Against global headwinds and domestic unrest, domestic activity had weakened. The share of private consumption in GDP has steadily declined since FY11, while private investment has remained largely unchanged as a share of GDP since FY12. The Bangladesh Bureau of Statistics released preliminary estimates of GDP growth in FY16 on April 5, 2016. For the second time in last three decades, GDP growth is estimated to have exceeded 7 percent, driven on the

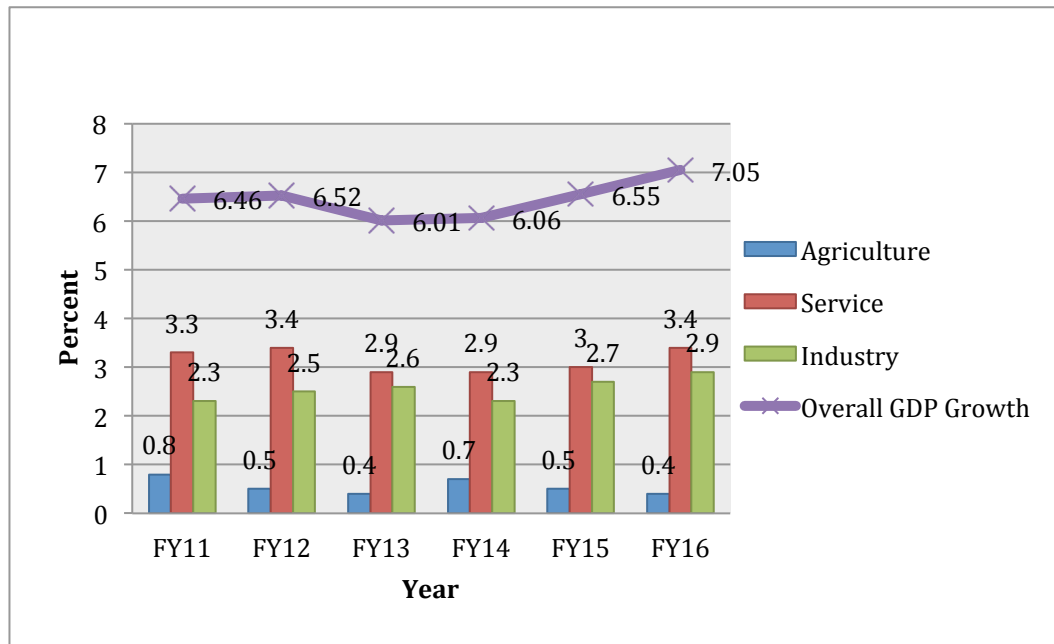
¹³ Ibid.

¹⁴ Ministry of Finance, Bangladesh, *Bangladesh Economic Review*.2015, <http://www.mof.gov.bd/en/budget/15_16/ber/en/Ch-07.pdf> (Accessed on 14 May 2016).

supply side by services and rise in public investment and consumption expenditures on the demand side (Figure 2.1). Services contributed 3.4 percentage points to the estimated 7.05 percent growth in FY16, followed by manufacturing contribution of 2 percentage points. Services alone contributed 0.4 percentage points out of the 0.5 percentage point increase in FY16 GDP growth relative to FY15. Of this 0.4 percentage points, 0.3 came from increased value added in public administration and defense and education sectors, reflecting the impact of a very large public sector pay increase implemented this year. On the demand side, private consumption remained the largest single source of growth, although its contribution declined from 3.8 percentage points in FY15 to 3.5 percentage points in FY16 (Table 2.1). The contribution of public investment nearly doubled from 0.8 percentage points in FY15 to 1.5 percentage points in FY16 while the contribution of private investment declined from 1.5 percentage point to 1.3 percentage point.¹⁵

¹⁵ World Bank, *Bangladesh Development Update* World Bank <<http://www.worldbank.org/en/news/feature/2016/04/30/bangladesh-development-update-bangladesh-economy-requires-focus-on-sustainable-and-inclusive-growth-moving-forward>>. (Accessed on 14 May 2016). It is difficult to understand where the BBS estimate of Tk 1313.8 billion public investments (in current prices) is coming from. Total capital expenditure in the FY16 central government budget is Tk 957.7 billion, not all of which is likely to be actually spent. Expenditures budgeted for the state owned nonfinancial enterprises is Tk 284.9 billion, of which around 80 percent is capital expenditures. This leaves unexplained about Tk 125 billion. It is implausible to assume local governments have the capacity to finance investment of this size from outside the central government budget.

Figure 2.2: GDP and Sector Growth Rates (%) Percent



Source: Bangladesh Bureau of Statistics (BBS) 2016¹⁶

¹⁶ above n 14.

Table 2.1: Contributions to Growth

	FY11	FY12	FY13	FY14	FY15	FY16
GDP Growth	6.46	6.52	6.01	6.06	6.55	7.05
<i>Contribution of Production Sectors (%)</i>						
Industry	2.3	2.5	2.6	2.3	2.7	2.9
Manufacturing	1.6	1.7	1.8	1.6	1.9	2.0
Services	3.3	3.4	2.9	2.9	3.0	3.4
Agriculture	0.8	0.5	0.4	0.7	0.5	0.4
<i>Contribution of Expenditure Components (%)</i>						
Private consumption	4.5	2.9	3.5	2.7	3.8	3.5
Government consumption	0.4	0.2	0.3	0.4	0.4	0.6
Private investment	1.9	2.3	0.4	2.2	1.5	1.3
Government investment	0.9	0.8	1.2	0.8	0.8	1.5
Exports, goods & services	4.7	2.4	0.5	0.6	-0.5	-0.1
Imports, goods and services	-5.6	-2.5	-0.3	-0.3	-0.7	1.9

Source: Bangladesh Bureau of Statistics (BBS), National Account 2005-06¹⁷

Growth in agriculture is estimated at 2.6 percent in FY16 with its share declining from 15.5 percent in FY15 to 14.75 percent. FY16 has been relatively free from political unrest. Crop cultivation did not suffer as farmers got necessary inputs and could market their products in urban and semi urban areas without any disruption. Aus and aman rice have been harvested, and boro plantation has been completed. The Department of Agricultural Extension (DAE) has set the target for food grain production at 36.42 million metric tons (MT) for FY16 of which 35.02 million MT is for rice and 1.4 million MT for wheat, up by almost 1

¹⁷ BBS. <http://www.bbs.gov.bd/home.aspx> (Accessed on 23 Mar 2016).

percent from the previous year's actual production. Nearly 54 percent of the rice production is expected from boro.¹⁸ Total area coverage for both aus and aman almost reached the target. Aus production has been targeted at 2.48 million MT for FY16, which is more than 6 percent higher than the actual production last year. The Aman production target has been fixed at 13.56 million MT, which is about 3 percent higher than for the previous Aman season. Although erratic rain and floods had hampered planting, this target for Amanis expected to be achieved. The total acreage of boro is expected to be 4.7 million hectares, compared with 4.84 million hectares last year. Farmers are reportedly finding growing wheat, potato and maize more profitable than boro.¹⁹

Growth in fisheries is estimated at 6.2 percent in FY16. Fisheries have been the fastest growing sector in agriculture in recent years, expanding at 6.2 percent on average per annum in last five years. Fisheries contributed around 3.3 percent to GDP in FY16. Over 17 million people are involved in the fish sector. Fish production in the country has been increasing to keep up with the growing demand at home and abroad for around a decade. According to the Department of Fisheries (DoF), the country produced 3.55 million tons of fish in FY15 and 3.45 million tons in FY14. For gearing up the production of fish, the government has set up 120 hatcheries in different parts of the country to provide training to the people and hatchery owners. The government also set a target to produce 4.52 million tons of fish by FY21. Proper utilization of the existing water bodies using

¹⁸ Cultivated December-February, harvested April- May.

¹⁹ World Bank, *Bangladesh Development Update*, above n 15.

the latest technologies could boost fish production.²⁰

Bangladesh overcame dire expectations of widespread starvation in the early 1970s to attain its goal of self-sufficiency in rice, its main staple.²¹ Table 2.2 provides a snapshot of agriculture's massive and laudable achievements since that time. Some of those challenges persist—the very limited land base with virtually no room to bring more land under cultivation; one of the highest population densities in the world; extreme vulnerability to natural disasters (also among the highest in the world); an undiversified production base; and poor infrastructure, including roads, power, and irrigation.

²⁰ Ibid.

²¹ Average imports of rice in recent years have been equivalent to less than 2 percent of domestic production.

Table 2-2: Bangladesh has transformed agriculture since 1970 (2012-2014)

Early 1970s (1972-73)	Early 2010s (2012-14)
Total food grain production: 10 million t	Total food grain production: 34-35 million t
Average rice yield: 1t/h	Average rice yield: 3t/h
Less than 7% of net cultivated area is irrigated	More than 80% of net cultivated area is irrigated
Fertilizer use at 45kg/h	Fertilizer use at 530kg/h
Refined aus and aman = 78% of rice output	Irrigated boro= 57% of rice output
Total population: 71 million	Total population: 157 million
Food grain availability per capita: 410 g per day	Food grain availability per capita: 410 g per day: 616-632 g per day

Source: Hossain and Bayes, 2009.²²

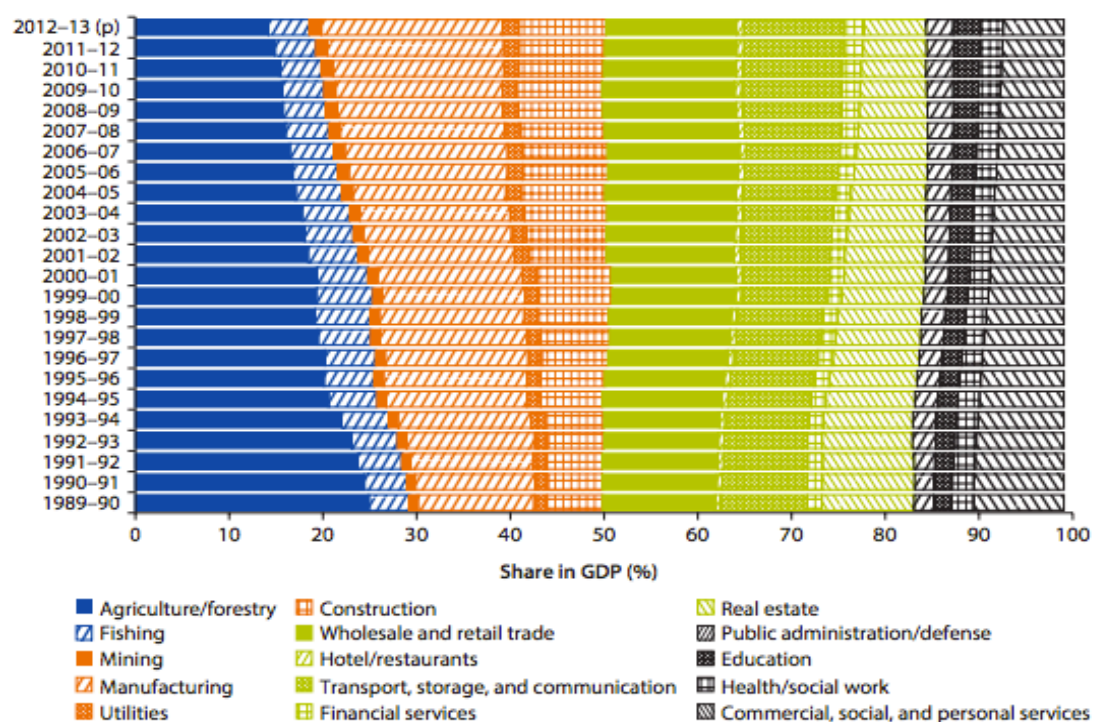
The improved performance of agriculture owes a significant debt to proactive economic and social policies. Significant demographic changes, specifically falling family sizes and rising human capital, together with technological change have contributed to the impressive growth in output per capita. The reduction in family size and entry of large numbers of better-educated young people into the workforce are delivering a “demographic dividend” in overall productivity to

²² Mahabub Hossain and Abdul Bayes, *Rural economy and livelihoods: Insights from Bangladesh* (AH Development Publishing House, 2009).

Bangladesh.

Agriculture (directly or indirectly) remains a major driver of Bangladesh's increasingly complex rural economy, with its widening array of inter-related sectors. Agriculture's relative size in the economy, according to World Bank, is becoming smaller, which is typical for a transforming economy, but this trend does not indicate that agriculture is becoming irrelevant. In a transforming economy, agriculture's role changes from being a direct or primary contributor to economic output to making a more leveraged contribution through powerful farm– non-farm linkages that have long been recognized in development economics.

Figure 2.3: Sectorial Composition of GDP, 1989-2013



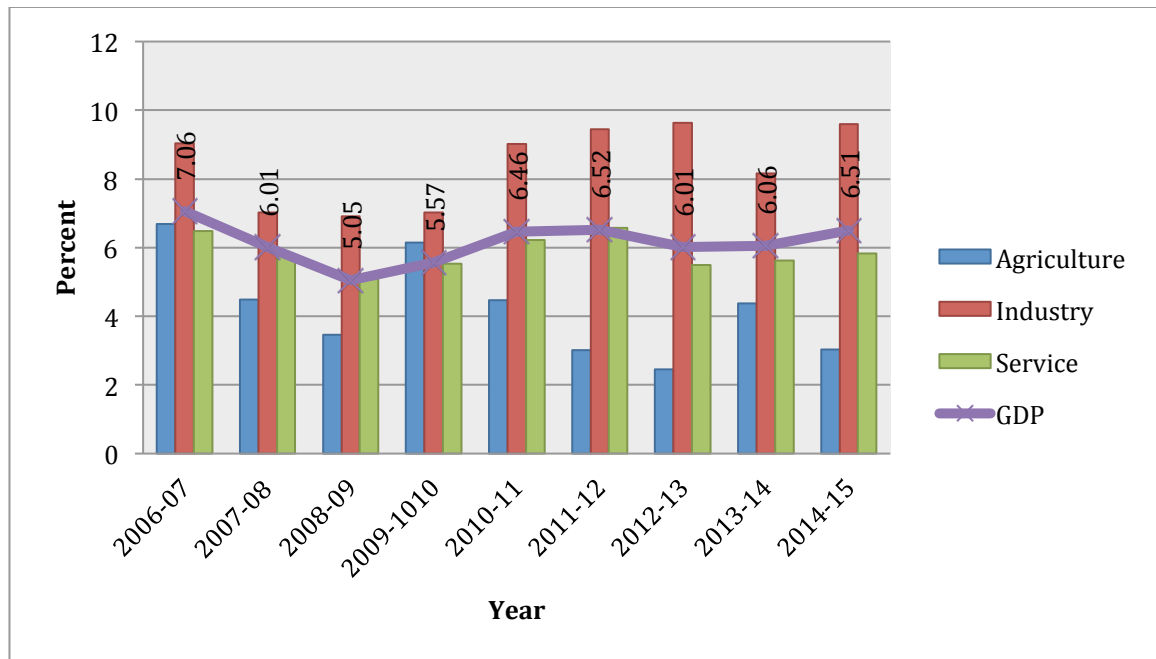
Source: World Bank, Dynamics of Rural Growth²³

²³ Madhur Gautam and Rashid Faruquee, *Dynamics of Rural Growth in Bangladesh: Sustaining Poverty Reduction* (World Bank Publications, 2016).

In FY 2014-15, within the broad agricultural sector, the provisional growth rate of agriculture and forestry sector stood at 2.07 percent, which was 3.81 percent in FY 2013-14. Despite slight increase in growth rate of animal farmings, forest and related services subsectors the overall growth rate of agriculture and forestry sector decreased from the previous rate due to the decreased growth rate of crops and horticulture subsector which came down to 1.30 percent from 3.78 percent of previous fiscal year. The estimated total production of cereals (rice, wheat and maize) was 384.18 lakh Metric Tonnes (MT) in FY 2014-15, which increased by 3.35 lakh MT compared to 380.83 lakh MT of the previous fiscal year. According to provisional data, the production of Aus, Amon and Boro stood at 23.28 lakh MT, 131.90 lakh MT and 191.92 lakh MT in FY 2014-15 respectively, which were slightly higher than those of previous fiscal year. Besides, the production of wheat and maize stood at 13.48 lakh MT and 23.61 lakh MT respectively in FY 2014-15. The growth rate of both animal farming and forestry sub-sectors showed increasing trend consistently. Animal farming and forestry sub-sectors grew by 3.10 percent and 5.10 percent respectively in FY 2014-15, which were 2.83 and 5.01 percent respectively in the previous fiscal year. According to the estimate of the Directorate of Fisheries (DOF), the total inland and marine catches in FY 2014-15 was 37.03 lakh MT where inland and marine catches were 30.74 lakh MT and 6.28 lakh MT respectively. The fisheries sector grew by 6.41 percent in FY 2014-15 compared to that of 6.36 percent in FY 2013-14.²⁴

²⁴ Finance, *Bangladesh Economic Review*. above n 14.

Figure 2.4: Broad Sectorial GDP Growth at Constant Price



Source: Ministry of Finance, Bangladesh Economic Review 2015

According to the new base year 2005-06 released by BBS, Bangladesh achieved 6.52 percent and 6.01 percent GDP growth in FY 2011-12 and FY 2012-13 respectively. Even during the global financial crisis and its aftermath, Bangladesh has been able to achieve GDP growth at more than 6 percent on an average. Following this trend, the economy grew 6.06 percent in FY 2013-14. According to provisional BBS estimates, GDP growth rate was recorded at 6.51 percent in FY 2014-15.²⁵

The provisional value of GDP at current market prices (base year: 2005-06) stood at Tk. 15,13,600 crore in FY 2014-15, which was 12.65 percent higher than that of the previous fiscal year. At current prices, the estimated per capita GDP for FY 2014-15 is Tk. 95,864, which has increased by 16.53 percent from the per capita GDP of Tk. 86,266 in FY 2013-14. On the other hand, per capita national income

²⁵ Ibid.

stood at Tk. 1,02,026 which was Tk. 92,015 in the previous fiscal year. In US dollar, per capita GDP and GNI stood at US\$ 1,314 and US\$ 1,235 respectively in FY 2014-15 compared to US\$ 1,184 and US\$ 1,110 respectively in FY 2013-14. Per capita national income increased by 11 percent compared to the previous fiscal year. GDP, GNI, per capita GDP and national income during the period from FY 2005-06 to FY 2014-15 are shown in Table 2.3 and sector-wise GDP at current market prices are shown in Table 2.4.

Table 2.3: GDP, GNI, Per Capita GDP and GNI at Current Market Prices

Item	2005-	2006-	2007-	2008-	2009-	2010-	2011-	2012-	2013-	2014-
GDP (In Crore	4823	5498	62868	7050	7975	9158	1055	1198	1343	15136
GNI (In Crore	5095	5850	67707	7609	8621	9883	11445	12953	14332	16108
Population (In	1198	14.18	14.38	14.58	14.78	14.97	15.16	15.37	15.58	15.79
Per Capita GDP	3450	3877	43719	4835	5396	6119	6961	7800	8626	9586
Per Capita GNI	3644	4126	47084	5219	5833	6604	7550	8428	9201	1020
Per Capita GDP	514	562	637	703	780	860	880	976	1110	1235
Per Capita GNI	543	598	686	759	843	928	955	1054	1184	1314

Source: Bangladesh Bureau of Statistics (BBS) *Provisional

Table 2.4: Gross Domestic Product (GDP) at Current Market Price

Base year: 2005-2006

(In Crore Taka)

Scetor/Sub-	2006	2007	2008	2009	2010	2011	2012	2013-	2014-
1. Agriculture And	7901	8998	9780	1109	1254	1388	148	1639	17700
a) Crops &	5762	6573	7115	8140	9190	1008	106	1179	12662
b) Animal Tannings	1219	1429	1583	1752	2017	2299	253	2766	29887
c) Forest and related	9187	9959	1081	1205	1339	1498	166	1839	20494
2. Fishing	1889	2063	2279	2460	2848	3182	369	4230	47583
3. Mining And	7866	9110	1096	1264	1420	1665	194	2108	23362
a) Natural gas and	5018	5387	6194	6803	6846	7366	795	8156	8732
b) Other mining &	2848	3723	4769	5842	7363	9284	115	1292	14630
4. Manufacturing	8760	1013	1161	1285	1465	1679	197	2232	25600
a) Large & medium	7013	8106	9199	1016	1164	1343	158	1803	20669
b) Small scale	1747	2030	2420	2695	3004	3353	386	4283	49309
5. Electricity, Gas Supply	5720	6441	7012	8346	1158	1418	163	1840	20808
		4950	5282	6003	8646	1018	121	1383	15642
b) Gas	842	1045	1249	1809	2339	3300	344	3676	4141
c) Water	378	445	481	533	605	701	766	891	1025
6. Construction	3351	3853	4418	4947	5707	6830	824	9083	10281
7. Wholesale And	7297	8614	960	1066	1213	1373	154	1725	19312
8. Hotel And	4069	4826	5790	7028	8228	9755	112	1303	14845
9. Transport, Communication	5313	5962	6718	8045	9457	1127	124	1343	14352
	3729	4188	4699	5757	6871	8334	921	9931	10579
b) Water transpon	4899	5111	5525	6386	6934	7089	764	8064	8589
c) Air transport	575	595	682	811	957	1022	104	1116	1190
d) Support transport	2772	313	3423	3826	4410	5391	600	6672	7246
10. Financial	1626	1870	2000	2344	2754	3631	422	4856	56577
a) Monetary	1373	1543	1581	1750	2152	2935	347	4039	47455
b) Insurance	1714	2108	2626	3356	3786	4584	492	5364	5942
c) Other financial	819	1163	1560	2583	2237	2381	259	2810	3180
11. Real Estate, Business Activities	4133	4511	4944	5443	6011	6871	788	0122	10632
12. Public Defence	1713	1966	2246	2542	3028	3349	376	4472	53356
13. Education	1185	1433	1625	1825	2139	2504	284	3276	37894
14. Health and	1045	1216	1336	1532	1773	2013	238	2692	30455
15. Community, Services	6354	7220	8536	9569	1046	1172	138	1565	17652
Tax less subsidy	2643	2983	3015	3624	466	5656	576	6317	73399
GDP at current	5498	6286	7050	7975	9158	1055	119	1343	15136
Growth rate	13.9	14.3	12.1	13.1	14.8	15.2	13.6	12.07	12.65

Source: Bangladesh Bureau of Statistics (BBS) *Provisional

Agricultural trade liberalization and other outward policy measures have contributed to recent economic growth. Bangladesh Bureau of Statistics (BBS) has recently come up with the provisional estimate of 7.05 per cent for the GDP growth in FY2016. It needs to be recalled that many analysts including the World Bank²⁶ and Asian Development Bank²⁷ expects the economic growth in FY2016 to be between 6.8-7 per cent in view of political unrest in the first half of the fiscal year and the trends of associated macroeconomic correlates.

However, in all likelihood Bangladesh will become a lower middle-income country in the next few years. In view of this possible scenario Bangladesh will need to prepare itself to face new challenges. One of the major implications of no longer being a low-income country would be that Bangladesh may not be considered for concessional credit lines. It implies that development financing from foreign aid could become costlier for Bangladesh in future. However, it is also conceivable that Bangladesh will still remain a least developed country (LDC) for some years since the thresholds for graduation from the LDC status relate to other specific criteria which include both income and non-income indicators.

²⁶ World Bank, *World Development Indicators (Bangladesh)* World Bank
<<http://data.worldbank.org/country/bangladesh>>. (Accessed on 15 Aug 2016).

²⁷ Asian Development Bank, *Basic Statistics*
<<http://www.adb.org/countries/bangladesh/main>>. (Accessed on 15 Aug 2016).

2.2.4 Structure of the Economy

The Industry sector plays an important role in socio-economic development of the country. According to BBS estimates, the contribution of the broad industry sector to real GDP stood at 29.55 percent in FY 2013-14, which increased to 30.42 percent in FY 2014-15. Among the fifteen sectors of GDP, the broad industry sector includes four sectors namely construction, mining and quarrying, manufacturing, electricity, gas and water supply. The contribution of the manufacturing sector is the highest in GDP. In FY 2013-14, the contribution of manufacturing sector in GDP was 19.47 percent which reached to 20.17 percent in FY 2014-15. The volume and growth performance of the manufacturing sector from FY 2006-07 to FY 2014-15 is shown in Table 2.5.

Table 2.5: Volume and Growth Rate of Manufacturing Sector

	(At constant prices of 2005-06)					(In Crore Tk.)			
Trim of	2006-	2007-	2008-	2009-	2010-	2011-	2012-	2013-	2014-
Small and	16112.	17264	18525.	20039	2117	2256	2455	26179	28907.
Cottage	(9.48)	(7.15)	(7.30)	(8.17)	(5.67)	(6.58)	(8.81)	(6.60)	(1030)
Medium-	65499.	70331	74933.	79631	8847	9799	1084	11836	130675
	(10.80)	(7.38)	(6.54)	(6.27)	(11.1)	(1036)	(10.6)	(9.16)	(10.24)
Total	81612.	87595	93458.	99670	1096	1205	1329	14454	159582
	(10.54)	(7.33)	(6.69)	(6.65)	(10.0)	(9.96)	(10.3)	(8.68)	(10.32)

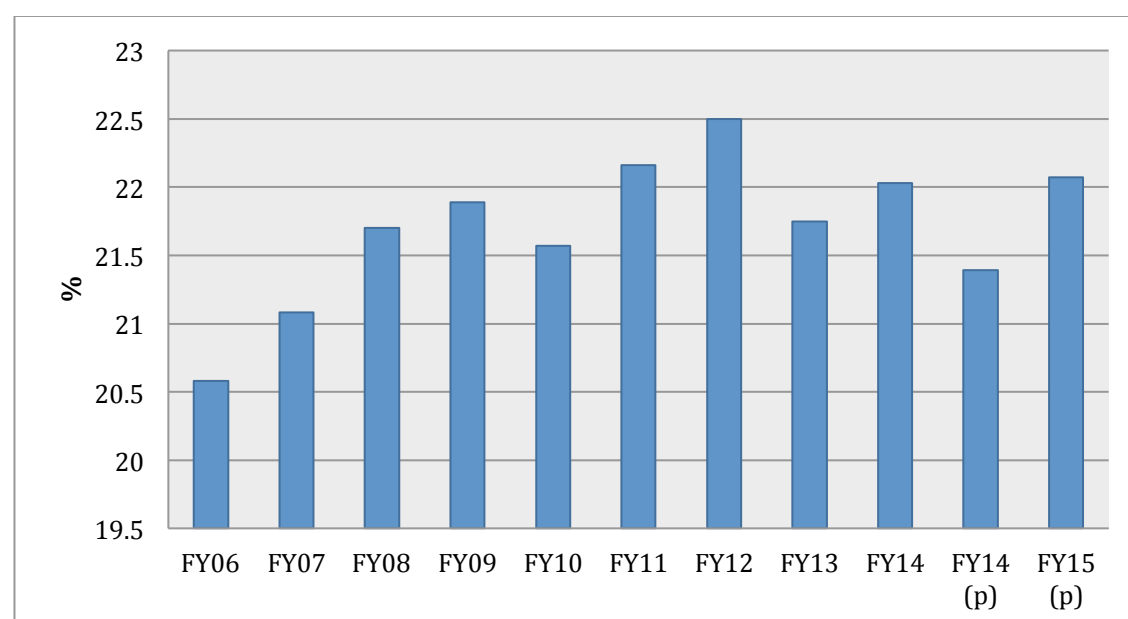
Source: Bangladesh Bureau of Statistics (BBS)²⁸

²⁸ Bangladesh Bureau of Statistics (BBS),
<http://www.bbs.gov.bd/WebTestApplication/userfiles/Image/LatestReports/SMI-%202012.pdf>, (Accessed on 14 Aug 2016).

Since FY2012, private sector investment growth has stagnated (Figure 2.4). The provisional GDP figure for FY2015 projects a marginal improved private investment performance (with a change of 0.04 of a percentage point as a share of GDP). The proxy indicators indicated a mixed picture as regards investment in FY2015. The growth of credit to private sector could only by 13.6 per cent as of March 2015. In contrast, growth of term loan for industries increased by 45.2 per cent during the first nine months of FY2015. However, there is a growing concern over the quality of term loan data as loans against trust receipts (LTR) were also often accounted under the term loan. The utilization of bank loans also need to be monitored closely. Total investment in export processing zones (EPZs) achieved a growth rate of 13.1 per cent (worth USD 3.4 billion) in July April of FY2015 over the corresponding period of FY2014. The corresponding growth figures were 14.5 per cent in FY2014 and 31.5 per cent in FY2013.²⁹

²⁹ Centre for Policy Dialogue (CPD), 'State of the Bangladesh Economy in FY 2015' (2015) <<http://cpd.org.bd/wp-content/uploads/2015/06/CPD-IRBD-FY15-State-of-Bangladesh-Economy-June-2015.pdf>>. (Accessed on 10 Oct 2015).

Figure 2.5: Private Investment (% of GDP) in last 10 years



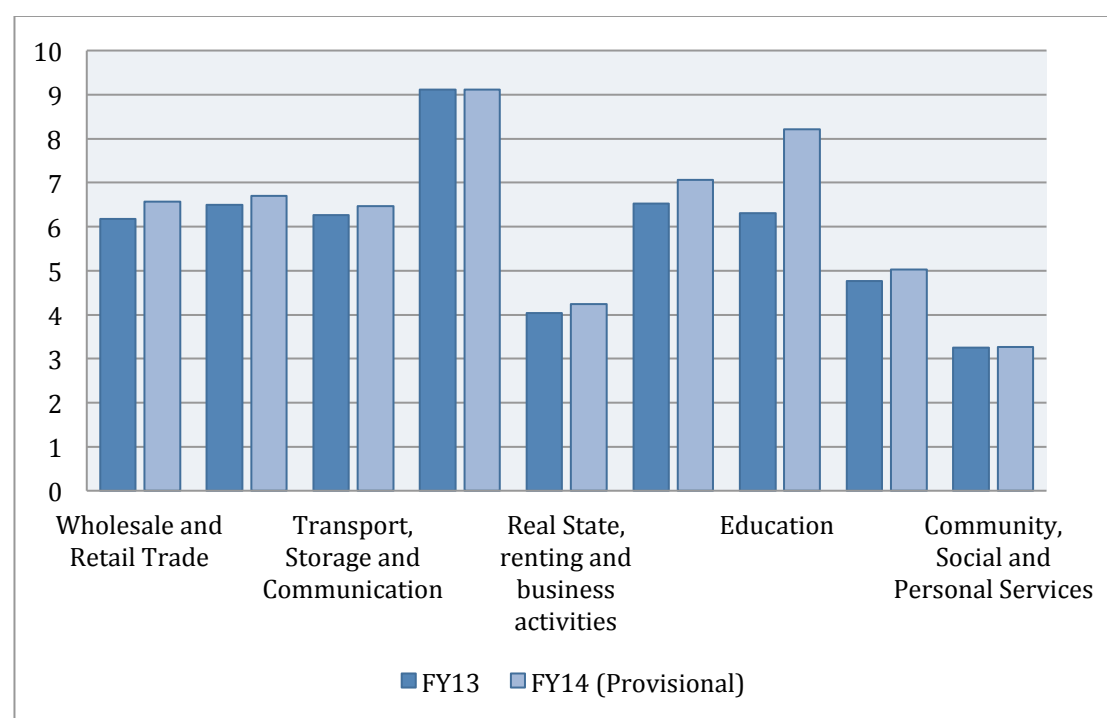
Source: Calculated from Bangladesh Bureau of Statistics (BBS)³⁰ p (provisional)

The services sector's growth rate of 5.8 per cent in FY2014 has been a surprise. Indeed, all the nine sub-sectors under the services sector is expected to attain higher growth in the current fiscal year, compared to last year (Figure 2.5). The growth of Education sector is expected to increase by 1.9 percentage points compared to last year. It was anticipated that in view of the political turmoil, the services sector was significantly affected. The BBS estimate has shown an improved performance for all the sectors, which were relatively more adversely affected during the political violence - e.g. land transport, wholesale and retail trade, hotel and restaurant and real estate, renting and business activities. Growth of 'tax less subsidy' is also expected to attain a higher growth rate of 5.1 per cent, which was 3.1 per cent in FY2013.³¹

³⁰ Ibid.

³¹ The share of 'tax less subsidy' is about 4.1 per cent in GDP.

Figure 2.6: Sectoral Growths



Source: Bangladesh Bureau of Statistics (BBS)³²

2.2.5 Private Sector

Private sector has been playing a significant role in the economic development of Bangladesh. In FY 2014-15, the total investment of GDP was 28.97 percent out of which 22.07 percent from private sector. It is one of the key desires of the government to widen the involvement of private sector in all spheres of development activities. In order to attract the private sector investment both in local and foreign the government has implemented a comprehensive reform programme by forming Privatization Commission and the Board of Investment. Moreover, the government to ensure congenial environment for private investment has promulgated different investment-friendly rules and regulations.

³² BBS, above n 28.

Furthermore, the government has delivered many special facilities such as tax holiday, tax exemption and one-stop services for the private investors. In general, the government is dependent on the Annual Development Programme (ADP) to carry out the public investment including to the infrastructure sectors. Now a day, along with the ADP mechanism, government has taken PPP strategy to implement the large-scale infrastructure and energy projects, which contributes greatly to fulfill the government's target in development sectors.³³

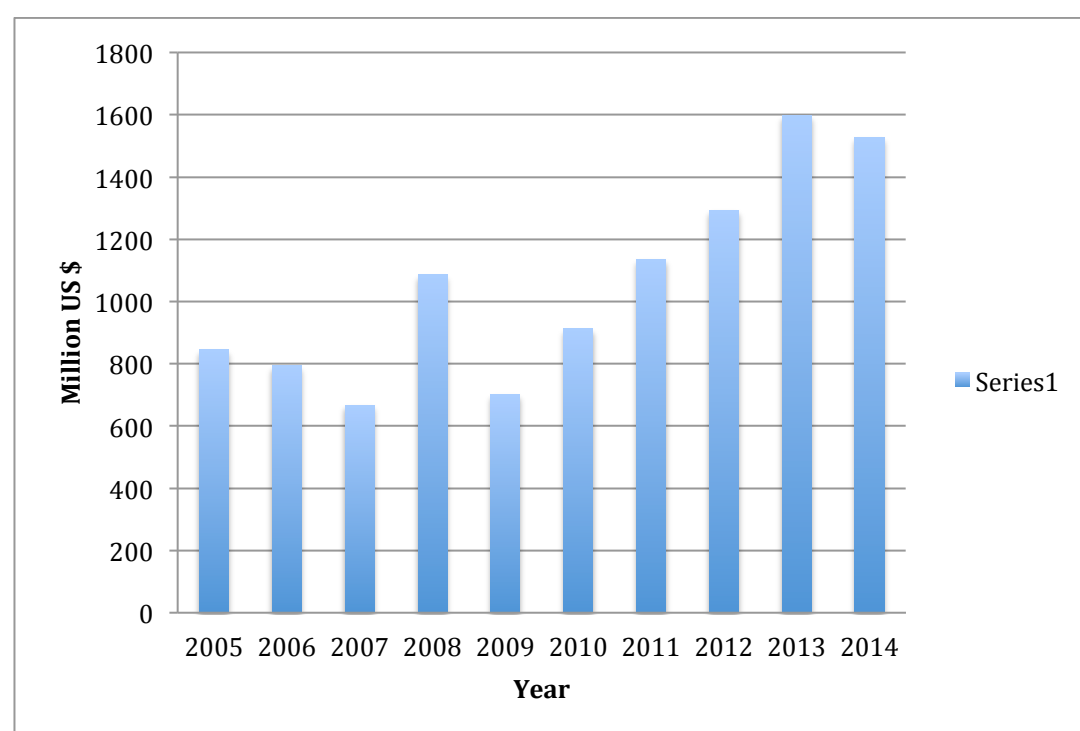
At present, many development and technical projects are being implemented through private sectors. In addition, government has accepted the strategy of implementing the infrastructure development projects on the basis of Public Private Partnership (PPP). In FY 2013-14, a total 1,432 private projects registered in Bangladesh Board of Investment (BOI) with recommended amount of Tk. 68,291 crore, which stood at Tk. 99,335 core in FY 2014-15 for 1,429 projects. In 2014, a total amount of US\$ 1,526.70 million flowed as Foreign Direct Investment (FDI) in the country, which was US\$1,292.56 million in 2012. Development of readymade garments and knitwear industry in private sector speeds up industrial sector as well as contributes to build up investment friendly environment in the country. In FY 2014-15 up to June 2015; total of 45,850 million MkWh of electricity was produced out of which 45.41 percent had been generated through private sectors.³⁴

³³ Finance, *Bangladesh Economic Review*.above n 14 at 220.

³⁴ Ibid.219

Foreign Direct Investment (FDI) is an important component of private investment in Bangladesh. Information of FDI inflow is collected and compiled from half-yearly Enterprise Survey of Bangladesh Bank. Figure 2.7 shows the trend in FDI inflows from 2005 to 2014. The FDI inflow recorded US\$1,527 million in 2014, which was US\$1,599 million in 2013. Major components of Foreign Direct Investment (FDI) are presented in the Table 2.6. The Table shows that reinvestment is the main component of FDI inflow, followed by equity and intra-company borrowing.

Figure 2.7: Trend in FDI Inflow in Bangladesh



Source: Bangladesh Bank³⁵

³⁵ Foreign Direct Investment in Bangladesh, Bangladesh Bank.
<http://www.bbs.gov.bd/WebTestApplication/userfiles/Image/LatestReports/SMI-%202012.pdf>, (Accessed on 14 Aug 2016).

Table 2.6: FDI Inflow to Bangladesh by Components (In Million US Dollar)

Components	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Equity	425.5	503.7	401.6	809.25	218.55	519.98	431.85	497.63	541.1	280.31
Reinvestment	247.5	264.7	213.2	245.73	364.94	364.62	489.63	587.53	697.1	988.79
Intra-Company Borrowing	172.2	24.1	51.5	31.33	116.67	28.72	214.90	207.40	361.0	257.60
Total	845.3	792.5	666.3	1086.31	700.16	913.32	1136.38	1292.56	1599.2	1526.70

Source Enterprise Survey, Bangladesh Bank³⁶

A total of 29 countries/frugalities from different areas of the world are registered with BOI for foreign and joint venture projects in FY 2014-15. On the basis of the investment amount (proposed) South-East Asia is in the peak position of the list. In addition, South, East and West Asia, European Union, North America and CIS region are in the latter positions respectively.

Political violence and instability; poor governance, infrastructures and institutions; uncertainty stemming from government inefficiency; politicization of public administration; corruption of public institutions; and weak enforcement of property rights were the main reasons for low FDI flow.³⁷ Since independence in 1971, Bangladesh has been experiencing political instability in the forms of

³⁶ Ibid.

³⁷ Agnès Bénassy-Quéré, Maylis Coupet and Thierry Mayer, 'Institutional determinants of foreign direct investment' (2007) 30(5) *The World Economy* 764. Shamima Nasrin, Angathevar Baskaran and Mammo Muchie, 'Major determinants and hindrances of FDI inflow in Bangladesh: Perceptions and experiences of foreign investors and policy makers' (Paper presented at the GLOBELICS-8th International Conference. Making Innovation Work for Society: Linking, Leveraging and Learning, 4,5. Dilip Kumar Sen and Chowdhury Rajkin Mohsin, 'FDI in the context of SAARC nations with particular reference to Bangladesh: An analytical study' (2010) 66(37) *The Perspective Plan and the Roadmap to Vision 2021* 75.

frequent changes in government, martial law, and imposition of a state emergency due to political turmoil and violence amongst political parties.³⁸ The military has been either directly running or influencing successive democratic governments since 1975.³⁹ Consequently, foreign investors considered investment in Bangladesh to be risky, insecure and uncertain, resulting in low FDI flow.⁴⁰

2.2.6 Foreign Remittance

The importance of foreign remittances in the economy of Bangladesh is widely recognized and requires little reiteration. Along with the readymade garment (RMG) sector and non-farm activities in the agricultural sector, remittances have been identified as one of the three key factors that have been responsible for reducing the overall incidence of poverty in Bangladesh.⁴¹

In the just concluded fiscal year, migrant workers sent home \$15.31 billion in remittance, the highest in the country's history. The remittance in 2014-15 also rose 7.6 percent from \$14.23 billion in the previous fiscal year, according to Bangladesh Bank (BB) statistics. A huge increase in manpower export, backed by the central bank's proactive measures to facilitate the inflow through formal channel, is believed to have driven the remittance growth. Bangladesh received

³⁸ Nasrin, *et al.*, 2010: 4, above n 37.

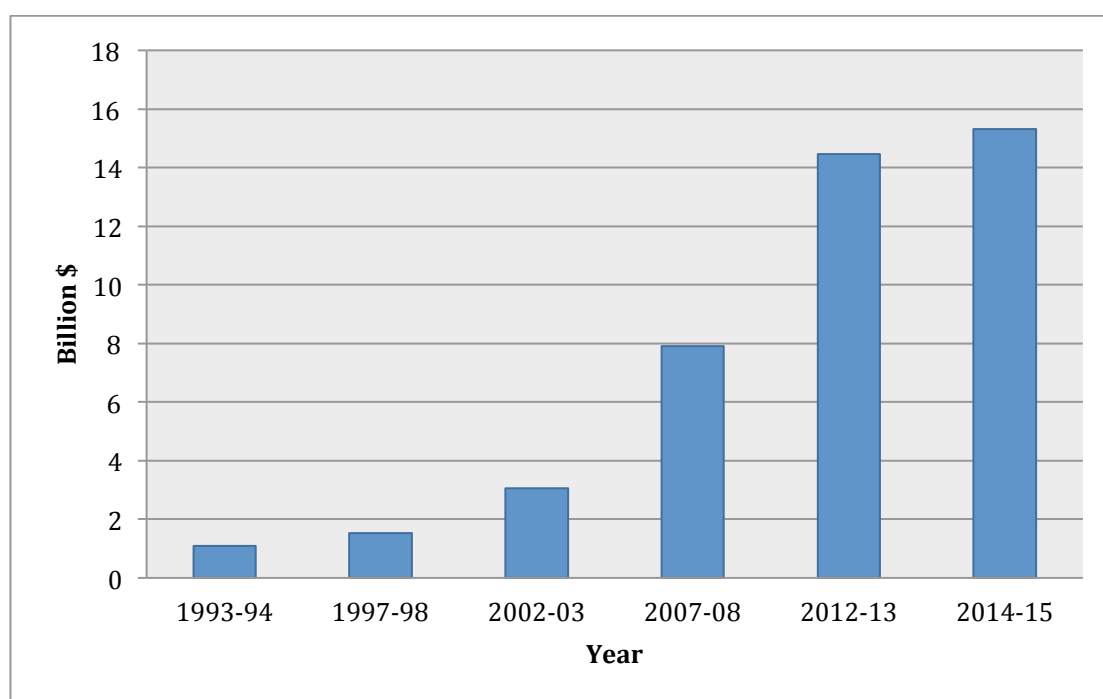
³⁹ Ibid.

⁴⁰ Sen and Mohsin, 2010: 75, 76, above n 37.

⁴¹ Siddiqur Rahman Osmani, *The impact of globalization on poverty in Bangladesh*, International Labour Organization No (2005) 9.
<<http://ilo.org/public/english/bureau/dwpp/download/bangladesh/bangglob.pdf>> (Accessed on 14 Oct 2013).

\$1.43 billion remittance in June alone, up by \$109.98 million from that of the previous month, according to the central bank.

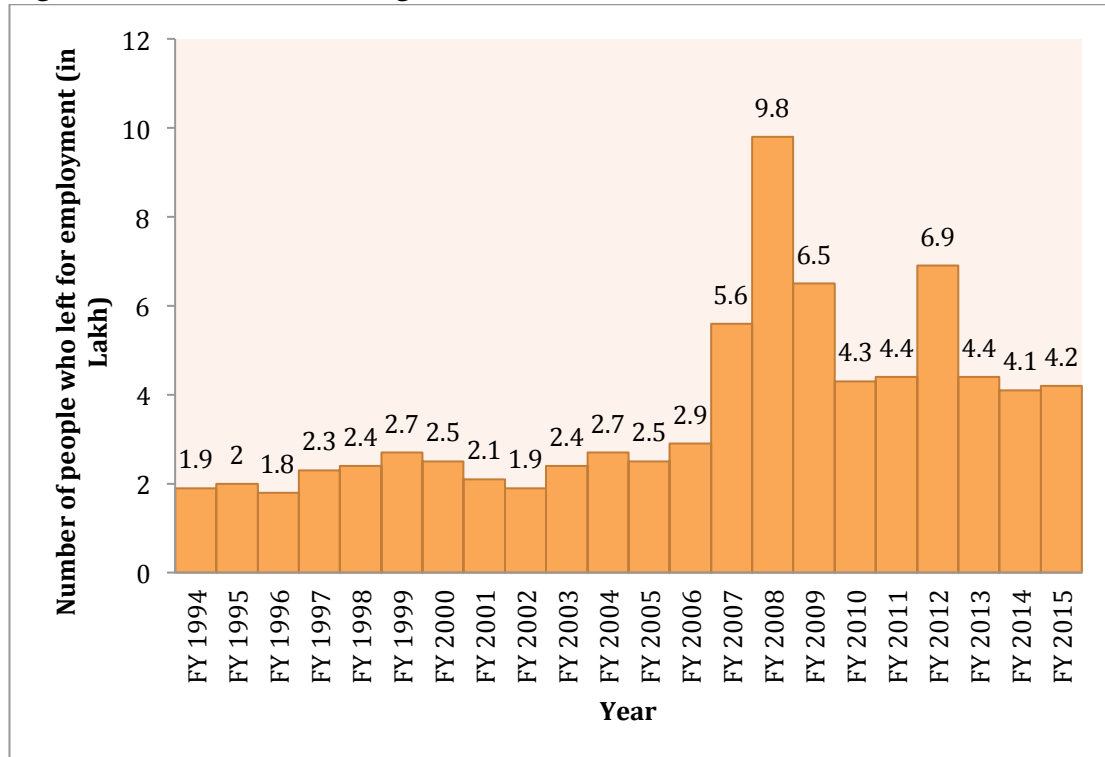
Figure 2.8: Remittance in Bangladesh



Source: Bangladesh Bank⁴²

⁴² Central Bank of Bangladesh. < <https://www.bb.org.bd/econdata/wageremittance.php> > (Accessed on 17 Aug 2016).

Figure 2.9: Remittance in Bangladesh



Source: The Daily Star⁴³

The outward migration of labour and the remittances that are generated as a result have been a feature of Bangladesh's post liberation history. The earliest official records on remittances indicate that the country received about US\$24 million in overseas remittances in 1976. Since then foreign remittance receipts have grown at an exponential rate. Figure 2.8 charts this increase. The role of remittances in the economies of labour sending countries such as Bangladesh is assuming increasing importance. It is viewed as a very stable source of foreign exchange⁴⁴ and even as being counter-cyclical.⁴⁵ The effect of remittances on the

⁴³ The Daily Star, 'Remittance inflow to Bangladesh hits record \$15.31b', *The Daily Star* (Dhaka, Bangladesh), July 03 2015 <<http://www.thedailystar.net/frontpage/remittance-hits-record-1531b-106567>>. (Accessed on 15 Jan 2016).

⁴⁴ Dilip Ratha, 'Workers' Remittances: An Important and Stable Source of External Development Finance' (2005) *Economics Seminar Series Paper 9*. <http://repository.stcloudstate.edu/econ_seminars/9> (Accessed on 14 Oct 2013).

macro-economy of a country has been well documented in the literature. The incoming foreign exchange helps receiving countries to pay import liabilities, improve their balance of payments position, strengthen foreign exchange reserves and finance external debt.

The advances in macro-economical indications suggest how the Bangladesh economic climate is swiftly relocating in the direction of market overall economy. In the last 4 decades, the true every capita cash flow has increased by greater than a 130%; poverty rate lessened by 60 %, which adds toward Bangladesh attaining the majority of the millennium development goals (MDGs) by 2015. The overall economy today is much more tough and versatile, as pointed out by the opportunity to endure the international financial disaster along with disasters with minimum adverse reactions. In spite of all of this improvement, Bangladesh remains to be troubled with substantial poverty, deprivation and inequality. Currently about one third of the human population are dwelling underneath the poverty collection and a lot of the work pressure is engaged in informal and very low earnings work. The poorer section is drastically deprived in terms of management of resources and gain access to institutional finance in addition to fundamental constitutional rights, which includes quality drinking water, cleanliness, health care and training. Thinking about every one of these elements, the Government of Bangladesh has followed the Vision 2021 and associated Prescriptive Plan 2010-2021 that have established reliable development targets on for Bangladesh in the end of 2021.

⁴⁵ Gerardo Esquivel and Alejandra Huerta-Pineda, 'Remittances and poverty in Mexico: a propensity score matching approach' (2007) 27(11) *Integration and Trade Journal* 45.

2.3 Government and Local Administration Structure of Bangladesh

Bangladesh is a democratic republic with a unicameral parliament called the Jatiya Sangsad. The head of state is the president, who is indirectly elected by members of the parliament for a maximum of two five-year terms. The 300 members of parliament are directly elected by universal adult suffrage, and 50 seats are reserved for women. These are allocated from party lists in proportion to the seats won by each party. The president appoints the leader of the majority party as prime minister and head of government. On the advice of the prime minister the president appoints the cabinet, which currently has 57 members.⁴⁶

The government of Bangladesh has a two-tier administrative system. The upper tier is the central secretariat at the national level consisting of the ministries and divisions to provide policies and to perform clearinghouse functions. The other tier consists of 'line' departments/directorates attached to the ministries and divisions that are mainly responsible for general administration, service delivery to citizens and implementation of various government development programs at the sub-national level.⁴⁷

Bangladesh has 64 administrative districts and below this a tiered system of local government comprising three levels of rural councils known as parishads, as well as single-tiered unitary urban municipalities. Local government is divided into rural, urban and hill districts, which all have similar functions. Urban authorities

⁴⁶ *List of Honorable Ministers, Special Envoy to the Prime Minister, Advisers to the Prime Minister, State Ministers & Deputy Ministers*, Govt. of Bangladesh
<<http://www.cabinet.gov.bd/site/page/e1c1df50-230f-4097-bda2-13cc3109f242/Details>>. (Accessed on 1 Jan 2016).

⁴⁷ Ahmed Syed Giasuddin, 'Public Administration in the Three Decades' in A.M. Chowdhury and Fakrul Alam (ed), *Bangladesh: on the Threshold of the TwentyFirst Century*. (Asiatic Society of Bangladesh, 2002) 321-354.

are single-tier and include ten city corporations and a number of town pourashavas. Rural local government has three tiers: 64 zila (district) parishads, 489 upazila (sub-district) parishads, and 4,552 union parishads. There are also three hill district parishads. The 11 city corporations are: Barisal, Chittagong, Comilla, Dhaka (north), Dhaka (south), Khulna, Narayangonj, Rajshahi, Rangpur, Gazipur and Sylhet. Other towns are governed by municipalities, which provide services to towns with populations of at least 15,000. The zila parishads are the largest rural authorities, with average populations of 1,997,150. The largest zila parishad is Dhaka District with a population of 8,511,228, and the smallest is Meherpur with a population of 591,436. Upazila parishads and union parishads are the intermediate and lowest levels with average populations of 264,841 and 27,463 respectively.

All local governments have the power to levy taxes and rates. There are no aggregate figures available; however, the main sources of local government revenue are as follows:

- income from taxes, rates, tolls, fees and other charges
- rents and profits from property
- grants made by central government
- profits from investments
- donations and transfers of private or public funds.

Units	Numbers
Division	8
Zila (District)	64
City Corporation	11
Municipalities	320
Upazila (Sub-District)	490
Union	4554

Source: Compiled from Bangladesh Bureau of Statistics (BBS), 2015

http://www.bbs.gov.bd/&gws_rd=cr&ei=IGeuV9LxC8KY0gS1s4OoBA

2.4 Agricultural Trade, Trade Liberalization and Trade Structure in Bangladesh

The agricultural sector in Bangladesh has undergone a massive transformation over a period of nearly five decades. The process of change has been a continuous phenomenon and in last five decades, the most important event has been the introduction of new technology known as the “Green Revolution” in the latter part of 1960s.⁴⁸

During the period of 1970s there were much state engagement in the provision of farm inputs and agriculture marketing. Reforms began in the late 1970s and early 1980s by liberalizing the input markets. Both domestic and trade policy got a

⁴⁸ Alauddin Mohammad, 'Bangladesh's Agriculture in Reform Mode Experiences, Obstacles and Prospects' in Russel Smyth Mita Bhattacharya, Marika Vicziany (ed), *Soth Asia in the Era of Globalization: Trade, Indutrialization, and Welfare* (Nova Science Publishers, Inc., 2004) 145-163.

vibration of liberalization in the early 1990s. While the country benefits from alluvial soils and annual flooding that allows wetland rice to be grown, average farm sizes were – and remain – small, in part owing to the heavy pressure of population in rural areas. The agricultural economy at independence was moreover growing only slowly: yields of rice, by far the main food crop, had risen by just 1.5% a year from 1950 to 1971.⁴⁹

In the early 1970s the situation of Bangladesh was uncertain because of the political disparity of the West Pakistan that lead to extensive poverty, high vulnerability, and seemingly so few resources per capita that the country seemed locked into poverty. The country was thus heavily dependent on food aid to feed its growing population. The extensive state control over market and the public ownership of key enterprise and also trade and input control by Bangladesh Agricultural Development Corporation (BADC) put the economy in the form of 1974 famine. The political instability of the post-independence also made the agriculture sector vulnerable.⁵⁰

Since independence in December 1971 and until late 1975, Bangladesh followed a development strategy of state intervention and controls. This first phase was characterized by massive nationalization of most production entities, heavy trade controls, and other forms of state interventions as Bangladesh experimented with a socialist type economic framework. An early phase of economic deregulation and denationalization started in 1976, although it took some years to have a clear

⁴⁹ Mahabub Hossain, *Credit for alleviation of rural poverty: The Grameen Bank in Bangladesh* (Intl Food Policy Res Inst, 1988) vol 65.

⁵⁰ Mohammad Monirul Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh' (2012) *Munich Personal RePEc Archive* 3.

direction for this to work out. This second phase ran up to 1990 with a mix of denationalization, economic deregulation encompassing both goods and services sector, and limited trade liberalization. The third phase, starting in 1991, saw continued progress with deregulation and privatization but most importantly witnessed fairly rapid trade liberalization compared to the past. The main elements of this analytical framework are summarized in Table 2.7.⁵¹

Table 2.7: Bangladesh Policy Regime Summary 1972-2002

Reform Content	Phase 1 (1972-75)	Phase 2 (1976-90)	Phase 3 (1991-02)
Trade	Severe trade controls on both exports and imports, including NTBs and heavy duties, often prohibitive.; fixed exchange rate system, with	Initial phase of trade reforms with some relaxation of NTBs and tariff barriers; creation of enabling "free trade" environment for	Substantial liberalization of trade and investment, market orientation, and opening up with large reduction in NTBs and average tariffs; shift from fixed to
Goods Sectors	Massive nationalization of major industrial enterprises; price controls; control of agriculture inputs and marketing..	Initial period of de-nationalization, de-regulation and removal of price controls; significant liberalization of agriculture	Further progress with privatization of manufacturing enterprises; initiation of deregulation measures to improve the
Services Sectors	Nationalization of most services including banking, infrastructure and even trading; administered prices.	Initial period of encouraging private sector in banking and other services; rent and price controls lifted substantially; state trading abolished, with one	Further progress with policies to support private investment in banking and infrastructure; power generation, telecommunications, opened to private investors.

Source: Ahmed and Zaidi⁵²

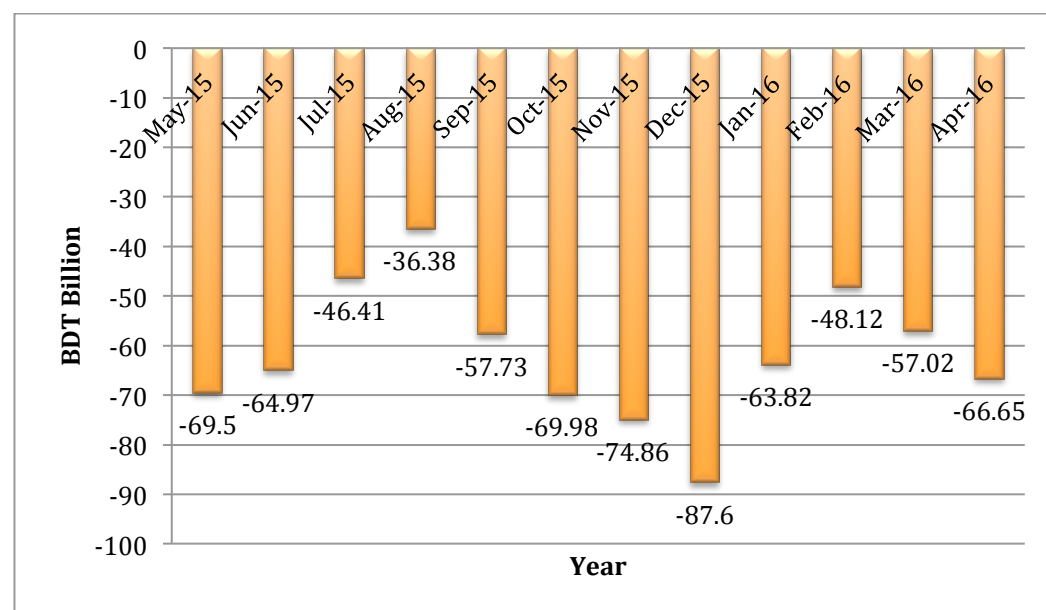
Bangladesh has been recording sustained trade deficits since 1976 mainly due to a high value of imports. Main imports are petroleum and oil (11 percent of the total imports); food items (11 percent) and textile (10 percent). Main exports mainly

⁵¹ Sadiq Ahmed, 'The political economy of Reforms in South Asia: Bangladesh and Pakistan' (2002) 183 *South Asia Region Internal Discussion Paper* 46. World Bank, Washington DC.

⁵² Ibid.

readymade garments (80% of exports revenue). Bangladesh recorded a trade deficit of 66.65 BDT Billion in April of 2016. Balance of Trade in Bangladesh averaged -21.94 BDT Billion from 1976 until 2016, reaching an all-time high of 0 BDT Billion in April of 1977 and a record low of -128.40 BDT Billion in January of 2012. Balance of Trade in Bangladesh is reported by the Bangladesh Bank.

Figure 2.10: Bangladesh Balance of Trade



Source: Bangladesh Bank⁵³

Bangladesh key exports are garments including knit wear and hosiery (80% of exports revenue). Others include: jute goods, home textile, footwear and frozen shrimps and fish. Exports in Bangladesh decreased to 187.48 BDT Billion in April from 210.27 BDT Billion in March of 2016. Exports in Bangladesh averaged 35.79 BDT Billion from 1972 until 2016, reaching an all-time high of

⁵³ Central Bank of Bangladesh. < <https://www.bb.org.bd/econdata/bop.php> > (Accessed on 16 August 2016).

211.99 BDT Billion in August of 2015 and a record low of 0.05 BDT Billion in February of 1972.

Figure 2.11: Bangladesh Exports

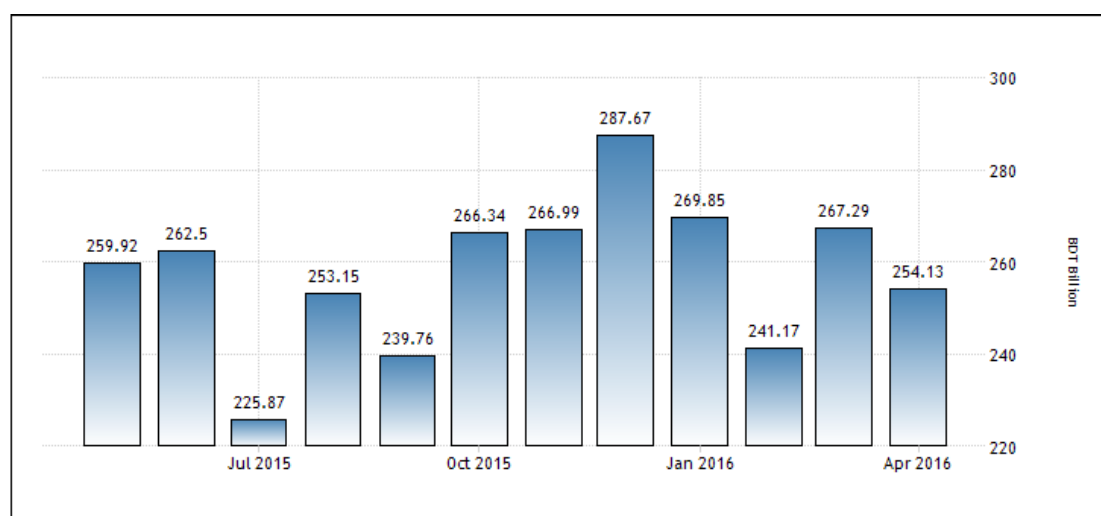


Source: Bangladesh Bank⁵⁴

Imports in Bangladesh decreased to 254.13 BDT Billion in April from 267.29 BDT Billion in March of 2016. Imports in Bangladesh averaged 61.44 BDT Billion from 1976 until 2016, reaching an all time high of 287.67 BDT Billion in December of 2015 and a record low of 0.57 BDT Billion in November of 1976. Bangladesh imports mostly petroleum and oil (11 percent of the total imports); textile (10 percent) and food items (9 percent). Others include: iron and steel (7 percent), edible oil (4 percent), chemicals (4 percent), yarn and plastic and rubber articles (4 percent). In 2013, imports of rice grains decreased substantially mainly due to adequate domestic supply of rice during the period.

⁵⁴ Central Bank of Bangladesh. < <https://www.bb.org.bd/econdata/index.php>> (Accessed on 16 Aug 2016).

Figure 2.12: Bangladesh Imports



Source: Bangladesh Bank⁵⁵

Bangladesh's top export destinations as estimated for FY2012 were the European Union (52.5%), United States (21%), Canada (4.1%), Turkey (3.2%), and Asia (10.6%). Bangladesh trading activities also include informal trade along the border with India. As a result, in recent years, exports to India have been significantly understated because of the large amount of unofficial trade, for which the authorities did not give an estimate.⁵⁶

Exports from Bangladesh have been boosted by duty-free access to the European Union, Canada, Australia, Japan, Norway, and China. The United States does not provide duty-free access for some key Bangladesh exports, and only a few goods qualify under the U.S. Generalized System of Preferences (GSP). At present, 96% of Bangladesh's exports to the United States consist of readymade

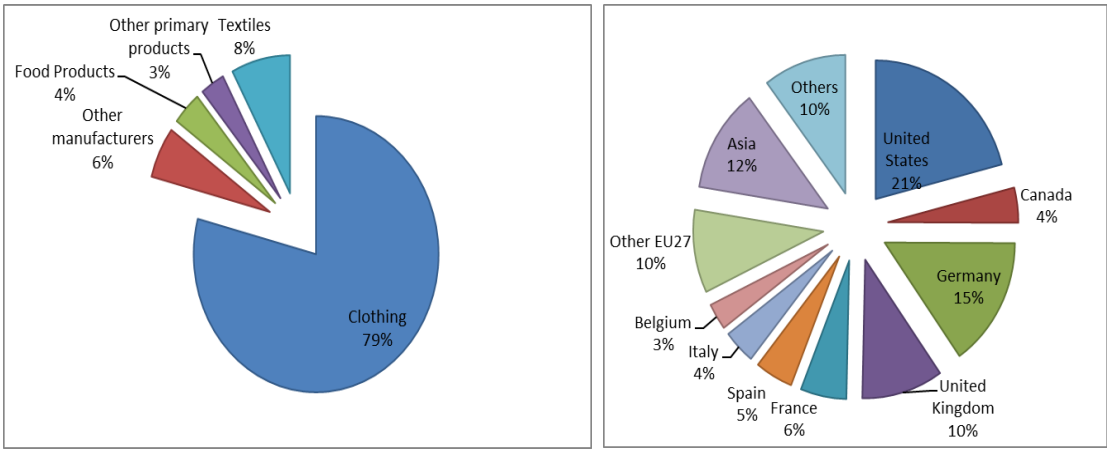
⁵⁵ Ibid.

⁵⁶ Trade Policy Review WTO, *Trade Policy Review-Report by the Secretariat - Bangladesh*, 12-6513 (26/11/2012).

<[https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S006.aspx?Query=\(\(%20@Title=%20bangladesh\)%20or%20\(@CountryConcerned=%20bangladesh\)\)%20and%20\(%20\(%20@Symbol=%20wt/tpr/s/*%20\)\)&Language=ENGLISH&Context=FomerScriptedSearch&languageUIChange d=true#](https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S006.aspx?Query=((%20@Title=%20bangladesh)%20or%20(@CountryConcerned=%20bangladesh))%20and%20(%20(%20@Symbol=%20wt/tpr/s/*%20))&Language=ENGLISH&Context=FomerScriptedSearch&languageUIChange d=true#)> (Accessed on 11 July 2016).

garments and textile products, which are bought by retail groups such as Walmart, Gap, and Target. Although Bangladesh can apply for preferential tariffs for some products under the U.S. Generalized System of Preferences, currently, only 0.62% of the country's goods exported to the United States qualify under this system. As a result, import duties on Bangladesh exports to the United States amount to more than US\$500 million per year.⁵⁷

Figure 2.13: Production composition and direction of merchandise exports 2011/12



Source: WTO calculation based on the data provided by Export Promotion Bureau online information www.epb.gov.bd/statisticshome.php

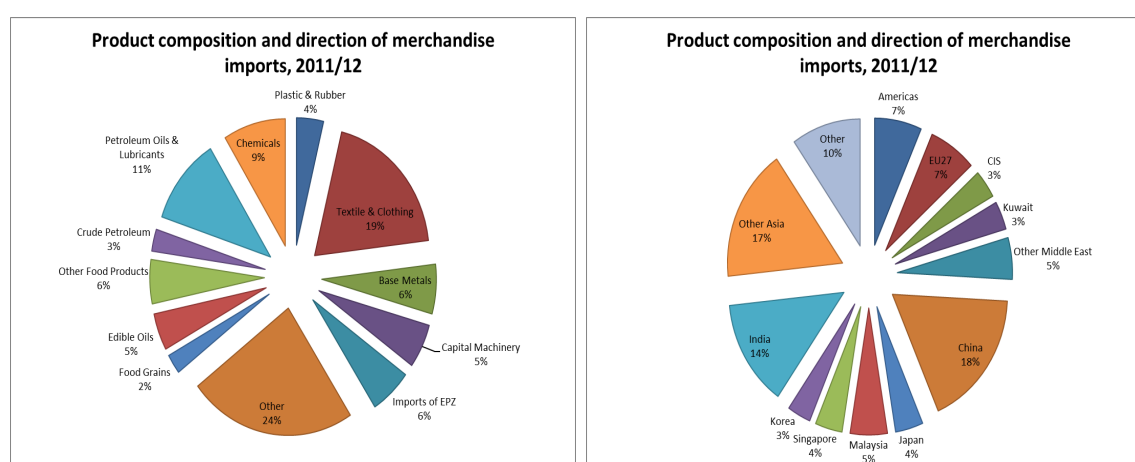
Although exports have risen significantly, the country's imports have been rising even faster, resulting in a chronic and widening trade deficit that, fortunately, has been offset by a strong flow of remittances from Bangladeshi overseas workers. Bangladesh's imports are primarily textiles, inputs for the RMG sector, petroleum products, and food items, all of which are critical to the economy and difficult to reduce.⁵⁸

⁵⁷ Ibid.

⁵⁸ Ibid.

In step with the rebound in garment exports in FY2009/10, which depend heavily on imported raw materials, imports climbed by a similar rate. Food grains rose sharply in FY2010/11, reflecting higher international prices and larger volumes, as the Government sought to build stocks and enhance food security. Imports of intermediate goods and capital equipment also climbed sharply, reflecting the pickup in exports and domestic economic activity. Because the base for imports is larger than that for exports, even with similar growth rates, the trade deficit widened to nearly US\$11 billion in FY2011 from the previous year's US\$7.5 billion.

Figure 2.14: Product composition and direction of merchandise imports



Source: WTO⁵⁹ calculations based on the data provided by Export Promotion Bureau, Bangladesh <www.epb.gov.bd/statistics/home.php>

From FY 2000 to 2015, agricultural import and export sales have increased at a compound annual growth rate of 10.4 and 4.6 percent. Major imports include rice, wheat, oilseeds, raw cotton, vegetable oil, petroleum products, crude petroleum, fertilizer, clinker, stable fiber, and yarn. The largest agricultural imports in terms of value are cotton lint, vegetable oil, wheat, sugar, and rice.

⁵⁹ https://www.wto.org/english/tratop_e/tpr_e/s161-3_e.doc (Accessed on 16 Aug 2016)

With agricultural production challenged by limited arable land, climate change, tropical cyclones, salinization, erosion, and a lower water table, Bangladesh imports agricultural products to meet its food security needs.⁶⁰

From CY 2012 to 2015, U.S. agricultural export sales to Bangladesh rose by approximately 174 percent to \$498 million, now higher than Pakistan. U.S. agricultural exports range from various commodities and products such as wheat, dairy products, fruits, and frozen vegetables. In CY 2015, Bangladesh imported \$15.8 million of processed foods from the United States (Please see Figure 2.15 below).⁶¹

Table 2.8: Bangladesh: Imports of Bulk Commodities Rise

Commodity (USD millions)	FY* 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
Rice	\$75	\$835	\$277	\$30	\$348	\$555
Wheat	\$761	\$1,085	\$602	\$697	\$1,117	\$1,019
Milk and Dairy Products	\$106	\$162	\$221	\$214	\$289	\$310
Spices	\$109	\$126	\$137	\$118	\$183	\$215
Oilseeds	\$130	\$103	\$180	\$242	\$508	\$353
Vegetable oil	\$1,049	\$1,068	\$1,650	\$1,399	\$1,761	\$1,574
Pulses	\$350	\$291	\$242	\$422	\$455	\$394
Sugar	\$650	\$656	\$1,187	\$732	\$902	\$743
Cotton	\$1,440	\$2,686	\$2,099	\$2,002	\$2,425	\$2,275
Total Imports	\$4,672	\$7,012	\$6,593	\$5,857	\$7,990	\$7,438

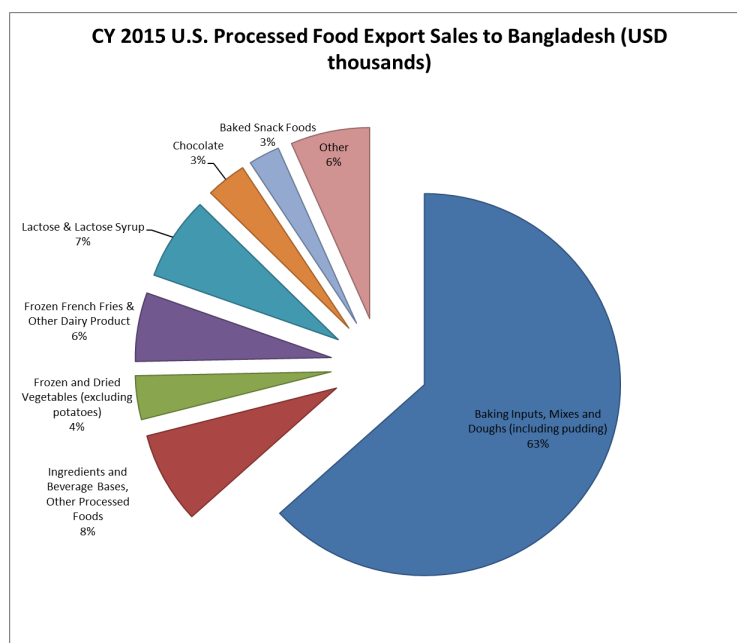
Source: Economic Trend⁶², January 2016, Bangladesh Bank

⁶⁰ Tanvir Hossain Joshua Emmanuel Lagos, 'Exporter's Guide Bangladesh-2016' (2016) *USDA Foreign Agricultural Service* 16
<http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Exporter%E2%80%99s%20Guide%20Bangladesh-2016_Dhaka_Bangladesh_6-7-2016.pdf>. (Accessed on 15 July 2016).

⁶¹ Ibid.

⁶² <https://www.bb.org.bd/econdata/> (Accessed on 15 July 2016).

Figure 2.15: Bangladesh: CY 2015 U.S. Processed Food Export Sales to Bangladesh (USD thousands)



Source: Global Agricultural Trading Report by USDA⁶³

2.5 Agricultural Sector of Bangladesh: Land Structure, Land Use and Productivity

2.5.1 Bangladesh Agriculture

Although Bangladesh is on course for Middle Income Country status by 2021, agriculture remains the largest employer in the country by far; and 47.5% of the population is directly employed in agriculture and around 70% depends on agriculture in one form or another for their livelihood. Agriculture is the source of food for people through crops, livestock, fisheries; the source of raw materials for industry, of timber for construction; and a generator of foreign exchange for the country through the export of agricultural commodities, whether raw or

⁶³ <https://apps.fas.usda.gov/gats/default.aspx> (Accessed on 15 July 2016).

processed. It is the motor of the development of the agro-industrial sector including food processing, input production and marketing, and related services. As main source of economic linkages in rural areas, it plays a fundamental role in reducing poverty, which remains a predominantly rural phenomenon.⁶⁴

During the fiscal year 2012-13, the broad agriculture sector⁶⁵ contributed 16.77% to the total GDP. The contributions of crop, fishery, livestock and forestry subsectors in GDP were 9.49%, 3.68%, 1.84% and 1.76% respectively. The provisional estimates show that contribution of the broad agriculture sector to GDP in 2013-14 would be 16.33%.⁶⁶ Nearly three fifth of the agricultural GDP comes from the crop sub-sector; the other contributors in order of magnitude are fishery, livestock and forestry.

Bangladesh agriculture sector consist of four sub-sectors such as crop and horticulture, animal farming and forest and related services. The sectorial share of agriculture is declining over the years as the major share is taken out by service sector in the beginning of 1980s. With the pace of growth of industrial sector, service sector started to flourish and took the first position in Bangladesh. In the figure 1, the percentage share of agriculture to GDP over the years has been shown with comparison to other sectors. In 1974, after the independence,

⁶⁴ Hamid Miah, 'Agriculture Sector Development Strategy: Background Paper for Preparation of 7th Five Year Plan' (2014) ⁶⁵ <http://www.plancomm.gov.bd/wp-content/uploads/2015/02/17_-Agriculture-Sector-Development-Strategy.pdf>. (Accessed on 15 July 2016).

⁶⁵ The broad agriculture sector includes crop (including horticulture), livestock, fishery and forestry subsectors.

⁶⁶ Ministry of Finance, *Bangladesh Economic Review*.2014.

agriculture was the most important sector, which holds almost 60% of the total GDP, but in 2001 it became only 24% of GDP. Though the population has increased doubled from 70 million to 140 million, the production of agriculture got also sufficient amount to feed this people. The share of agriculture became smaller because the pace of the growth of other sector was higher than agriculture.⁶⁷

The scenarios of growth rates in agricultural subsectors indicate that the decline in overall growth in agriculture is mainly due to fall in the growth of crop production. While the growth of livestock and forestry is witnessing an increasing trend, the growth in crops is substantially declining. As a result, the share of agriculture in GDP is largely declining, since the crop production that renders the major contribution to national income from agriculture sector is growing at a decelerating rate over the recent periods. Table 2.8 and 2.9 show that crop with a growth rate of 2.67 percent comprises 11.64 percent share of GDP in FY2007-08, while the share came down to 10.25 percent with 0.15 percent rate of growth in FY2012-13. Consequently, increasing trend in the growth of livestock and forestry does not compensate the decline of growth in crop production. Meanwhile, contribution of fisheries to GDP is declining, although the trend of growth assumes an increasing trend.

⁶⁷ Hasan, above n 50.

Table 2.9: Rate of Growth in Different Subsectors of Agriculture

Sector/Subsector	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13
(P)						
Agriculture & Forestry (%)	2.93	4.10	5.56	5.09	2.46	1.18
Crop (%)	2.67	4.02	6.13	5.65	1.95	0.15
Livestock (%)	2.44	3.48	3.38	3.48	3.39	3.49
Forestry (%)	5.47	5.69	5.23	3.90	4.42	4.47
Fisheries (%)	4.18	4.16	4.15	5.25	5.39	5.52

Source: Ministry of Finance, 2013

The main food-grain of Bangladesh are rice, wheat and maize. Between 2007-08 and 2012-13 period, area under wheat, maize, oilseeds spices, potato and vegetables increased, though area under sugarcane and fruits decreased. In 2012-13, share of rice area in total cropped area dropped. In FY 13, the share of rice in total agricultural value year-on-year basis also decreased by 0.8% points, while shares of fisheries and livestock sectors rose by 0.7% and 0.2% points respectively. However, the pace of diversification was quite slow compared to that in other countries like India, Pakistan, South Korea etc. (Mid-term Review of the 6th FYP). The declining trend in area under rice is an indication of increasing crop diversification. In 2009-10, the share of rice area in total cropped area was 78.5%, which declined to 76.0% in 2012-13. The share of High Yielding Variety (HYV) rice area in total rice area, after remaining at around 82% during the preceding three years, dropped to 78% in 2013-14 which may be a matter of concern for

raising productivity and production of rice over the coming years.⁶⁸

Table 2.10: Annual change in major crop production and change in crop yields (3 year moving average)

Crops	2009-10		2010-11		2011-12		2012-13		2013-14	
	Production change (%)	Yield change (%)	Production change (%)	Yield change (%)	Production change (%)	Yield change (%)	Production change (%)	Yield change (%)	Production change (%)	Yield change (%)
Rice	2.1	3.8	4.9	2.1	1.0	3.0	-0.2	1.7	1.6	2.3
Wheat	6.1	9.6	7.9	6.3	2.4	5.1	26.1	7.7	3.8	6.3
Maize	21.6	-0.7	14.8	0.9	27.5	5.0	14.4	4.3	4.1	4.4
Potato	50.5	9.3	5.0	5.5	-1.5	1.8	4.8	2.0	4.0	3.3
Pulses	12.5	3.7	3.9	0.5	4.7	3.6	10.7	0.6	-40.7	9.8
Brinjal	1.1	0.8	-0.4	1.0	3.9	2.2	4.8	3.7	20.7	10.4
Edible oilseeds*	11.9	2.3	5.2	1.4	2.7	4.0	5.4	0.7	16.1	3.5
Mango	1.7	0.0	5.5	8.9	6.3	4.5	1.3	6.3	3.7	-2.9
Banana	-2.1	-3.9	-2.1	-2.7	-6.8	-3.7	3.8	1.9	-0.5	4.2
Jackfruit	3.1	2.3	-4.4	-2.1	-3.6	-1.6	3.0	1.1	5.0	7.9

Source: FPMU⁶⁹ 2013, 2014 and 2015

A picture of annual change in productivity and production of rice and other crops (3 year moving average) is presented in Table 2.10. Production of all the crops except pulses and banana increased. Following marginal decrease in 2012-13, rice production increased by 1.6% in 2013-14. Sharp increasing trend in production is observed for brinjal and edible oilseeds. Except banana and jackfruit, all the crops maintained almost steady increasing trend in production since 2009-10. Change in rice yield was positive even in the year 2012-13, when the production decreased

⁶⁸ Miah, above n 64.

⁶⁹ The Food Planning and Monitoring Unit of the Ministry of Food, Government of Bangladesh <<http://fpmu.gov.bd/agridrupal/>> (Accessed on 13 Jan 2016).

marginally. The trend in changing yield pattern can be taken as an indication of yield gap minimization for rice and other crops also.⁷⁰

Agricultural trade liberalization contributed to a significant technological transformation in the agricultural sector through adoption of high yielding varieties (HYV) of rice, wider use of fertilizers and pesticides, and application of modern irrigation equipment. However, agriculture in Bangladesh remained at the traditional stage in terms of cultivation procedure and harvesting systems. Although, there is a trend to use power tillers, farmers use traditional ploughing such as bulls, shovel and spade in preparing the land for cultivation. Almost 100 percent of harvesting takes place manually with primitive instruments such as sickle and scythe.⁷¹

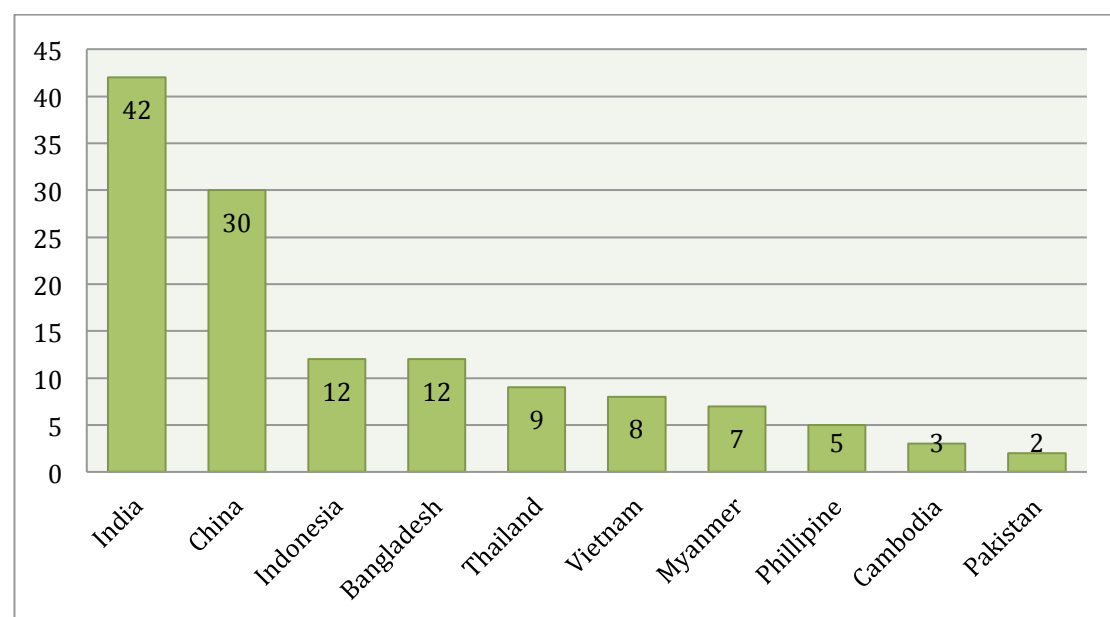
Rice is among the three leading food crops of the world, with maize (corn) and wheat being the other two. All three directly provide no less than 42% of the world's required caloric intake and, in 2009, human consumption was responsible for 78% of the total usage of produced rice. More than 3.5 billion of the world's population thinks of rice as their staple food, which translates to at least half of the people living in the world. Asian countries produce the most rice worldwide, while countries in Africa, Latin America, and the Middle East having shown considerable increase in rice consumption and demand. The top 10 rice

⁷⁰ Miah, above n 64.

⁷¹ Ministry of Agriculture. 2007. *Handbook of Agricultural Statistics, December 2007*. Dhaka: Ministry of Agriculture, Government of Bangladesh [Online].
<<http://www.moa.gov.bd/statistics/statistics.htm>> (Accessed on 15 May 2014).

producing countries in the world today are India, China, Indonesia, Bangladesh, Thailand, Vietnam, Burma, the Philippines, Cambodia, and Pakistan. These countries are also among the top rice consumers of the world, and combine to account for around 90% of the world's rice consumption. Despite significant progress in agricultural production, the productivity of farms in Bangladesh is relatively low in comparison with that of developed countries. This is partly because of the primitive cultivation system in Bangladesh's agriculture.

Figure: 2.16: Top Rice Growing Countries Worldwide



Source: World Atlas⁷²

⁷² <http://www.worldatlas.com/articles/the-countries-producing-the-most-rice-in-the-world.html>
(Accessed on 17 Jan 2016).

Although agricultural trade liberalization improved agricultural productivity significantly, there is a growing consensus that this is starting to fall gradually. Some studies such as Ahmed and Sattar⁷³, and Balcombe *et al.*⁷⁴ found clear evidence that the productivity of agriculture was in a declining trend. They argued that with the existing technology and production system, there would be little scope to further expand the production possibility frontier of Bangladesh's agriculture.

It is suggested that besides conventional inputs (irrigation equipment, fertilizers, pesticides and HYV seeds), non-conventional variables such as farmers' education, access to credit and improved agricultural extension services may play a significant role in increasing agricultural productivity. Moreover, the traditional cultivation system is a major hindrance to productivity improvement. Therefore, agricultural reform through modernization is an alternative option to increase productivity and efficiency in the agricultural sector.

2.5.2 Land Reforms and Land Structure of Bangladesh

After a long period of chronic food-grain shortages, Bangladesh has recently achieved a remarkable success in emerging as a marginally self-sufficient producer of rice. It is argued that the market liberalization measures in agriculture made a significant contribution to this success in rice production. The step-by-step liberalization of markets for modern inputs in agriculture was carried out partly

⁷³ Sadiq Ahmed and Zaidi Sattar, *Trade liberalization, growth and poverty reduction: The case of Bangladesh* (The World Bank 2003). World Bank Policy Research Working Paper 34204, Washington DC: The World Bank.

⁷⁴ Kelvin Balcombe et al, 'Examining the technical efficiency of rice producers in Bangladesh' (2007) 19(1) *Journal of International Development* 1.

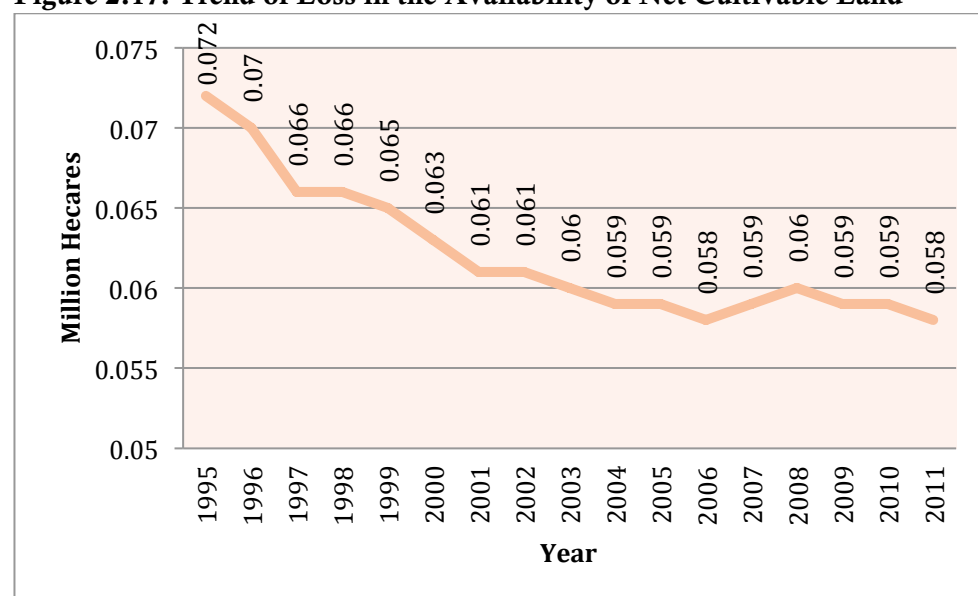
under pressure from foreign donors and partly on the realization that various direct interventions in these markets were unsustainable and unproductive in a longer-term context.⁷⁵

In agriculture, cropping intensity, along with the cropping pattern, plays the vital role in production system since the cultivable land areas have continuously been decreasing. Given the law of diminishing marginal returns, such continuous reduction in cultivable land has been exerting adverse impact on the growth in agricultural sector, resulting in recent declining growth in the sector. Figure 2.17 shows the decreasing trend of per capita agricultural land. Per capita agricultural land came down to 0.056 hectare in 2011 from 0.17 hectare in 1961. Rapid population growth, along with unplanned urbanization, causes the areas of cultivable land to be used for non-agricultural purpose, especially for building residence for increasing population. Statistics suggest that between the periods from 1961 to 2007, the agriculture experienced a twofold reduction in the availability of cultivable land. Production during this period increased due mainly to the use of input by the farmers at a higher rate on the same piece of land. For instance, one metric ton of food was produced from 0.406 hectare of land in 1961, whereas same production was achieved from the land below 0.14 hectare in 2007.⁷⁶

⁷⁵ Raisuddin Ahmed, 'Liberalization of agricultural input markets in Bangladesh: process, impact, and lessons' (1995) 12 *Agricultural Economics: The Journal of the International Association of Agricultural Economists* 115.

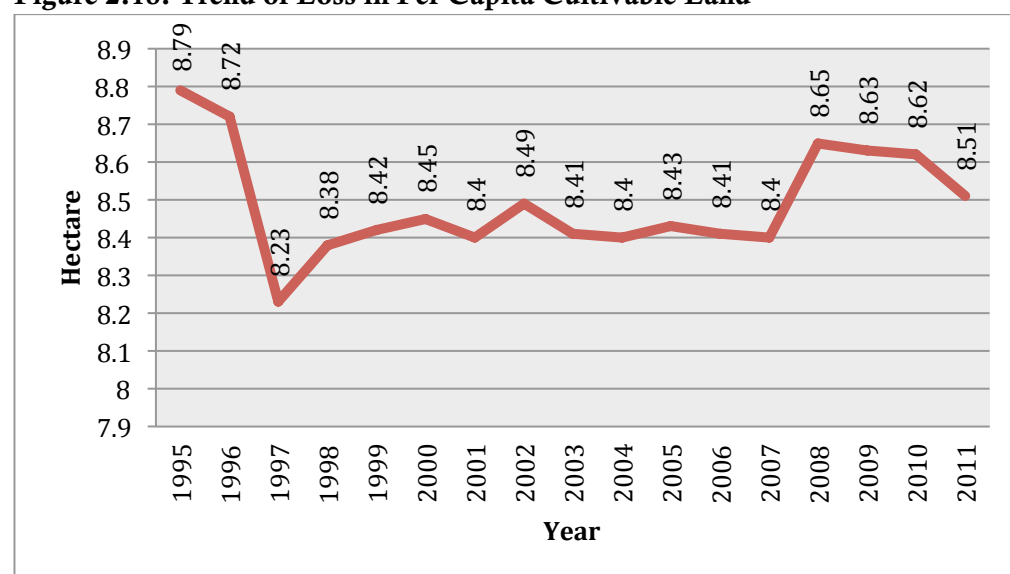
⁷⁶ J.K. Basak, *Real Sector: Agriculture, Growth or Contraction* (Sharabon Prokashani, 2012). Dhaka 165. Rana Ebney Ayaj, *Recent Trends of Growth in Agriculture, Industry and Power* Unnayan Onneshan
<[http://unnayan.org/reports/meu/MEU_March_2014/Final%20MEU\(Edited\)_29%20March14.pdf](http://unnayan.org/reports/meu/MEU_March_2014/Final%20MEU(Edited)_29%20March14.pdf)>. (Accessed on 15 July 2015).

Figure 2.17: Trend of Loss in the Availability of Net Cultivable Land



Source: Ministry of Agriculture, 2013

Figure 2.18: Trend of Loss in Per Capita Cultivable Land



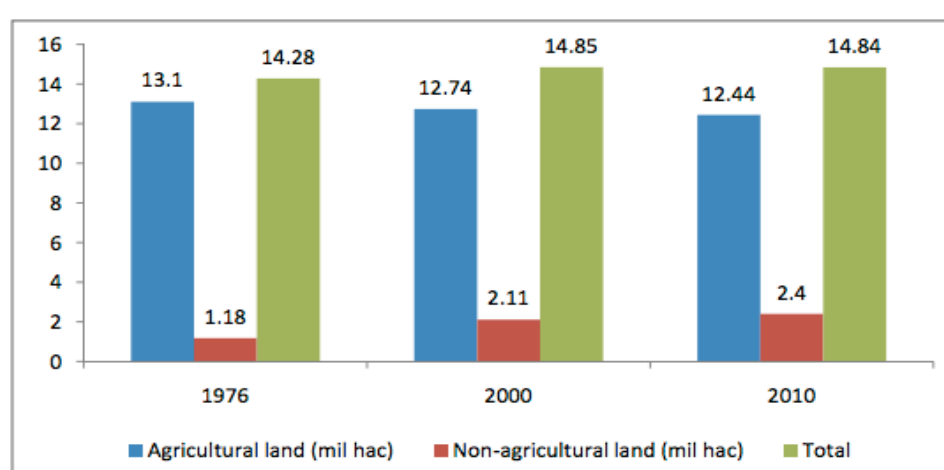
Source: Ministry of Agriculture, 2013 and World Bank⁷⁷, 2013

The total area of Bangladesh is 145,778 sq. km in 2010, which was estimated at 144,873 sq. km and 145,306 sq. km. in 1976 and 2000 respectively. Overall land

⁷⁷ <http://data.worldbank.org/indicator/AG.LND.ARBL.HA.PC> (Accessed on 17 Jan 2016).

gain was 905 km (90,512ha) during 1976 to 2010 mainly due to accretion in the southern coastal zone of Bangladesh.⁷⁸ Agricultural land area has decreased from 13.1 million ha in 1976 to 12.44 mil hectare in 2010—the total loss of agricultural land is 0.66 mil ha (Figure 2.18). The conversion of land from agriculture to non-agriculture is an important issue while dealing with land administration and management. Khas land management and distribution is another concern due to lack of official records and consequent loss of substantial amount of khas land.

Figure: 2.19: Types of Land in Bangladesh



Source: Hasan et al. 2013⁷⁹

The declining trend of agricultural land varies across periods and exacerbates in the 1990s. The agricultural land was declined by about 0.26 percent annually from 1976 to 2011 (34 years average), 0.42 percent annually from 1976 to 2001 (25 years average), 0.75 percent annually from 1983 to 1994 (10 years average) and 0.40 percent annually from 1994 to 2004 (10 years average). However, there

⁷⁸ MN Hasan et al, 'Agricultural land availability in Bangladesh' (2013) *SRDI, Dhaka, Bangladesh Ministry of Agriculture* 42.

⁷⁹ Ibid.

was a slight increase of agricultural land during 2001-2011 (average 0.15%); however, the increase was due to reclamation of char lands. On the other hand, the cultivable land has declined by 0.10 percent annually, mainly due to transfer to housing, road and industrial infrastructures.

Table 2.11: Availability of agricultural land during 1976 to 2011

Year	Land Area of Bangladesh (million ha)	Cultivable Land (million ha)	% Cultivable Land
1976-77	14.28	9.39	65.75
1980-81	14.29	9.38	65.64
1985-86	14.48	9.44	65.19
1990-91	14.84	9.72	65.50
1995-96	14.84	8.72	58.76
2000-01	14.85	8.40	56.57
2005-06	14.84	8.42	56.74
2010-11	14.84	8.52	57.41

Note: Agricultural land is the summation of cropped land, current fallow and culturable waste

Source: BBS, 2011

Although agricultural trade liberalization has facilitated diffusion of modern technology in agriculture, leading to significant productivity improvement, the existing characteristics of land, land tenure and management systems are the main barriers towards modernization of agriculture. Therefore, land reform is a fundamental issue of the economy.

It has often been suggested that the enthusiasm for land reform and that for industrialization are contradictory. The idea derives from the widely observed phenomenon that land reform pushes a much greater proportion of agriculture into the area of subsistence activities, thereby reducing both investible and marketable surpluses. Historically, the argument has been found to contain a

good deal of truth and the *ex post* justification for land reform in many cases could only be found in the greater emphasis on the principle of equity as compared to that for efficiency. Much of the force of such an argument would, however, appear to be lost in the case of Bangladesh today and this would appear to be due to the fact that the present question of land reform in Bangladesh is very different from the standard classical models.

At the risk of oversimplification, one might classify land reforms into two very broad types. The first type of land reform takes place during the transition from feudalism to industrial capitalism and has its main features the abolition or serious curtailment of the big feudal lords and the distribution of ownership rights to a large number of peasants. The second type of land reform takes place during the transformation of the society from capitalism to socialism and is characterized by the abolition of the private ownership of land.⁸⁰

The peculiarity of the question of land reform in Bangladesh derives from its being somewhere between the two kinds described above. The first kind of land reform would appear to have taken place in the 50s, although did not produce the expected result of material progress of agriculture. The second type of land reform is not on the cards. Bangladesh has achieved Independence through a nationalist movement where leadership is claiming a socialist mantle though it is quite clear that their aspirations and methods are typically social democratic. The abolition of the private ownership of land and its substitution by collectivization is not a problem that would be endorsed by this government. By

⁸⁰ Azizur Rahman Khan, *The Economy of Bangladesh* (Macmillan;[New York]: St. Martin's Press, 1972) 130.

collectivization is not a problem that would be endorsed by this government. No is it likely that there would be a spontaneous upsurge in the countryside in favour of collectivization.⁸¹

There is considerable debate on the land reform issues of Bangladesh. Devine⁸², and Griffin *et al.*⁸³ argued for redistribution of land in order to bring about reallocation of productive resources in rural areas. This advocacy is based on a neo-classical approach, which argues that redistribution of land can increase productivity of the agricultural sector and improve income distribution of rural households by reducing inequality.

The way in which land is currently administered remains firmly rooted in practices established during the colonial era. The British, from the outset, gave high priority to the organization of a centrally controlled management system that was designed to maintain political control and secure a steady source of state finance. Relatively little has changed in the post-independence era.

Attempts at re-distributive reform through the establishment of land ceilings have been a feature of both the Pakistan and Bangladesh periods. But whilst ostensibly designed to place land in the hands of the tiller and to return water bodies to those who fish them, these have largely been circumvented by the wealthy and

⁸¹ Ibid.

⁸² Joseph Devine, 'Ethnography of a policy process: A case study of land redistribution in Bangladesh' (2002) 22(5) *Public Administration & Development* 403.

⁸³ Keith Griffin, Azizur Rahman Khan and Amy Ickowitz, 'In Defence of Neo-Classical Neo-Populism' (2004) 4(3) *Journal of Agrarian Change* 361.

powerful. High population densities and increasing fragmentation of holdings mean, in any case, that the scope for re-distribution declines as time passes.

There has been a significant amount of khas land in Bangladesh with direct or indirect ownership of the government. An old estimate of khas land suggests that there are 3.3 million acres of khas land available, of which 0.8 million acres are of agricultural khas land, 1.7 million acres are of nonagricultural khas land, and 0.8 million acres are of khas water-bodies.⁸⁴ However, the actual area of khas land would be higher than 3.3 million acres, as suggested by various stakeholders. The reasons are attributable to the problems in official land record system, and dispute between government and 'so called' owner. The amount of khas land and water bodies available in the country varies by divisions ranging between 46.3 percent in Chittagong and only 4.5 percent in Khulna. In terms of availability of agricultural khas land, Dhaka division has the highest share (26%) and Khulna, the least (6.4). The highest share of non-agricultural khas land belongs to Rangamati (32% of the country total) and the lowest with 0.01 percent to at least 12 districts (with nil for two districts). A serious mismatch is evident in the official statistics of open water bodies.⁸⁵

The current administrative structure of land management in Bangladesh is built around three core functions: (i) record keeping, (ii) registration, and (iii) settlement. The core functions of land administration are maintained by various departments of two Ministries, The Ministry of Land (MoL) and the Ministry of Law, Justice and Parliamentary Affairs (MLJP). While the MoL discharges most

⁸⁴ Abul Barkat et al, *Political Economy of Khas Land in Bangladesh* (Association for Land Reform and Development Dhaka, BRAC, 2001) 229.

⁸⁵ Ibid.

of the land-related activities including survey, collection of land development tax, arbitration process, the MLJP mainly records land mutation and transfers.

The main task of the land administration is to conduct land surveys and maintain a clean record of land in an efficient manner. In Bangladesh, to investigate cadaster and ownership, three surveys, namely CS (Cadastral Survey, 1888 - 1940), SA (State Acquisition Survey, 1956 - 1962) and RS (Revisionary Settlement Survey, since 1965) were conducted. The survey process usually takes fairly longer time to complete surveys and regional surveys—12 years to 15 years in particular as the whole process includes visit of the site, investigating the cadasters and ownership and preparing the mouza map and khatian.⁸⁶

A disintegrated land administration is also a cause of concern. At the lowest tier, the function of record keeping is done by Tehsil office, while registration is done by Sub-registrar's office. There is an altogether different office, which handles the function of land settlement. The current land administrative system is not integrated in the sense that ownership rights are recorded in three different offices, each of which is run through a completely different executive process. While the Tehsil office is linked to the Ministry of land, the sub-registrar's office lies within the jurisdiction of the Ministry of Law and Parliamentary Affairs. In addition, the land settlement is done by completely separate office. This

⁸⁶ CARE, 'Land Policy and Administration in Bangladesh: A Literature Review' (2003) *CARE SDU Reports and Studies* 36
<http://www.carebangladesh.org/publication/Publication_7013284.pdf>. (Accessed on 15 July 2015).

disintegrated system is believed to be one of the main sources of hassles for the stakeholders.⁸⁷

Despite strong public repercussions against this land management system and a high demand for reforms to improve the system and bring all land-related procedures under the jurisdiction of a single ministry, government initiatives to resolve this issue are few. For example, in the late 1980s, the government abandoned the land reform agenda in favour of promoting vocational training and education, and providing research and extension services to agriculture for more rapid diffusion of higher-yielding crops.⁸⁸

Making the most of advantages from agricultural trade liberalization may possibly depend upon standard circumstances including characteristics of land, the property tenure system in addition to land supervision and management. Handling these conditions can help transform agriculture in a modern harvesting industry via technological innovation. Therefore, extensive terrain reform is important for this alteration, facilitated by agricultural industry liberalization. Similarly, safe property legal rights and productive land administration are essential for pro-poor agricultural expansion.

⁸⁷ Hossain Monzur, 'Improving Land Administration and Management in Bangladesh ' (2015) *Bangladesh Institute of Development Studies (BIDS)* 41.

⁸⁸ Mohammad Ali Taslim, 'Redistributive land and tenancy reform in Bangladesh agriculture' (1993) 27(3) *The Journal of Developing Areas* 341.

2.6 Poverty Alleviation and Inequality

Bangladesh has been pursuing the agenda of poverty reduction as an overriding priority and it is a fundamental challenge for Bangladesh since independence. Although, Bangladesh has gained important achievements in fighting against poverty since the early 1990s but there is no room for satisfaction. According to the Household Income and Expenditure Survey 2010 (HIES) conducted by BBS shows that the incidence of poverty has declined on an average to 1.74 percentage points during 2000 to 2010 against the MDG target of 1.20 percentage points. The estimated poverty headcount ratio for 2014 is 24.47 percent. Bangladesh has already met one of the indicators of target 1 by bringing down the poverty gap ratio to 6.5 against 2015 target of 8.0. The estimated figures suggest that the MDG target of halving the population living below the poverty line (from 56.7 percent to 29.0 percent) has already been achieved by 2012. Despite this success, poverty alleviation remains the high on the policy and development agenda of the Government. According to the UNDP Human Development Report, 2015 the position of Bangladesh has been recorded as 142th among 187 countries.⁸⁹ Furthermore, the report reveals that Bangladesh's Multidimensional Poverty Index (MPI) changed over the time that stood at 0.237 in 2011 from 0.292 in 2007.⁹⁰

Since 2000 to 2010, the proportion of poor in the population declined considerably, but the incidence of poverty witnessed a slower pace during 2005-

⁸⁹ UNDP, *Human Development Report*.2015. <http://hdr.undp.org/sites/default/files/2015_human_development_report.pdf> (Accessed on 01 Jan 2016).

⁹⁰ Finance, *Bangladesh Economic Review*.2014
<[http://www.mof.gov.bd/en/budget/14_15/ber/en/Ch-13%20\(English-2014\)_Final_Draft.pdf](http://www.mof.gov.bd/en/budget/14_15/ber/en/Ch-13%20(English-2014)_Final_Draft.pdf)>(Accessed on 15 Jul 2015).

2010 than 2000-2005. According to the latest available national statistics on poverty, based on head count rate (cost of basic needs method, CBM) and using upper poverty line, the incidence of poverty decreased to 31.5 percent in 2010 at the national level with an annual decrease rate of 2.46 percent from 1991-92 (HIES, 2010). If this trend of decrease continues, the incidence of poverty might fall to 22.9 percent by 2021.⁹¹ The estimates of poverty based on head count rate since 1991-92 to 2010 for upper and lower poverty lines are given in Table 2.11.

Using the upper poverty line, in HIES 2010, head count rate (HCR) of incidence of poverty estimated at 31.5 percent at the national level, 35.2 percent in rural area and 21.3 percent in urban area. In HIES 2005; these rates were 40.0 percent at national level, 43.8 percent in rural area and 28.4 percent in urban area. The HCR recorded a reduction by 8.5 percent (1.7 percent per annum) at national level, 8.6 percent (1.72 percent per annum) in rural area and 7.1 percent (1.42 percent per annum) in urban area during 2005 to 2010. Using the lower poverty line, in HIES 2010, the HCR of incidence of poverty estimated at 17.6 percent at national level, 21.1 percent in rural area and 7.7 percent in urban area. In HIES 2005; these rates were 25.1 percent, 28.6 percent and 14.6 percent in national, rural and urban area respectively. Thus HCR recorded a reduction by 7.5 percent at national level, 7.5 percent in rural area and 6.9 percent in urban area during the period 2005 to 2010.⁹²

⁹¹ K. M. M. et. Al. Rahman, *Incidence and Severity of Poverty, Decelerated Decline : Sate of Poverty in Bangladesh* (Shrabon Prokashani, 2012). Dhaka, Bangladesh.

⁹² Samiya Ferdousi and Wang Dehai, 'Economic growth, poverty and inequality trend in Bangladesh' (2014) 3 *Asian Journal of Social Sciences & Humanities* Vol 1.

Table 2.12: Head count rates of incidence of poverty

<i>Year</i>	<i>Upper Poverty Line</i>			<i>Lower Poverty Line</i>		
	<i>National</i>	<i>Rural</i>	<i>Urban</i>	<i>National</i>	<i>Rural</i>	<i>Urban</i>
2010	31.5	35.2	21.3	17.6	21.1	7.7
2005	40.0	43.8	28.4	25.1	28.6	14.6
2000	48.9	52.3	35.2	34.3	37.9	20.0
1995-96	50.1	54.5	27.8	35.2	39.5	13.7
1991-92	56.7	58.8	42.8	41.1	43.8	24.0

Source: HIES data.

Despite progress in reduction of the overall incidence of poverty during the last two decades, the number of population living under poverty line is still increasing. Soaring food price and food inflation, climate change as well as the lack of balanced development throughout the country are attributed for such increase. The number of population living below the poverty line has increased from 51.6 million in 1991-92 to 56 million in 2005 with an annual average rate of 0.314 percent at national level.⁹³

The rate of income poverty (measured by CBN considering upper poverty line) declined from 48.9 percent to 40.0 percent during the period from 2000 to 2005. The compound poverty reduction rate per year is recorded at 3.9 percent. But the rate of reduction of poverty is higher 191 in urban areas (yearly rate 4.2%). On the other hand, the rate of income poverty declined from 40.0 percent to 31.5 percent during the period from 2005 to 2010. The compound poverty reduction rate per year is recorded at 4.67 percent during this period. At the same time, the

⁹³ Rahman, above n 80.

rate of poverty reduction in rural areas is higher (yearly rate 5.59%). The depth of poverty (measured by poverty gap) between the period of 2000 and 2005 dropped at higher rate and severity (measured by squared poverty gap) reduced in same pace in urban areas compared to rural areas. The trends of poverty are shown in Table 2.13.

Table 2.13: Trend of Income Poverty

	2010	2005	Annual Change (%) (2005 to 2010)	2000	Annual Change (%) (2000 to 2005)
Head Count Index					
National	31.5	40.0	-4.67	48.9	-3.9
Urban	21.3	28.4	-4.28	35.2	-4.2
Rural	35.2	43.8	-5.59	52.3	-3.5
Poverty Gap					
National	6.5	9.0	-6.30	12.8	-6.80
Urban	4.3	6.5	-7.93	9.1	-6.51
Rural	7.4	9.8	-5.46	13.7	-6.48
Squared Poverty Gap					
National	2.0	2.9	-7.16	4.6	-8.81
Urban	1.3	2.1	-9.15	3.3	-8.64
Rural	2.2	3.1	-6.63	4.9	-8.75

Source: BBS, Household Income and Expenditure Surveys (HIES), 2010⁹⁴

There is a strong correlation between poverty and the size of land ownership in Bangladesh. It is observed from the Table 2.14, that the poverty incidence and size of land owned is inversely related. In 2010, the number of households owning land size group <0.05 acres are adversely affected by the curse of poverty (45.1%) according to Upper Poverty Line. This figure is much higher than the national average (31.5%). Lower poverty line also shows the similar patterns.

⁹⁴ Bangladesh Bureau of Statistics, Ministry of Planning.
<<http://www.bbs.gov.bd/WebTestApplication/userfiles/Image/LatestReports/HIES-10.pdf>>
(Accessed on 17 July 2016).

Table 2.14: Incidence of Poverty (CBN) by Ownership of Land (in percentage)

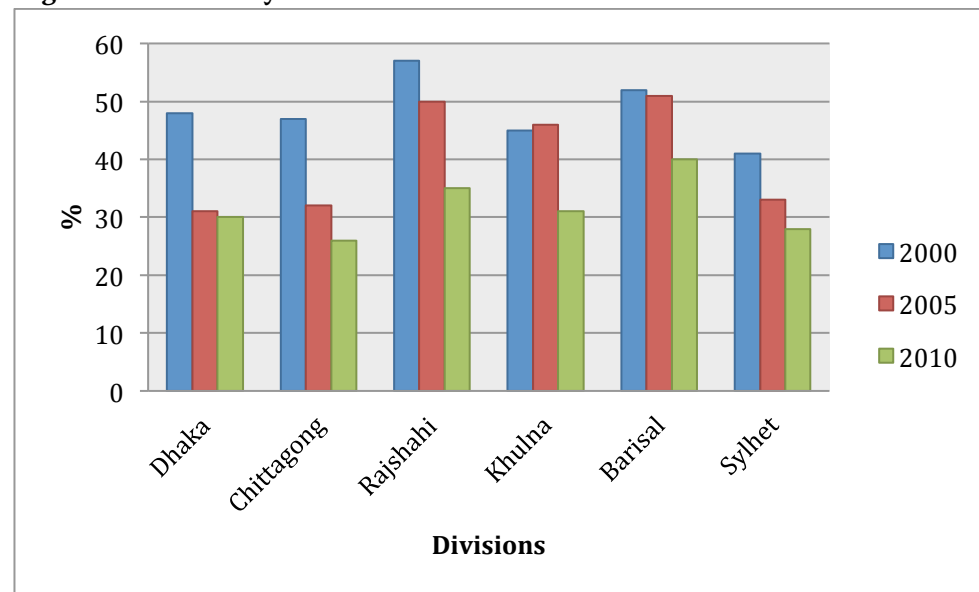
Size of Land Holding (Acres)	2010			2005		
Using the Lower Poverty Line						
	National	Rural	Urban	National	Rural	Urban
All Size	17.6	21.1	7.6	25.1	28.6	14.6
Land less	19.8	33.8	9.9	25.2	49.3	17.8
<0.05	27.8	35.9	12.3	39.2	47.8	23.7
0.05-0.49	17.7	22.9	5.4	28.2	33.3	11.4
0.50-1.49	13.3	15.2	2.4	20.8	22.8	9.1
1.50-2.49	7.6	8.6	1.8	11.2	12.8	2.7
2.50-7.49	4.1	4.3	2.7	7.0	7.7	3.0
7.50+	3.7	4.2	0	1.7	2.0	0.0
Using the Upper Poverty Line						
	National	Rural	Urban	National	Rural	Urban
All Size	31.5	35.2	21.3	40.0	43.8	28.4
Land less	35.4	47.5	26.9	46.3	66.6	40.1
<0.05	45.1	53.1	29.9	56.4	65.7	39.7
0.05-0.49	33.3	38.8	17.4	44.9	50.7	25.7
0.50-1.49	25.3	27.7	12.1	34.3	37.1	17.4
1.50-2.49	14.4	15.7	6.6	22.9	25.6	8.8
2.50-7.49	10.8	11.6	5.5	15.4	17.4	4.2
7.50+	8.0	7.1	14.6	3.1	3.6	0.0

Source: Bangladesh Bureau of Statistics (BBS), HIES-2010⁹⁵

In Bangladesh about 80 percent of her total population is living in rural areas and the incidence of poverty is mostly seen in rural areas. Although the poverty reduction has occurred for both rural and urban areas, but the reduction has not been even across regions. From the analysis of different reports, it is found that after 1990s, the regional disparities became apparent between the areas, which benefited from the rapid high economic growth. The highest decline in poverty incidence occurred for Dhaka division, followed by Chittagong and Sylhet. In contrast, poverty headcount stagnated in Barisal and increased slightly for Khulna. As a result of this unequal pattern of poverty reduction, regional differences are quite sharp. Figure 2.20 shows the division wise poverty trend in Bangladesh.

⁹⁵ Ibid.

Figure 2.20: Poverty Headcount



Source: HIES-2010⁹⁶

The mainstream argues that sustained and equitable economic growth inevitably leads to poverty reduction. There is widespread concern that economic growth has not been shared fairly, and that the current economic crisis further widens the gap between the rich and poor. In Bangladesh, the number of people living in poverty has increased due to rising disparities in the distribution of resources within the country. Uneven growth pattern has been proved as an obstacle in reducing poverty at a faster rate and has been shown to be harmful to growth. As such it is important to address the inequality issues for effective and faster reduction of poverty.⁹⁷

The eradication of poverty and inequality and meeting of basic needs are the primary goals for any government. However, achieving a reduction in poverty and inequality is a fundamental challenge in Bangladesh. Despite considerable

⁹⁶ Ibid.

⁹⁷ Ferdousi and Dehai, above n 92.

trust on poverty alleviation in all plan documents since the independence of Bangladesh, a significant number of people are still living below the poverty line. Bangladesh is still a low-income country with substantial poverty, inequality and deprivation. Most of the labor force is engaged in informal low productivity and low-income jobs. The access to secondary and tertiary education is limited and the quality of education at all levels is deficient. The poor group of the population is severely disadvantaged in terms of ownership of assets and has inadequate access to institutional finance as well as to basic services including quality education, healthcare, water and sanitation. Theoretically, there are some of the strategic documents and policy papers are seemed to be implementable to reduce the poverty situation in Bangladesh. However, without proper monitoring and evaluation, the implementation of all these policies, strategies and programmes seems useless.

2.7 Conclusion

Through the above evaluation with this chapter, it is actually evident that Bangladesh is a rural-based agricultural overall economy. It comes with a large population but it is a poor land in terms of per capita earnings. Agriculture takes on a vital role in the economic climate thinking of its participation to employment and GDP.

The major challenges for Bangladesh agriculture are to: raise productivity and profitability, increase diversification of production in line with consumption diversification to promote nutrition and minimize trade imbalances, reduce instability of production, increase resource use efficiency, reduce loss of arable

land, minimize yield gap, maintain food safety and quality, expand irrigation and farm mechanization and develop resilience to climate change impacts.

One of the causes of relatively poor performance of agriculture is the relatively poor rate of take up of new technologies. Public services such as research, education and extension are important to bring improvement in this area, obviously supported by the private sector input supply (seed, fertilizer, credit, etc). The challenge is to establish effective linkages between these public services and farmers who have to play a major role in testing and adapting technologies based on their local knowledge.

Another challenge is to sustain and further develop the capacity of agriculture to effectively respond to market signals – to ensure that what is grown can be sold at remunerative prices, both to maximize rural income generating opportunities and optimize the use of limited natural resources. The small and marginal farmers need to be supported in producing diversified crop suitable for both markets and household consumption to improve their nutritional status. They also need to be supported in selling their products at remunerative prices by developing linkages with domestic and international markets.

In order to ensure food security through development of agriculture in Bangladesh, the invention, adoption and dissemination of ‘new technology’ must be ensured with a view to increasing production of diversified crops. Attention must be given at controlling the rice price within the accessible limit of the poor ensuring a fair price to farmers. In addition, agricultural credit disbursement, supply of fertilizer, increased development budget vis-à-vis non-development budget in agriculture, early weather warning system for farmers and ‘environment

friendly sustainable agriculture' must be emphasized with providing adequate support for agricultural research and training. Thorough actions and comprehensive policies for modernization of agriculture focusing on pro-poor growth coverage will considerably affect poverty reduction.

The discussions and analyses about the socio-economic circumstance of Bangladesh with this chapter will likely be useful for comprehending the perspective of this research. This chapter has given us a precise idea about the growing need to enhance agricultural productivity and its contribution towards national economy. In a predominantly agrarian society like Bangladesh, the socio-economic factors combine to affect agricultural output and productivity. Furthermore, it affects the welfare of its citizens. Therefore, it is equally important to know about the underlying context of agricultural trade liberalization both theoretically and empirically. Chapter 3 of this thesis deals with a review of a number of theoretical concepts and findings on agricultural trade liberalization.

Chapter 3

Theoretical Aspects of Agricultural Trade Liberalization and the Position of Bangladesh

3.1 Introduction

The robust discussion across the wide-spread setup of trade liberalization policies over the last thirty years in developing and least developed countries demonstrate how controversial and significant this economic improvement method has been around in the arena of worldwide development and public policies. Some scholars now acknowledge that accessible border approach may well not have already been as productive as they have anticipated and started off to significantly ask about the position of liberalization policies in accomplishing financial growth in the developing world.

Agriculture industry takes on a vital role in poverty reduction and economic growth.¹ Even so, in recent time, most developing countries encounter decreases agricultural development along with a weakening role of agriculture in growth. Rapid human population development, regressing farm size, sliding soil fertility and missed options for earnings diversification and migration leads to the decrease of agricultural contribution. Moreover, the policy of high taxes on agriculture coverage, the policy bias in the direction of rural areas, the lack of federal government consideration, underinvestment and low expenditure in

¹ World Bank, 'Agriculture for Development' (2008) 386
<file:///Volumes/NO%20NAME/Agriculture%20for%20Development%20World%20Bank.pdf>. (Accessed on 1 Feb 2014).

agricultural industry also contribute to the reduced expansion of the agricultural sector.

Trade liberalization has contributed towards the massive expansion in the growth of world trade. The share of agriculture in GDP and employment decline over time although, economies grow and demand for non-agricultural products and services grow faster than the agricultural products.² Indeed, it is a broadly shared view among experts that agriculture has been neglected in the past three decades, during which time investment in rural infrastructure has fallen, reducing the capacity of rural economies to generate incomes and employment.³ The neglect of agriculture may be receding and giving way to the realization that the full potential of agriculture in economic development and poverty reduction has not been realized in many of the developing countries.⁴

This chapter provides a review of the detailed explanation of the background of this research. The research questions and objectives of this study were presented in Chapter 1, while in Chapter 2 the socio-economic condition of Bangladesh has been analyzed. This Chapter would explore the importance of the agricultural sector, overview of the trade in agriculture and trade liberalization in agriculture from the perspective of world trade. It further presents a review and analysis of some of the major studies related to agricultural trade liberalization in Bangladesh.

² C Peter Timmer, 'The macro dimensions of food security: economic growth, equitable distribution, and food price stability' (2000) 25(3) *Food Policy* 283.

³ M Ataman Aksoy, 'Global Agricultural Trade Policies' in M Ataman Aksoy and John C Beghin (eds), *Global Agricultural Trade and Developing Countries* (World Bank Publications, 2004) 37-54.

⁴World Bank, 'Agriculture for Development', above n 1.

This research seeks to contribute to the discussions and debates on the impact of the agricultural trade liberalization process through conceptual and theoretical analysis of the experience of Bangladesh. This would help to enhance the conceptual and contextual knowledge concerning the impact of agricultural trade liberalization on the economic growth of Bangladesh.

3.2 Trade Liberalization, Openness and International Trade

The concept and connection between trade liberalization, openness and economic growth has generated different kinds of arguments, definition and conceptual conflict in economics.⁵ Theoretically, consensus in the literature suggest that trade liberalization is a policy and strategy that involves the relaxation of restriction on tradable goods and services between countries.⁶ This can be extend in a broader sense to mean a reduction in all the trade barriers such as tariff and increasing openness of import restriction in each economy in order to create and foster competence in the global economy, efficiency in resource allocation and specialization in production through increase in competition of world market force, and tolerance of diverse culture, law and institutional frame work of participating countries.⁷

⁵ Anne O Krueger, *Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences* (Columbia University Press, 1978).

⁶ Petia Topalova, 'Trade liberalization, poverty and inequality: Evidence from Indian districts', *Globalization and Poverty* (University of Chicago Press, 2007) 291-336.

⁷ Bernard Hoekman and Alessandro Nicita, 'Trade policy, trade costs, and developing country trade' (2011) 39(12) *World Development* 2069. Ron Duncan and Doan Quang, 'Trade liberalisation, economic growth and poverty reduction Strategies' (2003) 27 *National Centre for Development Studies. The Australian National University*. Anne Krueger and IMF Director, '7. Protectionism and the crisis' (2009) *The Collapse of Global Trade, Murky Protectionism and the Crisis: Recommendations for*

Trade liberalization is a removal of all forms of restriction that could hamper free trade especially in export and adoption of several export incentive and a more realistic exchange rate policy.⁸ In developing this general concept, Panagariya⁹ added that the beginning of trade liberalization episode coincided with the reduction or elimination of quota restriction on trade. Krugman and Obstfeld¹⁰ sees trade liberalization policies as the core of the adjustment package which is expected to enlarge the elasticity's of export supply, import demand, and import substituting supply with respect to devaluation as well as more directly shift resources into tradable goods sectors, that many factors have been advanced for the incorporation of liberalization in the adjustment package.

The propensity towards open economies started in the early 1980's and arose from the failure of a set of different streams of economic thoughts over what development should be and how to achieve it. After the great depression in the early 1930's and the Second World War, academicians and policy-makers in developed and developing countries have gotten interested in formulating development strategies that would enable developing countries to catch up with developed countries and a number of conceptual models have been suggested including the neo-Marxist structuralism, Import Substitution Strategy, the dependency theory, and the national developmentalism, until the emergence of

the G20 37. Paul R Krugman, *International economics: Theory and policy*, 8/E (Pearson Education India, 2008).

⁸ Arvind Panagariya, 'Preferential trade liberalization: the traditional theory and new developments' (2000) 38(2) *Journal of Economic literature* 287.

⁹ Arvind Panagariya, 'Miracles and debacles: in defence of trade openness' (2004) 27(8) *The World Economy* 1149.

¹⁰ Paul R Krugman and Maurice Obstfeld, 'International Economics: Trade and Policy' (2006) 186.

neoliberalism in the 1980s as an alternative.¹¹

Andrew Berg and Anne Krueger¹² brought to light certain negative impacts of trade liberalization despite the praises and appraisal given to trade liberalization as being important in economic growth. They stated “one of the most common criticisms of trade liberalization and globalization in developed countries is that it drives down wages and jobs to low wage economies”.

Yet Berg and Kruger¹³ argued that trade liberalization improves terms of trade of developing economies. Parikh et al.¹⁴ pointed out that previous research in this field tend to give conflicting results, some studies shows that countries which went for trade liberalization programmes have improved their export performance. They further stressed and provide a strong support for the efficiency gains to be derived from trade liberalization, concluding that periods of greater liberality have coincided with period of faster growth in the total factor productivity (TFP).

Liberalization of trade has its roots in the classical trade theory. This area of study has grown significantly with the development of a multitude of international trade theories ranging from Mercantilism, Comparative Advantage, Heckscher–Ohlin Theory, Exogenous and Endogenous Growth, and Gravity Trade models amongst others. According to the pure theory of international trade, international

¹¹ Halit Yanikkaya, 'Trade openness and economic growth: a cross-country empirical investigation' (2003) 72(1) *Journal of Development economics* 57.

¹² Mr Andrew Berg and Anne O Krueger, *Trade, Growth, and Poverty: A Selective Survey* (International Monetary Fund, 2003).

¹³ Ibid.

¹⁴ Ashok Parikh and Miyuki Shibata, 'Does trade liberalization accelerate convergence in per capita incomes in developing countries?' (2004) 15(1) *Journal of Asian Economics* 33.

trade leads to improved economic growth through increased GDP.¹⁵ In addition, trade is also expected to lead to positive externalities such as economies of scale, which lower production costs and increase efficiency. Adam Smith¹⁶ advocated in his book for laissez-faire principle in trade. He stipulated that government should only be interested in the institutions and leave the invisible hands of the free market mechanism to determine the rest i.e. free trade should be guiding principle of all countries.¹⁷ The classical and neoclassical theories explain and argued that because of factor endowments and differences in technology, developing countries should specialize in the production and export of primary commodities to advanced nations in exchange for manufactured or finished products.¹⁸ David Ricardo's theory of comparative advantage (termed Ricardian theory) expanded on Smith's work by proposing that international trade would be possible, as long as there existed a difference in comparative production costs across nations.¹⁹ This model was driven by opinion that even if a country had absolute advantage in production of two goods, it was better off producing and trading the single good in which it had comparative advantage (i.e. the good with the lowest opportunity cost when compared to its trading partners).²⁰ Yet, the Ricardian

¹⁵ J.E. Anderson, 'International Trade Theory' in S.N. and Blume Durlauf, L.E. (ed), *The New Palgrave Dictionary of Economics* (Palgrave Macmillan, 2008).

¹⁶ Adam Smith, 'An inquiry into the wealth of nations' (1776) *Strahan and Cadell, London*.

¹⁷ Roberto Chang, Linda Kaltani and Norman V Loayza, 'Openness can be good for growth: The role of policy complementarities' (2009) 90(1) *Journal of development economics* 33. Zhang Wei-Bin, 'International Trade Theory: Capital, Knowledge, Economic Structure, Money, and Prices over Time' (2008) *B: Springer-Verlag*.

¹⁸ Dominick Salvatore, *Protectionism and world welfare* (Cambridge University Press, 1993) 445.

¹⁹ Krugman and Obstfeld, above n 10.

²⁰ Chaehwa Lee and Wilbert Wilhelm, 'On integrating theories of international economics in the strategic planning of global supply chains and facility location' (2010) 124(1) *International journal of production Economics* 225.

Model had a downfall assuming that, the world would operate in a perfectly competitive environment where labour could easily move within industries and ignored the impact of capital input. The notion that the whole country would benefit from trade has drawn significant criticism due to the gains from trade rarely passed through to all countries or all citizens. This has been evidenced by the classification of some nations as rich and others as poor nations without any convergence occurring between the two groups as a result from trade.²¹

Among the oldest views against trade liberalization in developing countries are those based on two pessimisms: export supply and world export demand from low-income countries. Exports supply pessimism holds that low income countries export are concentrated in a few products with a very low domestic supply response so that trade reforms in the sense of changing relative prices will not induce domestic producers to adjust output substantially. World export demand pessimism for primary commodities maintains that world demand is inelastic to both income and prices, for the product in which low income countries export are concentrated.²² Besides, developing countries are generally not in favour of liberalization policies as a move to protect their nascent industries for at least two reasons. The first one is the famous “infant” industry argument which maintains that during the temporary period when domestic costs in an industry are above the product’s import price, a tariff is a socially desirable method of financing the

²¹ Ron Martin and Peter Sunley, 'Slow convergence? The new endogenous growth theory and regional development' (1998) 74(3) *Economic geography* 201. Theo S Eicher and Stephen J Turnovsky, 'Transitional dynamics in a two-sector non-scale growth model' (2001) 25(1) *Journal of Economic Dynamics and Control* 85. William Easterly and William Russell Easterly, *The elusive quest for growth: economists' adventures and misadventures in the tropics* (MIT press, 2001).

²² Lawrence E Hinkle and Peter J Monteil, *Exchange rate misalignment: Concepts and measurement for developing countries* (Oxford University Press, 1999).

investment in human resources needed to compete successfully with foreign producers.²³

3.3 Global Agricultural Growths, Economic Development and Integration

Agricultural economists as well as development economists have long focused on how agriculture can best contribute to overall economic growth and modernization. Many analysts like, Rosenstein-Rodan²⁴, Lewis²⁵, Scitovsky²⁶, Hirschman²⁷, Jorgenson²⁸, Fei and Ranis²⁹ highlighted agriculture's abundant resources and ability to surpluses to the more important industrial sector.

Trade liberalization in relation to agriculture appears to be a relatively uncomplicated concept referring to the absence of government intervention in trade policy. However, due to the many academic, economic and political stakeholders that stand to gain or lose from its application, the concept remains vague. Having considered a vast majority of the literature available to date³⁰ it

²³ Robert E Baldwin, 'Openness and growth: What's the empirical relationship?', *Challenges to globalization: Analyzing the economics* (University of Chicago Press, 2004) 499-526.

²⁴ Paul N Rosenstein-Rodan, 'Problems of industrialisation of eastern and south-eastern Europe' (1943) 53(210/211) *The economic journal* 202.

²⁵ W Arthur Lewis, 'Economic development with unlimited supplies of labour' (1954) 22(2) *The manchester school* 139.

²⁶ Tibor Scitovsky, 'Two concepts of external economies' (1954) *The journal of political economy* 143.

²⁷ Albert O Hirschman, *The strategy of economic development* (1958).

²⁸ Dale W Jorgenson, 'The development of a dual economy' (1961) 71(282) *The Economic Journal* 309.

²⁹ Gustav Ranis and John CH Fei, 'A theory of economic development' (1961) *The american economic review* 533.

³⁰ Glen Atkinson, 'The political economy of liberalization and regulation: Trade policy for the new era' (1998) 32(2) *Journal of Economic Issues* 419. Baldwin, above n 23. Jagdish Bhagwati and

would appear that the definition of liberalization is bound to fall somewhere within the realms of the following concepts: the removal of tariffs and non-tariff barriers; the use of market determined exchange rate system; the move towards neutrality of incentives for export and imports.

In agrarian societies with few trading opportunities, most resources are devoted to the provision of food. As national income rises, the demand for food increases much more slowly than with other goods and services. As a result, value added from the farm household's own labour, land and capital as a share of the gross value of agricultural output – falls over time.³¹ Farmers' increasing use of purchased intermediate inputs and off-farm services adds to the relative decline of the producing agriculture sector, per sector.³²

Cross-border trade and investment flows have been a major engine of the process- 'machines' that allow countries to transform one set of goods and services into another set that they value more highly. The increase in trade openness and cross-border investment is beneficial to the world as a whole. Empirical research by

Thirukodikaval Nilakanta Srinivasan, 'Trade and poverty in the poor countries' (2002) 92(2) *The American Economic Review* 180. Sambit Bhattacharyya, 'Trade liberalization and institutional development' (2012) 34(2) *Journal of Policy Modeling* 253. Paul Collier, 'Higgledy - piggedy Liberalisation' (1993) 16(4) *The World Economy* 503. Judith Myrle Dean, Seema Desai and James Riedel, *Trade policy reform in developing countries since 1985: a review of the evidence* (World Bank Publications, 1994) vol 267. David Dollar, 'Outward-oriented developing economies really do grow more rapidly: evidence from 95 LDCs, 1976-1985' (1992) 40(3) *Economic development and cultural change* 523. Rudiger Dornbusch, 'The case for trade liberalization in developing countries' (1992) 6(1) *The Journal of Economic Perspectives* 69. Sebastian Edwards, 'Openness, productivity and growth: what do we really know?' (1998) 108(447) *The economic journal* 383. Hoekman and Nicita, above n 7.

³¹ Prabhu Pingali, 'Agricultural growth and economic development: a view through the globalization lens' (2007) 37(s1) *Agricultural Economics* 1.

³² C Peter Timmer, 'Agriculture and economic development' (2002) 2 *Handbook of agricultural economics* 1487.

economists has shown a significant positive relationship between openness and economic growth.³³

Sachs and Warner³⁴ conclude that open developing countries grew by an average of 3.5% faster than a comparator group of closed economies. The sustained rise in post-Second World War European export-output ratios were associated with a sustained increase in the average growth rate.³⁵

There is a vigorous debate on the relationship between liberalization and growth. Dani Rodrik has argued that data and methodological weaknesses do not allow strong conclusions to be drawn.³⁶ Sceptics agree that there is a positive association between liberalization and growth, but are not convinced the direction of causality is correct: they argue that it may be it is growth that leads to liberalization rather than the other way around.³⁷

Frankel and Rose³⁸ have shown that liberalization does indeed play a role even after allowing for geography and its possible indirect effects, while Wacziarg and

³³ David Greenaway, Wyn Morgan and Peter Wright, 'Trade liberalisation and growth in developing countries' (2002) 67(1) *Journal of development economics* 229.

³⁴ Jeffrey D Sachs et al, 'Economic reform and the process of global integration' (1995) 1995(1) *Brookings papers on economic activity* 1.

³⁵ Dan Ben-David and Michael B Loewy, *Free trade and long-run growth* (1996) 15.

³⁶ Dani Rodrik, *Globalization, social conflict and economic growth*, Conferencia de Raúl Prebisch. Ginebra. Versión revisada (en inglés) disponible en <http://www.ksg.harvard.edu/rodrik/global.pdf>. (Accessed on 14 Aug 2014). Francisco Rodriguez and Dani Rodrik, 'Trade policy and economic growth: a skeptic's guide to the cross-national evidence', *NBER Macroeconomics Annual 2000, Volume 15* (MIT Press, 2001) 261-338.

³⁷ Bernard M Hoekman and Michel M Kostecki, *The political economy of the world trading system: the WTO and beyond* (Oxford University Press, 2009) 18.

³⁸ Jeffrey Frankel and Andrew Rose, 'An estimate of the effect of common currencies on trade and income' (2002) *Quarterly Journal of economics* 437.

Welch³⁹ demonstrate that even if the cross-country evidence was not robust over the 1990s, if one takes countries' history individually, the dates of trade liberalization do characterize breaks in investment and GDP growth rates.

Liberalization is also an important channel for the diffusion of knowledge. The research and development that is embodied in imported goods – especially capital goods – offers a special mechanism through which the total factor productivity of an economy can be increased. More open economies tend to be more innovative, because of greater trade in knowledge and because greater competition spurs innovation, leading to higher rates of capital accumulation and productivity growth.⁴⁰

The existence of competition effects has been documented by many studies. Ahmed⁴¹ is representative example focusing on the trade liberalization undertaken in Bangladesh. This involved the abolition of most NTBs and a reduction of import tariffs from over 100 percent for some products to a uniform rate across all industries. Thus, liberalization leads to better exploitation of comparative advantage in terms not only of industries but also firms within each industry. As noted by Anderson and Winters⁴², if the more productive firms are also foreign owned – as often will be the case given that foreign firms must be

³⁹ Romain Wacziarg and Karen Horn Welch, 'Trade liberalization and growth: New evidence' (2008) 22(2) *The World Bank Economic Review* 187.

⁴⁰ Hoekman and Kostecki, above n 37.

⁴¹ Nasiruddin Ahmed, *Trade liberalization in Bangladesh: An investigation into trends* (University Press Limited, 2001) 268.

⁴² Kym Anderson and L Alan Winters, 'The Challenge of Reducing International Trade and Migration Barriers' (2009) *University of Adelaide Research Paper* 71 <<https://economics.adelaide.edu.au/research/papers/doc/wp2009-10.pdf>>. (Accessed on 14 August 2014).

efficient enough for FDI to be worth the extra fixed cost in establishment abroad – then being open to FDI multiplies the gain from trade liberalization.

No country has developed without being open and engaging with the world economy. Some of the countries paid a high price not being a part of the liberalization process. Bangladesh took part in early 1990s with the process but the process of liberalization could not make any positive impact into agricultural sector.

Trade liberalization is not a panacea that will automatically generate large growth benefits. Ben-David and Papell⁴³ examine the post Second World war growth path of 74 countries and conclude that 46 experienced a significant slowdown in economic growth rates during the period, even though liberalization ratios were rising. Greater trade integration is associated with faster growth, but complementary measures are needed to realize its full potentials – including management of fiscal and monetary policy, public investment in human capital (education) and infrastructure.

Research by Bolaky and Freund⁴⁴ shows that increased openness to trade is associated with a lower standard of living in economies with high barriers to the creation of new firms and restrictive labour market regulation that inhibits hiring. This is because such policies may prevent the expansion of the most productive firms by inhibiting the downsizing or exit of less profitable industries.

⁴³ Dan Ben-David and David H Papell, 'Slowdowns and meltdowns: postwar growth evidence from 74 countries' (1998) 80(4) *Review of Economics and Statistics* 561.

⁴⁴ Caroline Freund and Bineswaree Bolaky, 'Trade, regulations, and income' (2008) 87(2) *Journal of development economics* 309.

The transformation of agriculture from its traditional subsistence roots, induced by technical change, to a modern and ultimately industrialized agriculture sector is a phenomenon observed across the developing world. However, there are also a large number of countries that have stalled in the transformation process, or have yet to 'get agriculture moving. These countries are always classified as the 'least developed'. Pingali⁴⁵ showed that even within countries that are well on the path towards agricultural transformation, there are significant inter-regional differences. The reasons for the poor performance of the agriculture are poor provision of public goods investments in rural areas; lack of technology R&D with respect to commodities and environments important to the poor; a high share of agro-climatically constrained land resources; and institutional barriers to enhancing productivity growth.

Therefore, it is a basic research question to ask whether globalization will make a difference: Will trade integration and increased global interconnectedness enhance or impede the process of agricultural transformation for countries (especially Bangladesh) that have successfully used agriculture as an 'engine of growth? This study tries to answer the above critical questions within the context of Bangladesh agricultural industries, by accessing factors affecting the important determinants of economic growth.

⁴⁵ Pingali, above n 31.

3.4 Agricultural Trade and Development

The dynamics of trade negotiations favor rich countries. Countries and trading blocs such as the European Union, Japan, and the United States deal with the large quantities of goods. They make up a large and lucrative share of the world food market. Agricultural producers in developed countries make up a relatively small percentage of the population. Despite this, they wield a large amount of political clout and are able to influence both domestic policy and trade policy decisions. Agricultural producers in developing countries often have little political influence and are often dependent on a volatile world market, even though a large percentage of the population belongs to the agricultural sector. These conflicts highlight the dilemma in identifying a politically acceptable level of trade liberalization that will stimulate the desired growth levels in developing countries. World trade in agricultural goods can be liberalized to provide increased market access for less developed countries, thereby stimulating their growth and development.⁴⁶

Agriculture disappeared from the development agenda in the 1980s and 1990s despite having been a key preoccupation of developing country governments, donors and the international community during the 1960s and 1970s.⁴⁷ There is now renewed interest in the problems of the sector—not to a small extent. Developing economies have generally been described as dual economies with a

⁴⁶ Won W Koo and P Lynn Kennedy, *International Trade and Agriculture: Theories and Practices* (John Wiley & Sons, 2008).238 Douglas Gollin, Stephen Parente and Richard Rogerson, 'The role of agriculture in development' (2002) 92(2) *The American Economic Review* 160. Derek Byerlee, Alain De Janvry and Elisabeth Sadoulet, 'Agriculture for development: Toward a new paradigm' (2009) 1(1) *Annual Review of Resource Economics* 15.

⁴⁷ Jean-Jacques Dethier and Alexandra Effenberger, 'Agriculture and development: A brief review of the literature' (2012) 36(2) *Economic Systems* 175.

traditional agricultural sector and a modern capitalist sector.⁴⁸ Productivity is assumed to be lower in agriculture than in the modern sector. The canonical model was put forward by Lewis (1954)⁴⁹ and subsequently extended by Ranis and Fei (1961).⁵⁰ Lewis' model rests on the idea of surplus labor existing in the agricultural sector. With lower productivity in agriculture, wages will be higher in the modern sector, which induces labor to move out of agriculture and into the modern sector, which in turn generates economic growth. Other precursors, such as Schultz (1953)⁵¹, also point out the importance of food supply by the agricultural sector. In Schultz's view, agriculture is important for economic growth in the sense that it guarantees subsistence for society without which growth is not possible in the first place. This early view on the role of agriculture in economics also matched the empirical observation made by Kuznets (1966)⁵² that the importance of the agricultural sector declines with economic development. In this view, agriculture's role in economic development is to supply cheap food and low wage labor to the modern sector. Otherwise, both sectors have few interconnections. Growth and higher productivity in the agricultural sector can contribute to overall economic growth by releasing labor as well as capital to other sectors in the economy.

⁴⁸ James M Cypher and James L Dietz, *The process of economic development* (Routledge, 2008). Christopher B Barrett, Michael R Carter and C Peter Timmer, 'A century-long perspective on agricultural development' (2010) 92(2) *American Journal of Agricultural Economics* 447.

⁴⁹ Lewis, above n 25.

⁵⁰ Ranis and Fei, above n 29.

⁵¹ Theodore William Schultz, *The economic organisation of agriculture* (McGraw-Hill, 1953) 374.

⁵² Simon Smith Kuznets and John Thomas Murphy, *Modern economic growth: Rate, structure, and spread* (Yale University Press New Haven, 1966) vol 2.

In addition to labor and food supply, agriculture plays an active role in economic growth through important production and consumption linkages. For instance, agriculture can provide raw materials to nonagricultural production or demand inputs from the modern sector. On the consumption side, a higher productivity in agriculture can increase the income of the rural population, thereby creating demand for domestically produced industrial output. Such linkage effects can increase employment opportunities in the rural non-farm sector, thereby indirectly generating rural income. Moreover, agricultural goods can be exported to earn foreign exchange in order to import capital goods.⁵³

The role of the agricultural sector in an economy typically evolves as it moves through various stages of economic development. The agricultural sector in LDCs usually employs a large percentage of workforces. In addition, a large percentage of the economy is involved in the production of food, and many households spend a significant amount of their available time producing their own food. With a large percentage of their populations in rural areas, developing countries often experience difficulties providing access to quality education for all.⁵⁴ As the population shifts toward urban and suburban areas, developed countries experience less difficulty in providing access to quality education for their populations. AT the same time, as the population tends to cluster around towns and cities, transportation and communication problem ease. Agricultural

⁵³ Dethier and Effenberger, above n 47. Bruce F Johnston and John W Mellor, 'The role of agriculture in economic development' (1961) 51(4) *The American Economic Review* 566.

⁵⁴ Koo and Kennedy, above n 46. Dirk Bezemer and Derek Headey, 'Agriculture, development, and urban bias' (2008) 36(8) *World Development* 1342. Yujiro Hayami and Vernon W Ruttan, 'Agricultural productivity differences among countries' (1970) *The American Economic Review* 895.

producers in developed countries are better able to organize than their LDC counterparts. This is one explanation of why the level of domestic support and protection given to agriculture in developed countries is significantly higher than in LDCs.⁵⁵

Moon⁵⁶ has the divergent views on using agriculture to foster development; there exists a conventional agreement on the fact that agriculture, as the primary source of income for the poorest, holds an important place in poverty reduction. It has been shown that the whole economy is affected when the agricultural sector underperforms, and that increasing agricultural productivity is crucial to drop the poverty rate at a faster pace in any country. The central issue is to identify the more efficient way to convert agriculture into an effective tool of development. High-value commodities for export and income diversification away from agriculture are the two main strategies put forward by some economists. Yet, arguments against those approaches support that domestic market is the key to agricultural growth, and that the income diversification already in effect in Asia and Africa has not improved the income of the poor. Further arguments assume that the export's contribution to economic growth has been very modest in the Asian countries, and that income diversification away from agriculture should be done, based on an increasing agricultural growth or on the growth of urban activities with high productivities, conditions that are not met easily and all the

⁵⁵ Koo and Kennedy, above n 46,249.

⁵⁶ Wanki Moon and Jin-Myon Lee, 'Economic development, agricultural growth and labour productivity in Asia' (2013) 12(1) *Journal of Comparative Asian Development* 113.

time.⁵⁷

3.5 Arguments in Favor of and Against Free Trade

3.5.1 Arguments in Favor of Trade Liberalization

While the idea that all countries can benefit from international trade goes back to Smith and Ricardo, subsequent research has described the gains from trade in much greater detail.⁵⁸ In the *Principles of Political Economy* (1848), John Stewart Mill, one of the leading economists of the 19-century, pointed to three principal gains from trade. First, there is what Mills called the “direct economical advantages of foreign trade.” Second, there are “indirect effects” of trade, “which must be counted as benefits of a higher order.” Finally Mill argued “the economical benefits of commerce are surpassed in importance by those effects which are intellectual and moral.”⁵⁹

Smith and Ricardo⁶⁰ described the standard gains that arise from specialization. By exporting some of its domestically produced goods in exchange for imports, a country engages in mutually advantageous trade that enables it to use limited productive resources (such as land, labour and capital) more efficiently and therefore achieve a higher real national income than it could in the absence of trade. A higher real income translates into an ability to afford more of all goods

⁵⁷ Kiminori Matsuyama, 'Agricultural productivity, comparative advantage, and economic growth' (1992) 58(2) *Journal of economic theory* 317.

⁵⁸ Daniel CK Chow and Thomas J Schoenbaum, *International Trade Law: Problems, Cases, and Materials* (Wolters Kluwer Law & Business, 2013) 694.

⁵⁹ John Stuart Mill, *Principles of political economy* (D. Appleton, 1884).

⁶⁰ Smith, above n 16. David Ricardo, *Principles of political economy and taxation* (G. Bell and sons, 1891).

and services than would be possible without trade.⁶¹

Trade liberalization will influence in the long-run growth of an economy, as it is a belief that there is a strong positive correlation between trade and development strategies. The proponents of trade liberalization declared that the shift towards a more open trading regime confers significant benefits to the economy.⁶²

There is much better, indeed overwhelming evidence that free trade improves economic performance by increasing competition in the domestic market. This competition diminishes the market power of domestic firm and leads to a more efficient economic outcome. This benefit does not arise because foreign competition changes a domestic firm's cost through changes in the scale of output. Rather, it comes through a change in the pricing behavior of imperfectly competitive domestic firms. After Turkey's trade liberalization in the mid-1980s, for example, price-cost margins fell for most industries, consistent with a more competitive outcome. Numerous studies confirm this finding in other countries, providing powerful evidence that trade disciplines domestic firms with market power.⁶³

⁶¹ Chow and Schoenbaum, above n 58.

⁶² Elena Meschi and Marco Vivarelli, 'Trade and income inequality in developing countries' (2009) 37(2) *World development* 287. Chang, Kaltani and Loayza, above n 17. McCulloch, Winters and Cirera, above n 34.

⁶³ Chow and Schoenbaum, above n 58. Andrea Caggese and Vicente Cuñat, 'Financing constraints, firm dynamics, export decisions, and aggregate productivity' (2013) 16(1) *Review of Economic Dynamics* 177. Maria Garcia-Vega, Alessandra Guariglia and Marina-Eliza Spaliara, 'Volatility, financial constraints, and trade' (2012) 21(1) *International Review of Economics & Finance* 57.

Trade improves economic performance not only by allocating a country's resources to their most efficient use, but also by making those resources more productive in what they are doing. This is the second of John Stuart Mills⁶⁴ three gains from trade, the one he called "indirect effects." These indirect effects include "the tendency of every extension of the market to improve the process of production. A country which produces for a larger market than its own can introduce a more extended division of labour, can make greater use of machinery and is more likely to make inventions and improvements in the processes of production."⁶⁵

In other words, trade promotes productivity growth. The higher is an economy's productivity level, the higher is that country's standard of living. International trade contributes to productivity growth in at least two ways: it serves a conduit for the transfer of foreign technologies that enhance productivity, and it increases competition in a way that stimulates industries to become more efficient and improve their productivity, often by forcing less productive firms out of business and allowing more productive firms to expand.⁶⁶

The economic gains from trade are substantial, but they are not the only benefits that come to countries with a policy of open trade. John Stuart Mill's third and final claim was that "the economical advantages of commerce are surpassed in

⁶⁴ Mill, above n 59.

⁶⁵ Ibid.

⁶⁶ Chow and Schoenbaum, above n 58.

importance by those of its effects which are intellectual and moral.”⁶⁷ Mill did not elaborate, but he may have been referring to the idea of *deux commerce*, exemplified by Montesquieu’s observation in *The Spirit of the Laws* (1748) that “commerce cure destructive prejudices.”⁶⁸

3.5.2 Arguments Against Trade Liberalization

Prof. Irwin⁶⁹ examines some of the more popular arguments against free trade. The claim that trade should be limited because imports destroy jobs has been trotted out since the sixteenth century. And imports do indeed destroy jobs in certain industries. But just because imports destroy some jobs does not mean that trade reduces overall employment or harms the economy. After all imports are not free: in order to acquire them, a country must sell something in return.⁷⁰

Thus, the claim that imports destroy jobs is misleading because it ignores the creation of jobs elsewhere in the economy as a result of trade. Similarly, while trade proponents like to note that exports create jobs, which is true, they generally fail to note that this comes at the expense of employment elsewhere. Export industries will certainly employ more workers because of the foreign demand for their products, but exports are used to purchase the very imports that diminish

⁶⁷ Mill, above n 59.

⁶⁸ Baron de Montesquieu, 'The spirit of the laws [1748]' (1900) *Trans: Nugent, T.*. New York: Colonial.

⁶⁹ Douglas A Irwin, *Against the tide: An intellectual history of free trade* (Princeton University Press, 1996).

⁷⁰ Paul R Krugman, 'The narrow and broad arguments for free trade' (1993) 83(2) *The American Economic Review* 362. Philip I Levy, 'A political-economic analysis of free-trade agreements' (1997) *The American Economic Review* 506. Chow and Schoenbaum, above n 58.

employment in other domestic industries.⁷¹

Professor Irwin also considers the criticism that opening its markets up to free trade is the cause of a trade deficit. A trade deficit has a number of harmful effects. Trade deficit might injure domestic industries. Bangladesh's trade deficit ballooned in the fiscal year 2014-15 concluded in June on the back of an increase in imports. According to Bangladesh Bank the deficit stands at USD 9.464 billion.⁷² Trade policy cannot directly affect the current account deficit because trade policy has little influence on the underlying determinants of domestic savings and investment, the ultimate source of the current account. If a country wishes to reduce its trade deficit, then it must undertake macroeconomic measures to reduce the gap between domestic savings and investment.

Another argument is that trade leads to a shift from high paying to low paying jobs. Even those who agree that the overall effect of trade on employment is essentially zero may oppose free trade because they believe that it shifts jobs into less desirable sectors. The gravest of such concerns is that in the last three decades good jobs in manufacturing have been traded for bad jobs in services.⁷³

But an even more basic point must be stressed: the perception that imports destroy good, high-wage jobs in manufacturing is almost completely erroneous. It is closer to the truth to say that imports destroy bad, low-wage jobs in manufacturing. This is because wages in industries that compete against imports

⁷¹ Chow and Schoenbaum, above n 58. Jagdish N Bhagwati, 'Export-promoting trade strategy: issues and evidence' (1988) *The World Bank Research Observer* 27.

⁷² Jamilur Rahman, 'Bangladesh's Trade Deficit Stands at \$9.4 billion', *The Daily Sun*, 12 July 2015 <<http://www.daily-sun.com/printversion/details/58360/Bangladesh%E2%80%99s-trade-deficit-stands-at-9.4-billion>>. (Accessed on 13 Jan 2016).

⁷³ Chow and Schoenbaum, above n 58.

are well below average, whereas wages in exporting industries are well above average.⁷⁴ Bangladesh tends to export skill-intensive manufacturing product, such as garments. Bangladesh also sends skilled and semi-skilled workers to foreign countries. Workers of these industries earn relatively high and low wages and contribute towards GDP. As a result, any policy that limits overall trade by reducing both exports and imports tends to increase employment in low-wage industries and reduce employment in high-wage industries. Proponents of *New Trade Theories*⁷⁵ argued that trade liberalization could reduce the wages of unskilled labour, thereby widening the income gap between the rich and the poor across economies as well as within an economy. This argument is because of the fact that most developing countries are endowed with abundance of unskilled labour.⁷⁶

3.6 Agricultural trade Liberalization and Poverty Reduction

Agricultural trade liberalization has gained an importance in poverty reduction as many research approaches are based on the premise that it has a direct impact on farmers' income. There is ample evidence that increasing agricultural productivity has benefited millions by creating job opportunities and providing

⁷⁴ Eileen Appelbaum, *Manufacturing advantage: Why high-performance work systems pay off* (Cornell University Press, 2000). Chow and Schoenbaum, above n 58.

⁷⁵ Kelvin J Lancaster, 'A new approach to consumer theory' (1966) *The journal of political economy* 132; Avinash Dixit and Victor Norman, *Theory of international trade: A dual, general equilibrium approach* (Cambridge University Press, 1980); Elhanan Helpman, 'International trade in the presence of product differentiation, economies of scale and monopolistic competition: A Chamberlin-Heckscher-Ohlin approach' (1981) 11(3) *Journal of international economics* 305; Paul Krugman, *Increasing returns and economic geography*, National Bureau of Economic Research No (1990).

⁷⁶ Daniel Chiquiar, 'Globalization, regional wage differentials and the Stolper–Samuelson Theorem: Evidence from Mexico' (2008) 74(1) *Journal of International Economics* 70.

higher incomes to farms.⁷⁷ The comparative advantage of developing countries is associated with the agricultural sector. Therefore, the protectionist policies in developed countries are criticized for preventing developing countries benefiting from world trade.⁷⁸ However, most of the LDCs and net food importing countries and cotton importing countries like Bangladesh, agricultural trade liberalization might have negative consequences because of the terms of trade effects, non-tariff issues, and supply side constraints being likely to limit possible expansion of their exports.⁷⁹

The fact that there are important linkages between the traditional and modern sectors in developing countries makes agricultural growth an important instrument for decreasing poverty. The contribution to poverty reduction takes place directly, through the effects of agricultural growth on farm employment and profitability, and indirectly because increases in agricultural output induce job creation in upstream and downstream non-farm sectors as a response to higher domestic demand. Potentially lower food prices increase the purchasing power of poor consumers. The magnitude of these effects for poverty reduction depends on

⁷⁷ Deborah Fahy Bryceson, 'African rural labour, income diversification & livelihood approaches: a long - term development perspective' (1999) 26(80) *Review of African Political Economy* 171.

⁷⁸ Kym Anderson, John Cockburn and Will Martin, 'Would freeing up world trade reduce poverty and inequality? The vexed role of agricultural distortions' (2011) 34(4) *The World Economy* 487; Alvaro Calzadilla, Katrin Rehdanz and Richard SJ Tol, 'The economic impact of more sustainable water use in agriculture: A computable general equilibrium analysis' (2010) 384(3) *Journal of Hydrology* 292; Jean-Christophe Bureau, Sébastien Jean and Alan Matthews, 'The consequences of agricultural trade liberalization for developing countries: distinguishing between genuine benefits and false hopes' (2006) 5(02) *World Trade Review* 225; Stephen Tokarick, 'Dispelling some misconceptions about agricultural trade liberalization' (2008) 22(1) *The Journal of Economic Perspectives* 199.

⁷⁹ Eric Wailes, 'Global trade and protection regimes in rice trade' (2003) *Draft paper. University of Arkansas*; Timothy A Wise, 'The limited promise of agricultural trade liberalization' (2009)(152) *RIS Discussion Papers*.

the specific circumstances of an economy. If, for example, technological progress in the agricultural sector is labor-saving, farm-employment might not necessarily increase.⁸⁰

The positive relationship between agricultural trade liberalization and economic growth is well established.⁸¹ Evidence consistently shows that agricultural growth is highly effective in reducing poverty. Datt, Kozel and Ravallion⁸² claim that growth in agriculture and rural economy had been highly beneficial to reduce rural poverty in India, while Virmani⁸³ finds that higher agricultural growth in India has an impact on poverty reduction in addition to its contribution to overall GDP growth.

Gollin⁸⁴ pointed out that, the large share of agriculture in many developing economies does not immediately imply that overall growth has to be based on an ADLI (Agricultural Demand Led Industrialization)-type strategy. Matsuyama⁸⁵ suggests that the relation between agricultural growth and overall economic growth depends on the openness of a country to international trade. Whereas agricultural growth goes hand in hand with economic growth in small, closed

⁸⁰ Xavier Irz et al, 'Agricultural productivity growth and poverty alleviation' (2001) 19(4) *Development policy review* 449.

⁸¹ Colin Thirtle, Lin Lin and Jenifer Piesse, 'The impact of research-led agricultural productivity growth on poverty reduction in Africa, Asia and Latin America' (2003) 31(12) *World Development* 1959.

⁸² Gaurav Datt, Valerie Kozel and Martin Ravallion, 'A Model-based Assessment of India's Progress in Reducing Poverty in the 1990s' (2003) *Economic and Political Weekly* 355.

⁸³ Arvind Virmani, 'Sources of India's Economic Growth' (2002) *Indian Council for Research on International Economic Relations, New Delhi (ICRIER Working Paper 131)*.

⁸⁴ Douglas Gollin, 'Agricultural productivity and economic growth' (2010) 4 *Handbook of agricultural economics* 3825.

⁸⁵ Matsuyama, above n 57.

economies—where gains in agricultural productivity will lead to the linkage effect described above—the relation might be reversed in the case of an open economy. If the country has a comparative advantage in agriculture, openness to trade will draw resources away from the modern sector into agriculture, which might be less productive than industry. The importance of the degree of openness of a country was pointed out early on by proponents of ‘agriculture-first’ approaches to development. For instance, Fei and Ranis⁸⁶ acknowledged that imports could potentially substitute for domestic agricultural products. Adelman⁸⁷ suggested that ADLI would work best for low-income countries that are not yet export-driven; and Foster and Rosenzweig⁸⁸ stress that the tradability of rural non-farm sector goods can have different implications. In a general equilibrium perspective, productivity gains in the agricultural sector have a negative impact on the tradable non-farm sector. This is because agricultural products as well as rural non-farm non-tradable have a relatively inelastic demand for labor, whereas tradable goods have more elastic labor demand. If wages increase due to greater agricultural productivity, factories producing tradable goods, which are assumed to be operated by external producers, will move to escape the higher wages.⁸⁹

Eswaran and Kotwal⁹⁰ explain that, in an open economy, in which both agricultural and modern-sector goods can be traded, linkages between the two

⁸⁶ Ranis and Fei, above n 29.

⁸⁷ Irma Adelman, 'Beyond export-led growth' (1984) 12(9) *World development* 937.

⁸⁸ Andrew D Foster and Mark R Rosenzweig, *Agricultural development, industrialization and rural inequality*, mimeo, (Cambridge, Massachusetts: Harvard University) No (2003).

⁸⁹ Dethier and Effenberger, above n 47.

⁹⁰ Mukesh Eswaran and Ashok Kotwal, 'Export led development Primary vs. industrial exports' (1993) 41(1) *Journal of Development Economics* 163.

sectors become less important for overall growth. As a result, there is less of a necessity to increase agricultural productivity to induce overall growth and reduce poverty. Both sectors can contribute to growth. But if agriculture is less productive than other sectors, importing food and focusing efforts on other sectors might be more beneficial to a country's development. Both Dercon and Gollin⁹¹ admit that, under certain circumstances, the agricultural sector can be crucial for economic growth. If countries are landlocked and closed to international trade, agriculture can be a main driver behind overall growth and should be supported actively.

While many studies indicated that agricultural trade liberalization had made a significant contribution to economic growth through technological transformation in the agricultural sector, understanding the process of pro-poor economic growth and explaining the vast differences in economic performance across countries have been fundamental challenge for researchers and policy makers.⁹²

Although various theoretical models suggest quite opposing roles for agriculture in development, they do not necessarily contradict each other. The models are derived under different economic assumptions (e.g., openness to trade). Therefore, it is not surprising that they derive different policy implications. Because developing countries differ with respect to their economic environments,

⁹¹ Stefan Dercon and Douglas Gollin, *Agriculture in African development: A review of theories and strategies* (2014).

⁹² Françoise Gérard and Marie-Gabrielle Piketty, *Impacts of agricultural trade liberalization on poverty: sensitivity of results to factors mobility among sectors*, 106th seminar of the European Association of Agricultural Economists "Pro-poor development in low income countries: Food, agriculture, trade and environment".Held on 25-27 October 2007, Montpellier, France. Chiquiar, above n 76.

the role of agriculture for development might be re-evaluated in each specific case. This is in line with the 2007 World Development Report's message (World Bank 2007)⁹³, which suggests that in agriculture-based economies, agriculture can be the main engine of growth, whereas in transforming countries, agriculture is already less important as an economic activity but is still a major instrument to reduce rural poverty. In urban countries, by contrast, agriculture plays the same role as other tradable sectors and subsectors with a comparative advantage can help to generate economic growth.⁹⁴

It has been argued by agro-pragmatists that, agriculture has a significant role in growth as well as in poverty reduction. However, agricultural trade liberalization may worsen the conditions of the poor in the form of higher prices due to the price of food in liberalized markets being determined more by world prices than by domestic productivity.⁹⁵ In Bangladesh the poverty situation deteriorated in the early 1970s due mainly to the decline in the per capita availability of rice. The soaring price of rice caused tremendous hardship to the landless, marginal farmers and artisans in the rural areas, and industrial laborers and transport and construction workers in urban areas.

Since the mid-1980s the food grain prices have increased at a much slower rate than the general price index, due to favorable growth in agriculture in general and the rice production in particular. The large farmers have been hurt by the decline

⁹³ Banco Mundial, *World Development Report 2007: Development and the next generation* (World Bank, 2006).

⁹⁴ Dethier and Effenberger, above n 47.

⁹⁵ Guido Van Huylenbroeck et al, 'Multifunctionality of agriculture: a review of definitions, evidence and instruments' (2007) 1(3) *Living Reviews in Landscape Research* 1.

in the real rice price, but the landless have gained. Agriculture's main role in poverty reduction lies in maintaining the supply of food at least at a rate at which the demand has been growing, thereby keeping the food prices stable and within affordable limits of low-income households.

3.7 Impact of Trade Liberalization on Agriculture in Bangladesh

There is a growing challenge whether the small farmers in Bangladesh can participate effectively in international specialization although there is a strong correlation between export expansion and economic growth. Such participation is only possible if farmers' productivity can increase and the costs and risks of engaging in trade are reduced.⁹⁶ As trade liberalization increases has influence to producer prices to decline and farm input costs to rise. However, this does not imply that cash cropping incentives have not benefited from marketing policy reform in key substance crop sectors. It has been shown that the ability to ensure reliable and low-cost food for rural households is an important detriment of their ability to diversify into higher value non-food crops. Cash crop growers have benefited directly from pre-harvest support provided under commercial out grower schemes. The development of credit markets to finance commercial cereal production remains a challenge.⁹⁷

Bangladesh is primarily an agrarian country with a very low level of economic development and the country is still designated by the World Bank as a low-income poor developing country. Bangladesh's per capita income is USD \$1.466,

⁹⁶ Jelle Bruinsma, *World agriculture: towards 2015/2030: an FAO perspective* (Earthscan, 2003) 235.

⁹⁷ Ibid.

which is slightly above the average of low-income countries.⁹⁸ The country is primarily an agriculture-based country with a large proportion of the population formally and informally depending on this sector for food, income, employment and livelihood.

Whether a country can take advantage of new trading opportunities under the World Trade Organization (WTO) would depend on its comparative advantage. In most developing countries, social or economic profitability deviates from private profitability because of distortions in the input and output markets, the import and export duties, and the valuation of the domestic currency. Comparative advantage in the production of a given crop is measured by imputing the value of production at the border price (world market price adjusted for transport cost and trade margins) and comparing it with the social and opportunity cost of producing, processing, transporting, handling and marketing an incremental unit of the commodity. If the opportunity cost is less than the border price, then the country has a comparative advantage in producing that crop. Bangladesh's comparative advantage could lead towards the promotion of specialization resulting in higher productivity and growth, accelerate investment by allowing access to bigger markets and permit economies of scale, and encourage imports of previously unavailable or scarce capital goods and intermediate inputs for agriculture.⁹⁹

⁹⁸ Staff Correspondent, 'Per capita income rises to \$1466', *The Daily Star* (Dhaka, Bangladesh), 06 April, 2016 <<http://www.thedailystar.net/frontpage/capita-income-rises-1466-1204930>>. (Accessed on 25 Aug 2016).

⁹⁹ Wei-Bin, above n 17.

Several studies (Mahmud et al. 1994¹⁰⁰; Morris et al. 1997¹⁰¹; Roy, 1999¹⁰²; Shahabuddin 2000¹⁰³; Shahabuddin 2002¹⁰⁴; Shahabuddin and Dorosh 2001¹⁰⁵; Shahabuddin et al. 2002¹⁰⁶; Shilpi 1998¹⁰⁷) estimated the comparative advantage of various crops in Bangladesh for different ecologies and irrigation systems. The most recent studies using recent input-output prices, market distortions and production coefficients show that:

- At export parity price Bangladesh has comparative advantage in the production Aman rice, jute and vegetables. Bangladesh can gain from the increase in production of these crops provided that the surplus production

¹⁰⁰ Wahiduddin Mahmud, Sultan Hafeez Rahman and Sajjad Zohir, *Agricultural growth through crop diversification in Bangladesh* (International Food Policy Research Institute, 1994).

¹⁰¹ Michael L Morris, Nuimuddin Chowdhury and Craig Meisner, *Wheat production in Bangladesh: Technological, economic, and policy issues* (Intl Food Policy Res Inst, 1997) vol 106.

¹⁰² Dilip Kumar Roy, 'Trade Policy and Exports of Horticultural Products from Bangladesh' (1999).

¹⁰³ Quazi Shahabuddin, 'Assessment of comparative advantage in Bangladesh agriculture' (2000) *The Bangladesh Development Studies* 37.

¹⁰⁴ Q Shahabuddin, *Comparative advantage, diversification and value addition in Bangladesh agriculture*, Asia Regional Conference on Public-Private Sector Partnership for Promoting Rural Development, Dhaka. Paper presented at the Asia Regional Conference on public-private sector partnership for promoting rural development held at Dhaka (Bangladesh) on 2-4 October 2002, jointly organised by Bangladesh Agricultural Economists Association (BAEA) and International Association of Agricultural Economists (IAAE).

¹⁰⁵ Quazi Shahabuddin and Paul Dorosh, 'Comparative Advantage in Bangladesh Agriculture' (2001) *TOWARDS CaMPREHENSIVE FOOD* 35. FMRSP Working Paper No. 4. Ministry of Food. Government of Bangladesh.

¹⁰⁶ Quazi Shahabuddin et al, 'Assessment of comparative advantage in rice cultivation in Bangladesh' (2002) *Developments in the Asian Rice Economy* 369. Proceedings of the International Workshop on Medium-and Long-term.

Prospects of Rice Supply and Demand in the 21st Century, 3-5 December 2001, Los Baños, Philippines. Los Baños (Philippines): International Rice Research Institute. p 369-384.

¹⁰⁷ F Shilpi, 'Draft report on policy incentives and comparative advantage of Bangladesh agriculture' (1998) *Dhaka (Bangladesh): The World Bank*.

could be exported in the world market.

- At import parity price Bangladesh has comparative advantage in the production of Boro rice, potato, lentil and onion. Bangladesh will not be able to compete in the export market for these commodities. But because of the transport cost and trading margin, the cost of importing these commodities into Bangladesh would be higher than the opportunity cost of producing them within the country.
- Bangladesh does not have comparative advantage in the production of wheat, oil seeds, sugarcane and spices. The country will gain by importing these commodities, if the resources tied in the production of these commodities can be diverted to the production of other crops.

Liberalization of agricultural input markets and trade liberalization in rice helped Bangladesh increase domestic cereal production and reduce variability of supply. A gradual liberalization of markets for modern inputs in agriculture was carried out between 1978 and 1990 under pressure from foreign donors and with the realization that various direct interventions were fiscally unsustainable and unproductive in the long run. These reforms greatly reduced the role of the Bangladesh Agricultural Development Corporation in marketing and distribution of fertilizer, irrigation equipment, power tillers, pesticides and seeds. Liberalization and privatization of input markets coincided with a large

expansion in tube well irrigation and winter (boro) season rice cultivation in the late 1990s.¹⁰⁸

Following broad trade liberalization in the 1990s, Bangladesh has successfully used private sector trade to help stabilize rice and wheat prices following major production shortfalls, reducing need for large government stocks.¹⁰⁹ Food grain (rice and wheat) is typically procured at fixed prices through direct purchases of grain from farmers or traders. Until the early 1990s, subsidized sales of grain through ration programmes were the major distribution channels. As part of reforms undertaken in the early 1990s, however, major ration channels were shut down and by the end of the decade approximately 85 percent of public sector distribution were targeted to poor households through direct distribution channels such as Food for Work and Food for Education.

No attempt is made to support a floor price or defend a ceiling price through unlimited purchases or sales. The Government's impact on market prices has greatly diminished, however, as the size of the PFDS has fallen while the amount of rice in private markets has sharply increased.¹¹⁰

Private imports of wheat and rice were liberalized in the early 1990s. Then, in 1994, private food grain exports were liberalized in India as part of an ongoing broader macroeconomic reform including exchange rate depreciation. As a result

¹⁰⁸ Raisuddin Ahmed, Steven Haggblade and Tawfiq-e-Elahi Chowdhury, *Out of the shadow of famine: Evolving food markets and food policy in Bangladesh* (Intl Food Policy Res Inst, 2000).

¹⁰⁹ Paul A Dorosh, 'Trade liberalization and national food security: rice trade between Bangladesh and India' (2001) 29(4) *World Development* 673; Francesco Goletti, *The Changing Public Role in a Rice Economy Moving toward Self-sufficiency: The Case of Bangladesh*, Research Report No (1994).

¹¹⁰ Ahmed, Haggblade and Chowdhury, above n 108.

of the liberalization of the Bangladesh import trade and India's export trade, India replaced Thailand as the main source of Bangladesh rice imports due to lower transport costs and quicker delivery to Bangladesh. Following several large domestic shortfalls of rice, domestic rice prices in Bangladesh rose to import parity levels, providing incentives for private sector imports. Thus, private imports surged in years of large domestic shortfalls and fell to zero in normal production years when domestic prices fell below import parity.¹¹¹

Private sector imports were especially important for national food security following the floods of 1998, which destroyed more than 20 percent of the monsoon season rice crop (about 10 percent of the annual production). Following the flood, the Government of Bangladesh adopted the cautious strategy of moderate government imports to supply government distribution channels while actively encouraging private sector imports through a policy of zero tariffs and other measures. By following this trade-oriented stabilization strategy, Bangladesh was able to increase domestic supplies quickly and successfully stabilize prices.¹¹²

Since the mid-1980s, Bangladesh has been undergoing structural reforms, which are aimed at liberalizing the economy and making it market-oriented by reducing the role of the Government and giving encouragement to the private sector. The external trade sector has been liberalized through withdrawal of quantitative restrictions and steady reduction in import tariffs. In Bangladesh, agriculture has

¹¹¹ FAO, 'Trade Reforms and Food Security: Conceptualizing the Linkages' (2003) 417 <<http://www.fao.org/docrep/005/y4671e/y4671e00.htm#Contents>>. (Accessed on 14 Aug 2014)

¹¹² Ibid.

traditionally received lower border protection compared to the industrial sector due to country's dependence on food imports. Bangladesh's export regime is fairly deregulated with a small number of commodities in the control list. Although a variety of export incentives and export promotion measures have been put in place to facilitate the growth of exports, the only incentive available to agricultural commodities is reduced airfare for the export of vegetables.¹¹³

Under the WTO Agreement on Agriculture (AOA), the reduction commitments are expected to have significant implications on movements of world agricultural prices and global trade in agricultural products. Prices of products with increased market access and those currently receiving high subsidies are likely to rise. These products include rice, wheat, beef, vegetables, coarse grains, milk and milk products, sugar, fruit, vegetable oil, etc. As a LDC, Bangladesh was not required to make any reduction commitments in the Uruguay Round (UR); however, she was required to bind tariffs on all agricultural products.¹¹⁴

3.7.1 Agriculture in World Trade Organization

Following the Uruguay Round negotiations, all agricultural products were brought under multilateral trade rules by the WTO's Agreement on Agriculture. The Agreement is made up of three 'pillars': market access, export competition and domestic support. All WTO members, except least developed countries

¹¹³ Mostafa Abid Khan, 'Trade Liberalization: Impacts and Implications for Bangladesh Agriculture' (Paper presented at the Effects of Trade Liberalization on Agriculture in Asia, Bagor, Indonesia, October 5-8, 1999) <<http://uncapsa.org/sites/default/files/CG38.pdf>>. (Accessed on 14 Aug 2014)

¹¹⁴ Ibid.

(LDCs), were required to make commitments in all these areas in order to liberalize agricultural trade.¹¹⁵

The URAA enforced trade reform in agriculture commodities to accomplish the reduction of domestic subsidies, export subsidies and market barriers over six years for developed countries and then 10 years for developing countries.¹¹⁶ The Uruguay Round Agreement also introduced tariff rate quotas (TRQ) for a volume of import at a particular rate to create additional market access where tariffs replaced non-tariff barriers. During the URAA, countries agreed to convert all import barriers to their tariff equivalents in a process called 'tariffication'.¹¹⁷ Once the tariff equivalents were established, tariffs are supposed to be restricted. Removing the trade barriers to such trade presents a greater opportunity for future gains. Although the establishment of the Uruguay Round of GATT marked the starting point in agricultural trade liberalization, agricultural protection continues to be the most critical issue in global trade negotiations.¹¹⁸

The implementation of the GATT-URAA agreement did not seem to be as favourable for the developing countries as developed countries acquired most of the benefits.¹¹⁹ Agricultural subsidies implemented by the developed countries to

¹¹⁵ Thomas C Beierle, *From uruguay to doha: agricultural trade negotiations at the world trade organization* (Resources for the Future, 2002).

¹¹⁶ Timothy E Josling et al, *The Uruguay Round Agreement on agriculture: an evaluation*, International Agricultural Trade Research Consortium No (1994).

¹¹⁷ MA Aksoy and JC Beghin, 'Global Agricultural Trade and Developing Countries (The World Bank, Washington DC)' (2005).

¹¹⁸ Ibid.

¹¹⁹ Antoine Bouët et al, 'Multilateral agricultural trade liberalisation: The contrasting fortunes of developing countries in the Doha round' (2005) 28(9) *The World Economy* 1329.

protect their domestic producers make free trade even more unworkable.¹²⁰ In developed countries, the agriculture sector is perceived to hold disproportionately large political power compared to its share in the GDP and the total labour force. While mainstream opinion perceives agricultural trade liberalization as a beneficial move for the whole world, the protectionist attitude of developed countries towards their agricultural sector has created obstacles in this direction.¹²¹

3.7.2 Agricultural trade Liberalization: A Brief Study on Bangladesh

Till now the extant literature on agricultural trade liberalization related to Bangladesh is very scarce, and those, which exist, are mostly disjointed and deal at most with very specific or narrow area within this sector. The agricultural sector in general and the agricultural trade liberalization in particular has the potential to perform a number of critical roles in transforming the country in the desired direction.¹²²

Khan and Hossain¹²³ examined that due to high pressure of population and limited opportunities for non-agricultural occupations, land in Bangladesh is cultivated mostly in very small-scale farms. So, development of agribusiness and trade

¹²⁰ Moon and Lee, above n 56.

¹²¹ Merlinda D Ingco, *Agricultural trade liberalization in the Uruguay Round: One step forward, one step back?* (World Bank Publications, 1995) vol 1500.

¹²² Muhammad Mahboob Ali and Anisul M Islam, 'Developing Agribusiness Strategies for Bangladesh-An Analysis' (2011)(2011-01) *AIUB Business and Economics Working Paper Series*.

¹²³ Azizur Rahman Khan and Mahabub Hossain, *Strategy of development in Bangladesh* (Springer, 1989) 239.

liberalization should be challenging in this institutional context and it should be taken into account in strategy development.

Islam and Sarker¹²⁴ studied the livestock and poultry population and production in northwestern part of Bangladesh and report that the livestock sector which is composed of cow-buffalo and goat-sheep production registered very slow growth rate while the poultry sector made of fowl and duck grew at an appreciable rate. They found that the rapid growth of the Poultry sector was still inadequate to meet the growing domestic demand. This study thus indicates that there is perhaps strong need for and prospect of development of the poultry sector in particular in the country.

Mujeri and Khondaker¹²⁵ found that trade liberalization is pro-poor. But they argued that though the globalization process in Bangladesh is pro-poor but the gain is relatively small. They did not analyze the impact of agricultural trade liberalization.

Sabur and Rahman¹²⁶ examined various factors that contributed to different varieties of rice production in Bangladesh. They reported that agricultural extension services, human labor, seed, fertilizer, age and experience were main contributors to increased production of Boro variety of rice. For Aus variety, the main contributors were location and bullock power that had positive effects

¹²⁴ T.S. Islam and Md. A.R.Sarker, 'A study of livestock and poultry population and production in Northwestern Bangladesh' (2003) *Bangladesh Journal of Political Economy* 18.

¹²⁵ Mustafa Mujeri and Bazlul Khondker, 'Poverty implications of Trade liberalization in Bangladesh: A general equilibrium approach' (2002) *Dhaka: Bangladesh Institute of Development Studies*, 52.

¹²⁶ SA Sabur and MH Rahman, 'Agribusiness of Poultry and Poultry Products in Bangladesh' (2004) 20(1) *Bangladesh Journal of Political Economy*, 1.

whereas extension service, area, and bullock power have had positive effects on Aman production.

Ahmed and Sattar¹²⁷ identified that Bangladesh initiated liberalized process moderately since 1980 and more swiftly and widely in 1990's. They found that, the trade liberalization and economic reform contributed to the growth of output, per capita income growth. But, they did not establish the link between trade liberalization, poverty and growth.

Junaid¹²⁸ argued that marketing of agricultural products in the country is not efficient and hence a proper and effective management of different functions within agricultural marketing will provide better price opportunity to farmers and growers during both peak and off-peak seasons and thereby help increase agricultural production. In a related study, Jahangir¹²⁹ observed that the existing poor marketing system and lack of adequate cold storage facilities have depriving the growers of perishable products like vegetables and fruits for long time in this country. However, they did not analyse the possible impact of this in relation to the welfare of the rural households in Bangladesh.

Klytchnikova and Diop¹³⁰ justify that as in the rural areas of Bangladesh the net buyers are poorer than net sellers so trade liberalization benefited the poor of the

¹²⁷ Sadiq Ahmed and Zaidi Sattar, 'Impact of trade liberalisation: Looking at the evidence' (2004) *Economic and Political Weekly* 4059.

¹²⁸ Zukhruf Binte Junaid, 'Problems encountered by the peasants of Bangladesh in practicing agriculture and green marketing' (2005) 4(2) *The AIUB Journal of Business and Economics*, 76.

¹²⁹ SM Jahangir, 'An Overview of Bangladesh Agriculture, Journalist's views State of Agriculture in Bangladesh-Secured Food, Secured Future' (2009) 195.

¹³⁰ Irina Klytchnikova and Ndiame Diop, *Trade reforms, farm productivity, and poverty in Bangladesh* (World Bank Publications, 2006) vol 3980.

rural areas. They argued that agricultural trade liberalization improved the production of rice considerably, leading to a decrease of rice price. However, they did not identify the impact of agricultural trade liberalization on the welfare of the rural households.

Quasem¹³¹ identified that, agricultural productivity in the country is low, as new technologies are not widely used or spread, especially in non-rice crops. To thrive in the competitive globally business environment, proper agricultural planning and management should be done so as to achieve competitive advantage and economies of scale in production. He reports that harmful speculative motive in the agriculture sector is strong and vibrant that hurts agricultural production and distribution. As a result of these practices, farmers and growers in many situations are deprived of getting their due and fair share for their valuable contributions towards agricultural production. Further, with respect to the institution of intermediaries, Dobson and Quader¹³² observed that the role of middlemen in the agribusiness is not very efficient and needs to be streamlined and improved so that the gains to consumers and producers can be improved. However, none of the studies examined how these impacted on the economic growth welfare of the rural population.

¹³¹ Md Abul Quasem, *Development Strategies and Challenges ahead of Bangladesh* (Palok Publishers, 2008).

¹³² William D Dobson and Syeda Masarrat Quader, 'Doing business in an industry with difficult economics: The experience of advanced technology hatchery in Bangladesh's Shrimp Industry' (2005) 4 *The AIUB Journal of Business and Economics*, 35.

3.8 Conclusion

This chapter provides an extensive background for this thesis comprising a literature review of the importance of the agricultural sector in development and economic growth. The revival of agriculture has been marked as agriculture is being included in trade free agreements to increase agricultural trade. A stirring factor for researching this issue in the context of current negotiations on global trade reform is that there is an impact on resource-poor farmers due to increased exposure to competition. Moreover, the review has revealed the strong link that subsists between poverty elimination and agricultural development. This study therefore considers the lack of literature on Bangladesh on the topic. The study acknowledges the scarce of published literature on agricultural trade liberalization and its impact on economic growth in Bangladesh. Through the recognition of these gaps in the literature and the inconsistencies in estimation, this study was able to develop its research question: **What is the impact of agricultural trade liberalization on economic growth in Bangladesh?**

This chapter has introduced a number of unresolved debates that require further investigation regarding the relationship between trade liberalization and agricultural growth, and consequently food security. The common gaps that have been identified in this chapter demand additional research. Most of the studies distillate on poverty, agricultural policy reform, trade liberalization, market deregulation but none of them investigated the possible impact of agricultural trade liberalization on economic growth. Sometimes, these studies paid more

attention on macroeconomic outcomes rather than the interest of the small-scale farmers/producers.

This study seeks to address the gap referred to with a view to determine the extent to which agricultural trade liberalization has influenced the economic growth in Bangladesh. This leads to examine in terms of its contribution to improve export earnings, alleviation of poverty and inequality and environmental protection.

Chapter Four

Overview of the Agricultural Sector of Bangladesh and its Trade Developmental Aspects

4.1 Introduction

This chapter provides an overview of the Bangladesh's agricultural industry, and its role in the economy; presents the challenges those are facing regional and free trade agreements of South Asia and revisits the development of trade policy, and the role of regional integration and free trade agreements into trade flows and economic growth in Bangladesh.

4.2 Role of Agriculture in the Bangladesh Economy

Throughout the twentieth century, perhaps more than many sectors of the economy, has been the scene of political ferment, the focus of public attention and the object of governmental policy. Yet despite an immense amount of political interest and legislation to at least contain difficulties in the agricultural arena.¹ Bangladesh agriculture plays an important role in the overall economic development of Bangladesh and it is regarded as the lifeline of Bangladesh economy. Despite being small in terms of its direct share of the total gross domestic product, remains a significant provider of employment. It is also an important social sector concerned with issues like food and nutritional security, income generation, and poverty reduction.

¹ Richard B Le Heron, *Globalized agriculture: political choice* (Pergamon Press, Books Division, 1993) 235.

Throughout the 1950s and 1960s the trends and movements of the agricultural terms of trade became an important issue in Pakistan because they were interpreted as the outcome of policies that were designed to accelerate economic development through forced industrialization. This became a political issue in the late 1960s when some prominent economists working on and in Pakistan developed the agriculture squeeze thesis to explain industrialization in West Pakistan at the expense of Bangladesh's agriculture.² The performance of agriculture since 1973 has been relatively good by historical standards but still is inadequate to meet the demand generated by burgeoning population growth and modest increases in real per capita **GDP**. Moreover, the situation seems to have deteriorated slightly in recent years. For the period 1973-81, the agricultural sector grew at the average annual rate of 3.7 percent on a 1973 base and a 3.2 percent on a 1974 base.³ Both rates are relatively high by either historical or contemporary standards for a developing country and are especially noteworthy given the difficulties Bangladesh faced in rising to independence as a nation.⁴ But when judged in light of growth in demand, it appears that demand has grown more rapidly than domestic production. Given the rates of growth of per capita **GDP** of 2.9 percent for the period, and assuming an income elasticity of demand for food of 0.5, the demand for food from increased **GDP** (income) grew at 1.5

² Walter P Falcon, 'Agricultural and industrial interrelationships in West Pakistan' (1967) 49(5) *Journal of Farm Economics* 1139; Nurul Islam, *Foreign Trade and Economic Controls in Development: The Case of United Pakistan* (Yale University Press, 1981); Nurul Islam, *Making of a nation, Bangladesh: An economist's tale* (The University Press Ltd., 2003); Stephen R Lewis, 'Effects of Trade Policy on Domestic Relative Prices: Pakistan, 1951-64' (1968) 58(1) *The American Economic Review* 60.

³ E Boyd Wennergren, Charles H Antholt and Morris D Whitaker, *Agricultural development in Bangladesh* (Westview Press, 1984) 462.

⁴ Yujiro Hayami and Vernon W Ruttan, *Agricultural development: an international perspective* (Baltimore, Md/London: The Johns Hopkins Press, 1971).

percent per year. This added to a population growth rate of 2.5 percent results in a growth of demand for food approximating 4.0 percent per year for the period.⁵ The disparity of **0.3** percent between growth in agricultural production of 3.7 percent and growth in demand for food of 4.0 percent was relatively modest, but, even so, production was deficient.⁶

In the early 1970s the situation of Bangladesh was uncertain because of the political disparity of the West Pakistan that lead to extensive poverty, high vulnerability, and seemingly so few resources per capita that the country seemed locked into poverty. The country was thus heavily dependent on food aid to feed its growing population. The extensive state control over market and the public ownership of key enterprise and also trade and input control by Bangladesh Agricultural Development Corporation (BADC) put the economy in the form of 1974 famine. The political instability of the post-independence also made the agriculture sector vulnerable.⁷

The progress that has occurred in agriculture presents an interesting time series pattern. Agricultural production grew moderately in 1974 but showed declines in 1975, 1977, and 1979 from the previous years due to unfavorable weather and floods. A spurt in production occurred in 1978 and the level has generally been maintained through 1981, likely the result of increased plantings and yields of wheat. The limited overall performance of the agricultural sector conceals some

⁵ Ibid.

⁶ Wennergren, Antholt and Whitaker, above n 3.

⁷ Mohammad Monirul Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh' (2012) *Munich Personal RePEc Archive* 21 <<http://mpa.ub.uni-muenchen.de/46540/>>. (Accessed on 21 September 2014).

important improvements in production of specific crops. For example, since 1973 wheat production rose eightfold due to the adoption of high yielding varieties and increased use of fertilizer and irrigation. Potato production has shown a significant increase since 1977. Boro rice production has also reached new highs since 1980, and mustard production during the same period has shown significant growth.⁸

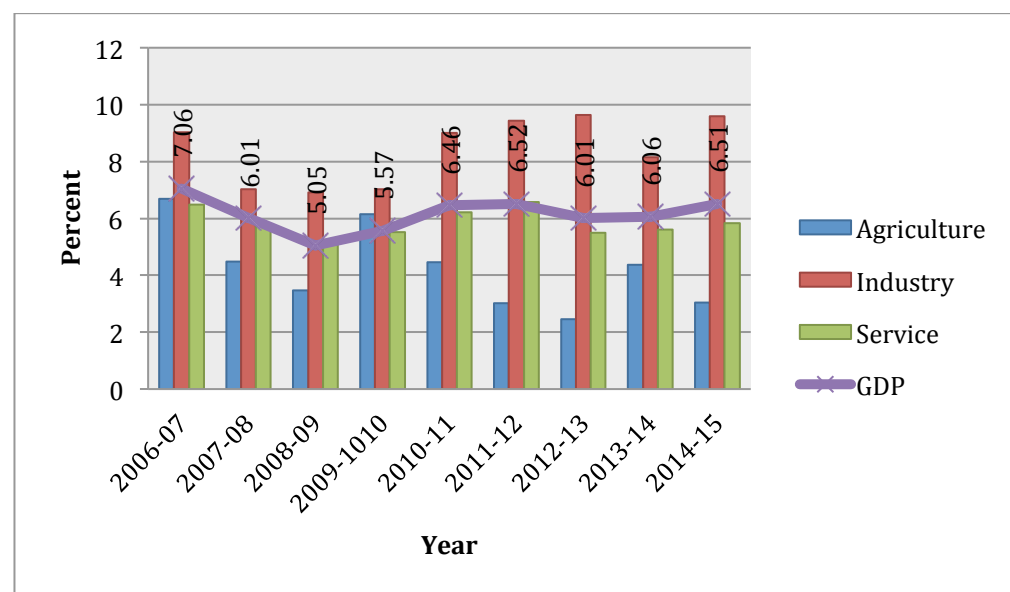
A declining drift in the growth of agricultural sector has recently been noticed, which, in turn, contributed to decelerating growth in GDP in the country.⁹ In spite of the fact that there was an increasing trend in growth in agriculture from 1990 to 2010, since the FY2010-11 the rate of growth has been falling. The rate of growth in agriculture was 6.15 percent in FY2009- 10, whereas in FY2010-11, FY2011-12 and FY2012-13 the rate was 4.46percent, 3.01 percent and 2.46 percent respectively. This falling growth in agriculture has been causing the share of agriculture in GDP to decline over the recent years. For instance, in FY2009-10, the share of agriculture in GDP was 20.29 percent, whereas in FY2010-11, FY2011-12 and FY2012-13 the share was 20.01 percent, 19.42 percent and 18.70 percent respectively. As a result of this declining contribution of agriculture to national income, the growth of GDP in the country has also been found decelerating. In FY 2014-15, within the broad agricultural sector, the provisional growth rate of agriculture and forestry sector stood at 2.07 percent, which was 3.81 percent in FY 2013-14. Despite slight increase in growth rate of animal farming, forest and related services subsectors the overall growth rate of

⁸ Wennergren, Antholt and Whitaker, above n 3.

⁹ Unnayan Onneshan, 'Recent Trends of Growth in Agriculture, Industry and Power' (2014) 5(3) *Bangladesh Economic Update* 23.

agriculture and forestry sector decreased from the previous rate due to the decreased growth rate of crops and horticulture subsector which came down to 1.30 percent from 3.78 percent of previous fiscal year. These information and analysis are based on the following figures compiled by the Ministry of Finance, Government of Bangladesh.

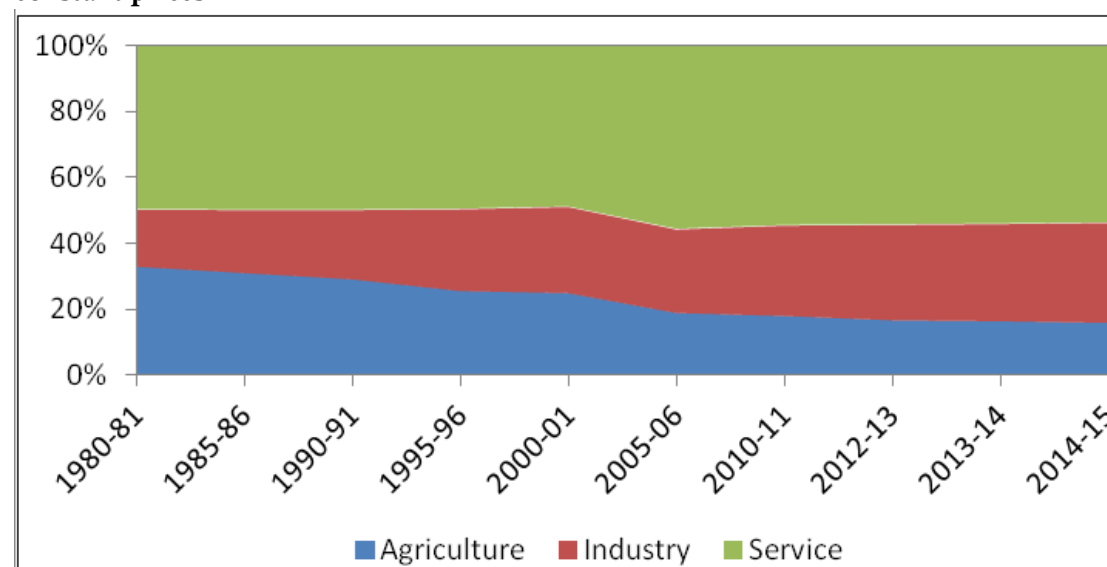
Figure 4.1: Broad Sectoral GDP Growth at Constant Prices



Source: Ministry of Finance, 2015¹⁰

¹⁰ Ministry of Finance, *Bangladesh Economic Review* Government of Bangladesh
http://www.mof.gov.bd/en/budget/15_16/ber/en/Ch-02.pdf.(Accessed on 11 August 2016).

Figure 4.2: Share of three Major Sectors in the last more than three decades at constant prices



Source: Ministry of Finance, 2015¹¹

Recent declining trend of growth in agriculture can be attributed to a number of reasons. First, the post-green revolution period has not experienced any breakthrough as regards technological advancement in the country on the one hand, and the poor and marginal farmers who comprise the majority of total farm population cannot afford the high cost of using high input technologies in agriculture on the other. Second, despite higher cropping intensity, the declining trend in the availability of arable land causes the growth in agricultural sector to fall. Third, though the budget allocation in agriculture is increasing, the large portion of this allocation goes for meeting non-development expenditure every year leaving a meager amount for development spending, thus constraining development in the sector. For instance, 85 percent of total agriculture-related budget was allocated for meeting non-development expenditure in FY2009-10, 84 percent in FY2010-11 and 85 percent in FY2011-12. Therefore, in order to raise

¹¹ Ibid.

productivity and profitability, reduce instability, and increase efficiency in resource use, increase of the allocation on the development side is important.¹²

4.3 Agriculture: Growth in Sub-Sectors

The scenarios of growth rates in agricultural subsectors indicate that the decline in overall growth in agriculture is mainly due to fall in the growth of crop production. While the growth of livestock and forestry is witnessing an increasing trend, the growth in crops is substantially declining. The broad agriculture sector consists of two sectors namely, (i) agriculture and forestry and (ii) fisheries. The growth rates of GDP by sectors at constant prices (base year: 2005-06) since FY 2005-06 have been shown in Table 4.1. The growth rate of both animal farming and forestry sub-sectors showed increasing trend consistently. Animal farming and forestry sub-sectors grew by 2.83 percent and 5.05 percent respectively in FY 2013-14, which were 2.74 and 5.04 percent respectively in the previous fiscal year. Table 4.1 represents the sectoral share of GDP at constant prices (Base Year: 2005-06). The table shows that, the share of the agriculture and forestry sector in GDP at constant prices was 12.64 percent in the FY 2013-14, which was 13.09 percent in FY 2012-13. The contribution of all the three sub-sectors of agriculture and forestry sector decreased during this period like the previous year. On the contrary, the contribution of fisheries sub-sector marginally increased from 3.68 percent in FY 2012-13 to 3.69 percent in FY 2013-14. According to the

¹² Onneshan, above n 9.

base year 2005-06, the overall contribution of broad agriculture sector dipped to 16.33 in FY 2013-14 which was 16.78 percent in FY 2012-13.¹³

Table 4.1 Sectoral Share of GDP at Constant Prices

(Base Year: 2005-06) (In Percentage)

Sector/Sub-sector	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14*
1. Agriculture And Forestry	15.33	15.17	14.89	14.58	14.65	14.27	13.70	13.09	12.64
a) Crops & horticulture	11.10	11.08	10.88	10.63	10.79	10.50	10.01	9.49	9.11
b) Animal Framings	2.38	2.27	2.19	2.13	2.06	1.98	1.90	1.84	1.78
c) Forest and related services	1.86	1.83	1.82	1.82	1.81	1.79	1.78	1.76	1.74
2. Fishing	3.67	3.75	3.79	3.78	3.73	3.73	3.68	3.68	3.69

Source: Unnayan Onneshan¹⁴

Table: 4.2: Sectoral Growth Rate of GDP at Constant Prices

(Base Year: 2005-06) (In Percentage)

Sector/Sub-sector	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14*
1. Agriculture And Forestry	5.44	6.04	3.87	3.09	6.55	3.89	2.41	1.47	2.46
a) Crops & horticulture	6.17	7.00	3.99	2.83	7.57	3.85	1.75	0.59	1.91
b) Animal Framings	2.15	1.99	2.20	2.35	2.51	2.59	2.68	2.74	2.83
c) Forest and related services	5.46	5.50	5.26	5.54	5.34	5.56	5.96	5.04	5.05
2. Fishing	5.75	9.41	7.00	4.94	4.60	6.69	5.32	6.18	6.49

Source: Unnayan Onneshan¹⁵

**Provisional*

¹³ Finance, *Bangladesh Economic Review*, above n 10.

¹⁴ Onneshan above n 9.

¹⁵ Ibid.

4.4 Availability of Cultivable Land in Bangladesh

In agriculture, cropping intensity, along with the cropping pattern, plays the vital role in production system since the cultivable land areas have continuously been decreasing. According to official data from Soil Resources Development Institute (SRDI) in 2010 crop agriculture land covers 9.5 million hectares in Bangladesh. On the other hand, Bangladesh Bureau of Statistics (BBS) estimated 8.52 million hectares is under crop land in 2010-11 and the Department of Agriculture Extension (DAE)¹⁶ Bangladesh stated in the Krishi (agriculture) Diary (2011), it is about 9.098 million hectares. Differences are due to the methodology employed by different organizations and time required for one cycle of survey. Given the law of diminishing marginal returns, such continuous reduction in cultivable land has been exerting adverse impact on the growth in agricultural sector, resulting in recent declining growth in the sector. Table shows the decreasing trend of per capita agricultural land. Per capita agricultural land came down to 8.52 hectare in 2011 from 9.39 hectare in 1977. Rapid population growth, along with unplanned urbanisation, causes the areas of cultivable land to be used for non-agricultural purpose, especially for building residence for increasing population. Statistics suggest that between the periods from 1976 to 2011, the agriculture experienced a two- fold reduction in the availability of cultivable land. Production during this period increased due mainly to the use of input by the farmers at a higher rate on the same piece of land.¹⁷

¹⁶ Department of Agricultural Extension, *Annual Report 2014-15* Government of Bangladesh <<http://www.dae.gov.bd/>>.(Accessed on 11 August 2016).

¹⁷ Basak J.K., *Real Sector: Agriculture, Growth or Contraction* (Sharabon Prokashani, 2012) 185.

Table 4.3: Availability of agricultural land since 1976-77 to 2010-11

(Area in million hectares)

Year	Total land area of Bangladesh	Net cultivable land	% Net cultivable land	Year	Total land area of Bangladesh	Net cultivable land	% Net cultivable land
1976-77	14.28	9.39	65.75	1994-95	14.84	8.77	59.10
1977-78	14.28	9.38	65.68	1995-96	14.84	8.72	58.76
1978-79	14.28	9.38	65.68	1996-97	14.85	8.24	55.49
1979-80	14.29	9.39	65.71	1997-98	14.85	8.36	56.30
1980-81	14.29	9.38	65.64	1998-99	14.85	8.43	56.77
1981-82	14.29	9.38	65.64	1999-00	14.85	8.45	56.90
1982-83	14.29	9.36	65.50	2000-01	14.85	8.40	56.57
1983-84	14.45	9.46	65.47	2001-02	14.84	8.48	57.14
1984-85	14.48	9.43	65.12	2002-03	14.84	8.42	56.74
1985-86	14.48	9.44	65.19	2003-04	14.84	8.40	56.60
1986-87	14.70	9.51	64.69	2004-05	14.84	8.44	56.87
1987-88	14.84	9.82	66.17	2005-06	14.84	8.42	56.74
1988-89	14.84	9.84	66.31	2006-07	14.84	8.41	56.67
1989-90	14.84	9.78	65.90	2007-08	14.84	8.65	58.29
1990-91	14.84	9.72	65.50	2008-09	14.84	8.64	58.22
1991-92	14.84	9.09	61.25	2009-10	14.84	8.63	58.15
1992-93	14.84	8.75	58.96	2010-11	14.84	8.52	57.41
1993-94	14.84	8.75	58.96	-	-	-	-

Source: Bangladesh Bureau of Statistics (BBS)

4.5 Management of Agriculture in Bangladesh

Although the Government has placed highest importance to the overall development of agriculture sector including increased national food production, the management of agriculture sector needs to aim at facilitating an innovative and modern agricultural system that will render increased production through invention of new technology and creation of greater opportunity for agricultural research. With a view to developing the agriculture sector, the Government has taken a number of steps. These include, among others, expansion of small irrigation facilities, reduction of water logging, production of improved quality and high yielding varieties of seeds and their preservation and distribution.

Agricultural research has been given special priority for the development and expansion of the draught and saline tolerant varieties, short duration crops and varieties of crops adaptable to the weather and environment of a particular region and producing crops suitable for a particular kind of soil as well as proper use of fertilizer and integrated pest management (IPM) for pest control. Saline tolerant and short duration crop variety and technology has been invented using nuclear technology and bio-technology and extended to the field. Saline tolerant crop varieties have extended the coverage of rice cultivation in the vast coastal areas of southern region. Cultivation of short duration (highest 110 days) crops helps reduce food scarcity in *monga*-prone areas and generate employment.¹⁸

Steps have been taken to scale up subsidy on agricultural inputs, ensure fair price and supply of agricultural inputs, expansion of irrigation facilities and increased availability of irrigation instrument, agriculture extension as per target, quality control of agricultural products and ensure sufficient storage facility of food grains. Implementation of various programmes are underway to increase food production by expanding the coverage of agricultural land and by creating the opportunities of multiple cropping line of expansion of irrigation by using ground water in various regions of the country, reduction of water logging and planned drainage of water in *haor* areas. The Government has taken an initiative to introduce a *Crop Insurance* scheme to provide the farmers of small and medium land holding with crop price support in the event of crop failure due to natural

¹⁸ Finance, *Bangladesh Economic Review*, above n 10.

disasters. In addition, an *Endowment Fund* has been established to provide support to increase productivity through diversification of crops.¹⁹

While the Government has undertaken several initiatives to strengthen agricultural management, the majority of small and marginal farmers cannot afford the adoption of technology-intensity beyond the current basic level of seed-fertilizer-irrigation technology. In addition, agriculture is characterized by tenancy of rent, mortgage and sharecropping and the relation between the adoption of new technology by a farm and its tenurial arrangements is hardly inclined to move towards higher technological ladder. The argument is that sharecroppers have little to achieve from the spread of modern technology and institution of share tenancy as a feature of pre-capitalist modes of production and the sharecropping system are considered to be barriers to the spread and adoption of new technology. Therefore, the adoption of new technology by the poor tenants and sharecroppers needs to be ensured in order to foster the growth in agriculture. Though the agriculture sector has undergone considerable research and development in terms of the invention of salinity-resistant rice species, the spread and availability of these species need to be ensured and the research of inventing the species of rice which will be tolerant to drought and flood need to be extended immediately.²⁰

The use of fertilizer has been increasing in crop production in Bangladesh. Governments of Bangladesh have been allocating a good number of subsidies for with a view to making the farmers avail themselves of purchasing fertilizers at an

¹⁹ Ibid.

²⁰ Onneshan, above n 9.

affordable price.²¹ The use of chemical fertilizer is on the increase with the increasing demand for food production in the country. The use of urea fertilizer alone was the highest. In FY 2012-13, the quantity of urea fertilizer used was 22.47 lakh MT. The total quantity of fertilizers used was 39.62lakh MT in the same year. In FY 2013-14, the total quantity of fertilizer used was 44.75 lakh MT. The year wise use of fertilizers during the period from FY 2007-08 to FY 2013-14 is shown in Table 4.4.

Table 4.4: Use of Chemical Fertilizer

(In '000' metric ton)

FY	Name of Fertilizers										Total
	Urea	TSP	DAP	SSP	NPKS	MOP	AS	Gypsum	Zinc	Others	
2007-08	2762.00	392.00	129.00	118.000	120.00	262.00	7.00	75.00	20.00	0	3885.00
2008-09	2532.96	156.00	18.23	20.00	40.00	75.00	3.00	15.00	5.00	0	2864.23
2009-10	2409.00	420.00	136.00	0	50.00	263.00	5.00	20.00	10.00	0	3313.00
2010-11	2652.00	564.00	305.00	0	40.00	482.00	6.00	25.00	7.00	0	4081.00
2011-12	2296.00	678.00	409.00	0	20.00	613.00	6.00	15.00	12.00	0	4049.00
2012-13	2247.00	654.00	434.00	0	18.00	571.00	8.50	20.00	18.00	0	3970.50
2013-14	2462.00	685.00	543.00	0	27.00	577.00	2.70	173.00	4.29	1.79	4475.78

Source: Ministry of Agriculture²²

To ensure the increase in rice production and to safeguard food security, efforts have been continuing to ensure the use of underground and surface water in an integrated and planned manner to increase cropping intensity, diversification and yield while maintaining environmental balance. A number of projects are being implemented in different regions of Bangladesh to motivate farmers for efficient use of water. Through these projects, different demonstrations were carried out in

²¹ M Hossain and VP Singh, 'Fertilizer use in Asian agriculture: implications for sustaining food security and the environment' (2000) 57(2) *Nutrient Cycling in Agroecosystems* 155.

²² Ministry of Agriculture, Govt. of Bangladesh. < <http://www.moa.gov.bd/>> (Accessed on 17 July 2016).

boro season on Alternate Wetting and Drying (AWD), which received better responses from the farmer.

Programmes have been taken up to reserve and utilize surface water to reduce pressure on underground water keeping in view of the issues such as global warming, climate change, reduction of water flow in the international rivers etc. The Government has undertaken various projects to build over-ground and buried pipe irrigation canals in order to install power driven pumps, and to prevent wastage of irrigation water by excavating/re-excavating canals, building dams in mountain streams and constructing irrigation infrastructures. To provide irrigation facilities rubber dams are being used in small rivers and on the other hand to ensure collection of irrigation surcharge and optimum use of water, installation of smart card-based prepaid meters is under way.²³

Since the inception of minor irrigation projects (power pump, DTW, STW and floating pump etc.) in the early sixties, area under irrigation has been expanding. From FY 2009-10 to FY 2012-13, BADC has implemented 19 irrigation projects and 136 irrigation programmes including 6 water logged removing programmes. Under the above programmes water logged of 16,728-hectare land has been removed by excavation of *khals*. Similar types of 8 water logged removing programmes have been implemented in FY 2013-14.²⁴

²³ Tushaar Shah, Om Prakash Singh and Aditi Mukherji, 'Some aspects of South Asia's groundwater irrigation economy: analyses from a survey in India, Pakistan, Nepal Terai and Bangladesh' (2006) 14(3) *Hydrogeology Journal* 286.

²⁴ Extension, above n 16.

However, in addition to higher productivity and vigilant pricing system in agriculture, sustainability must also to be ensured in the sector. Increasing use of fertilizer has forced land to yield higher production. For instance, the use of fertilizer in agriculture has increased 890 times on an average during the period of 1975-2007. Whereas in 1995, the use of fertilizer per hectare of land was 0.36 kg, in 2007, more than 298 kg was used per hectare of agricultural land.²⁵ However, though higher use of fertilizer has increased the productivity of land, soil fertility in agricultural land has been decreasing because of the large scale application of chemical fertilizer. As a result, sustainability in agriculture may undergo a serious challenge in the future. Besides, agriculture in Bangladesh is highly dependent on ground-water for irrigation, which may also cause increased salinity of soil as well as decline in the fertility of agricultural land. Therefore, in order to ensure sustainable agriculture, immediate responses need to be taken to increase the productivity and fertility of agricultural land simultaneously.²⁶

4.6 Agricultural Policy and Agricultural Development in Bangladesh

Much Progress has been made during the last decades in Bangladesh in formulation and adapting agricultural policies to the ever-changing needs of modernizing agriculture. The governments in the past have been adapted different sets of policy to cater its needs of the government line departments, private sectors and farmers to create an enabling environment for technology dissemination and enhancing agricultural productivity. Bangladesh experienced a continuous process of policy refinement. *A Positive Policy Reform Agenda had been framed and practiced during the green revolution and its post green revolution process to*

²⁵ J.K, above n 17.

²⁶ Onneshan, above n 9.

reap the benefits of market orientation and open trade, while simultaneously addressing a broader range of domestic policy objectives. It was recognized that the stated objectives of agricultural policies generally fall into two categories. Either they address issues relating to equity and income distribution, or they relate to the correction of market failures and openness of the market economy. Market failures are often believed to be more frequent in agriculture than elsewhere in the economy due to agriculture's many functions having both positive and negative externalities, and public goods characteristics.²⁷

In broad aggregate terms, the key driver of agricultural growth has been increased productivity made possible through policy reform. Agricultural trade policy and price incentives mechanism in East Pakistan (present Bangladesh) through to 1971 were heavily influenced by overall trade and macro-economic considerations of united Pakistan. During the 1950s and 1960s, Pakistan followed an import- substitution trade strategy that involved taxation of agricultural exports and protection of domestic industry through import tariffs. It also tended to avoid currency devaluations and instead rely on quantitative controls on imports to limit effective demand for foreign exchange at the official exchange rate.²⁸ In the early 1950s, Pakistan introduced quantitative import controls through a system of import licenses to favour use of foreign exchange for capital and intermediate goods and limit imports of consumer goods. At the same time, cotton and jute exports were taxed through export duties. Overvaluation of the

²⁷ Shapan Adnan et al, 'Agrarian structure and agricultural growth trends in Bangladesh: the political economy of technological change and policy interventions' (1999) *Sonar bangla? Agricultural growth and agrarian change in West Bengal and Bangladesh*. 177.

²⁸ Bela A Balassa, 'The Structure of Protection in Pakistan' in SR Lewis and Stephen E Guisinger (eds), *The Structure of Protection in Developing Countries* (Johns Hopkins University Press, 1971).

Pakistan rupee, combined with these explicit export taxes, contributed to a 70 percent decline in the real value of total exports between 1952 and 1958.²⁹

In 1959, the government's introduction to the export bonus scheme in an effort to spur export Earnings represented an effective devaluation of the exchange rate for exports receiving vouchers and for imports purchased with these vouchers.³⁰

Jute was the most important export earnings of that time. The high implicit taxation of raw jute reduced domestic prices and production incentives, leading to lower levels of exports and higher world prices. To some degree, this policy may have facilitated the development and adoption of synthetic fibers that ultimately replaced jute in many markets. Value added in jute milling in East Pakistan was low in the late 1960s, but profits were high because of the export bonus scheme.³¹

After the independence, Bangladesh followed a highly restrictive trade and exchange rate policy characterized by import regulations, high import tariffs, export taxes, persistent quantitative restrictions and an overvalued exchange rate similar to policies of the 1960s. The policy regime in this period was particularly restrictive for the agricultural sector. The government had a monopoly on import of most agricultural commodities and placed major restrictions on exports of raw jute, the major agricultural export. As a result of these distortions, agricultural

²⁹ Paul Anthony Dorosh and Alberto Valdes, *Effects of exchange rate and trade policies on agriculture in Pakistan* (Intl Food Policy Res Inst, 1990) vol 84; Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh', above n 7.

³⁰ World Bank, 'The economic development program of Pakistan' (1963) (Report no.883-BD); Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh', above n 7.

³¹ World Bank, 'Bangladesh survey of the jute and cotton textile industries' (1975) (Report no. AS-96a); Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh', above n 7.

price incentives were substantially reduced throughout the period.³²

4.6.1 Policy Reforms and Their Impacts

Key reforms since the 1980s have facilitated irrigation through the rapid spread of groundwater pumps, improved technology through the use of high yielding plant varieties and fertilizer, better connectivity and linkages to packaging, processing, and markets for farm products (and more efficient markets) through investment in roads, and changes in land market operations through mechanization.³³ The roles and contributions of the drivers have varied over time and by area, but the aggregate trends are clear.

Policy reform has been an important driver of agricultural growth both at the macro level and at the sectoral level. Sectoral reforms were initiated in the 1980s when the government made major reforms in agricultural input markets, starting with fertilizer markets. The first stage of reforms liberalized the retail trade in fertilizer, and the second stage liberalized the wholesale market, with progressively greater participation of private traders. Donors through financing to import fertilizer and to train farmers to use it alongside new high-yielding varieties supported the bold steps taken by the government, and the speed with which they were implemented.³⁴

³² Sultan Hafeez Rahman, *The impact of trade and exchange rate policies on economic incentives in Bangladesh agriculture* (International Food Research Institute, 1994) 117.

³³ Shahabuddin.Q, 'Bangladesh: Agriculture and food security policies' (2014) Background paper for *Dynamics of rural growth in Bangladesh*, GDAFR, World Bank, Washington D.C.

³⁴ World Bank, 'Dynamics of Rural Growth in Bangladesh' (2016) (103244-BD) *Agriculture Global Practice* 212. Washington, DC.

In tandem, the government took steps to liberalize markets for other inputs, including irrigation and water management, and seeds. The irrigation system, which began with large public irrigation projects, gradually moved to private enterprises. Private farmers or groups of farmers to draw water from the myriad rivers crisscrossing Bangladesh used first, low-lift pumps. Second, privately owned, small-scale tube wells gradually developed for extracting groundwater. Until 1980, BADC³⁵ (a public institution) procured and distributed small-scale irrigation equipment, such as pumps and shallow tube wells; in 1980, BADC-owned irrigation equipment was privatized. In 1988 the government eliminated restrictions on imports of agricultural equipment, and farmers started investing their own resources to set up shallow tube wells. Informal markets for irrigation water developed quickly with the rapid expansion in privately owned shallow tube wells. In highly land-constrained Bangladesh, the rapid expansion of irrigation increased the productivity of land (yield per hectare) and also facilitated greater intensification (using more inputs per hectare) as well as improved efficiency (using inputs more effectively).³⁶

Recognizing the importance of a strong seed sector for technological change, the 1993 National Seed Policy sought to strengthen the seed system.³⁷ The National Seed Policy changed the seed system from a public sector orientation to involve the public and private sectors as well as civil society organizations. The Seeds (Amendment) Act 1997 and the Seed Rules 1998 further liberalized the

³⁵ Bangladesh Agricultural Development Corporation.

³⁶ World Bank, 'Dynamics of Rural Growth in Bangladesh', above n 34.

³⁷ D.J.Spielman Naher F, 'Seeding the future: An analysis of seed system development in Bangladesh' (Paper presented at the Evidence-Based Policy Options for Food and Nutrition Security in Bangladesh, Dhaka, Bangladesh, October).

regulations for seed certification and allowed the marketing of truthfully labeled seed.

These reforms of seed, fertilizer, and irrigation markets are widely credited for bringing about substantial gains in agricultural production, especially of rice, but few studies have empirically measured the impact of market reforms. Ahmed (1995)³⁸ estimated the direct impact of liberalized input markets, distinguishing between the pre- and post-liberalization period, and concluded that reforms in fertilizer and irrigation markets could reasonably be credited with the success in rice production in the post-liberalization period (between 1984 and 1992). Specifically, approximately 20–32 percent of the increase in production could be attributed to the impact of the reforms on fertilizer consumption and private irrigation development. In a further study, Ahmed (1999)³⁹ also concluded that food grain shortages and higher food prices would have persisted without changes in the fiscally unsustainable public intervention in agricultural input markets in Bangladesh.

Important reforms have also been introduced in output markets, and specifically with respect to procurement and trade of food grains. In line with the broader liberalization efforts of the early 1990s, Bangladesh deregulated imports of rice and scaled back public procurement and distribution to allow the private sector to function more freely. The efficacy of these decisions, and the efficiency of Bangladeshi entrepreneurs in responding to the changed policy environment, is

³⁸ Raisuddin Ahmed, 'Liberalization of agricultural input markets in Bangladesh: Process, impact, and lessons' (1995) 12(2) *Agricultural Economics* 115.

³⁹ Raisuddin Ahmed, 'Liberalization of agricultural input markets in Bangladesh', *Privatization and Deregulation* (Springer, 1999) 175-190.

evident from the fact that until 2007, when India imposed an export ban on rice, rice prices in Bangladesh remained low and stable. The prices were found to very closely follow the subsidized (Below Poverty Line) public distribution price of India⁴⁰, clearly demonstrating smoothly functioning markets. This experience since 1994 demonstrates the important role the private sector has played—even through the massive and devastating flood of 1998—in delivering a period of highly stable domestic prices up to 2007.⁴¹

Reforms did not continue unabated. Policies in support of market liberalization were partially reversed in the late 1990s, and following the 2007 food crisis, input subsidies and public intervention in grain markets through domestic and international procurement of rice and wheat increased substantially. In 2005, restrictions were introduced in the seed sector prohibiting private sector breeding for notified crops (with the exception of rice), while rules and regulations on the registration and release of varieties were maintained. The adverse effects of those reversals (and remaining policy impediments) were mitigated to some extent by growth in productivity and, more recently, by rising prices for agricultural products. In other words, the reforms unleashed a surge in growth, with sustained—even through periodic reversals—increases in productivity of factors of production.⁴²

The new National Fisheries Policy, approved in 1998, included detailed policies for conservation, management, and exploitation of fisheries resources; quality

⁴⁰ Paul A Dorosh and Shahidur Rashid, 'Trade subsidies, export bans and price stabilization: Lessons of Bangladesh–India rice trade in the 2000s' (2013) 41 *Food Policy* 103.

⁴¹ World Bank, 'Dynamics of Rural Growth in Bangladesh', above n 34.

⁴² Ibid.

control; planning; monitoring and evaluation; fisheries extension; and human resources development. A comprehensive National Fisheries Strategy and Action Plan were developed in 2006 to guide implementation of the strategy within the overall policy framework. The strategy focused on core areas, including long-term planning; people's participation; coordination, collaboration, and support for the sector; the regulatory framework; pro-poor approaches; gender; alternative sources of income generation for fishers; and environmental management. The more recent National Strategy for Accelerated Poverty Reduction reinforces the government's commitment to implement the fisheries strategy and accelerate growth of the fisheries subsector, especially through the intensification of inland aquaculture, a stronger focus on export-oriented species, ensuring sustainable biodiversity and preserving natural breeding grounds for inland fish, improving product diversification and value addition, and developing appropriate market infrastructure. While these policy and strategy papers provide a strong foundation and a clear roadmap for future fisheries development, their implementation to date has been fairly limited.⁴³

Going forward, it is important to address the remaining policy distortions to create a balanced incentive structure across crops and to promote non-crop subsectors. Those distortions are a critical constraint on the next surge in growth, which will have to be driven by diversification. In the broad policy framework, analysis consistently highlights the need to level the policy field that currently bestows significant advantages to rice (through output price support, procurement,

⁴³ Ibid.

and price stabilization); reorient public expenditures toward high-return technology services and infrastructure; and address the remaining regulatory barriers to more effective private sector participation in the seed sector.

4.6.2 Review of Gaps in Relevant Policy

The positive reform agenda emphasized that issues relating to market failures should be addressed first, and only after that should remaining income distribution issues be tackled. Policies that address market failures also have an impact on farm incomes, sometimes positive and sometimes negative. The optimal level of intervention of each policy instrument should be considered together. For instance, reform of agricultural input markets in Bangladesh in the early 1980s, followed by liberalization of grain trading and the alteration of several longstanding programmes of public distribution of grains during the late 1980s and early 1990s. The subsequent sections and Annex to this chapter present our analysis of gaps in relevant policy documents of concerned ministries.

4.6.2.1 The National Agriculture Policy

The new National Agriculture Policy (NAP) 2013, focuses on: sustainable and profitable agricultural production; development and dissemination of new technologies; increase in productivity, employment and income generation; competitive agriculture through commercialization; adaptation to climate change and sustainability of agricultural system; agricultural marketing to ensure better prices to both farmers and consumers; enhance production quality to meet export standards; opportunities for agro-processing industries; encouraging production of diversified and more nutritious crops.

Some downside risks and challenges identified for the implementation of the policy are: natural hazards; continued deterioration of soil health; continued reduction of arable land and water resources; increased use of agricultural land for non-agricultural purposes; and volatility of prices discouraging farmers to engage in crop production; loss of agricultural biodiversity; excessive use of pesticides; environmental degradation; and insufficient budget allocation for agricultural research. The implementation of the agriculture policy should also recognize and cope with the existing weaknesses of the agriculture sector, including an inadequately developed marketing system, excessive post-harvest losses, limited availability of formal credit, and lack of suitable technologies, especially for unfavorable environment. In line with the objectives, constraints and challenges identified, the NAP (2013) defines the following main areas of intervention: research and development; agricultural extension; seed and plant; fertilizer; minor irrigation; agricultural mechanization; agricultural cooperatives; agricultural marketing; women in agriculture; management of natural resources; development of human resources; agricultural labour and non-farm activities.

4.6.2.2 Fertilizer Policy in Bangladesh

There has been a progressive shift in fertilizer policies in Bangladesh towards privatization, deregulation, and a reduction of subsidies, which began in the mid-1980s and continued until mid-1990s. This was partially reversed following the severe fertilizer crisis in 1995. During global food price crisis in 2007-08 public sector roles were further strengthened towards market intervention and providing subsidy on fertilizers for achieving self-sufficiency and food security. Table 4.5

(Appendix A) presented a brief description of evolution of fertilizer policy in Bangladesh till the first decade of the 21st century.

The government embarked on a Perspective Plan covering the 2010 to 2021 period. “Achieving food security” and “pursuing environmental friendly development” have been specially mentioned as broad development goals. This would be achieved through successive five-year plans. Priority attention in planned crop intensification in the coastal zone is particularly emphasized in the document.

4.7 Agricultural Development Plans

The development of Bangladesh agriculture is based on the development plans on five years basis. After the independence, Bangladesh so far has undertaken fifth five-year plan and three two years plans. The political turmoil and international pressure on development project sometimes hampers the five-year plans but Bangladesh has her own development plan to move forward. Last year Bangladesh has taken sixth five-year plan and Table 4.6 shows all five years plans.

Table 4.6: Growth performance in the Five Year Plans

Plan period	Annual Average Growth (%)	
	Target	Actual
First five year plan (FY73-FY78)	5.5	4.0
Two year plan (FY78-FY80)	5.6	3.5
Second five year plan (FY80-85)	5.4	3.8
Third five year plan (FY85-FY90)	5.4	3.8
Fourth five year plan (FY90-FY95)	5.0	4.2
Fifth five year plan (FY97-FY02)	7.0	5.1
FY02-FY06		5.5
FY06-FY10		6.3
Sixth Five Year Plan (FY11-FY15)	8.0	4.5
Seventh Five Year Plan (FY16-FY20)	8.0	

Source: Bangladesh Bureau of Statistics

The First Five –Year plan set out and published in 1973. A substantial expansion of public ownership of the productive sectors took place in 1972, before the formulation of the plan in 1973. The plan recommended actions, which would carry further forward the consolidation and enlargement of the public and co-operative sectors. Trading both national and foreign were the most important areas of private enterprise in agriculture. The second five-year plan began in 1980 and ended in 1985. There are some major changes in the domestic support in

agriculture by the government in this period. Government focused on input management, fertilizer and machinery equipment for the development of agricultural sectors. All of these policies are domestic policy to foster the growth of this sector. The third five-year plan introduced new policies. In 1987 private traders were allowed to buy fertilizer at factory gates and ports. Also, private dealers were allowed to import engines and pumps. From 1988/89 to 1995/96, input subsidy got down from 2.53% to 0.83% of value of output; Price support got down from 0.20% to 0.01% of output; Producer Subsidy Equivalent got down from 2.73 to 0.84.

The fourth five-year plan proposed a new seed policy in 1990. Free import for fertilizer from world market has been introduced in 1992. In 1991-93, liberalized grain trade reduced tariffs on imports⁴⁴:

Import-weighted average tariffs	FY 94	FY 96	FY 02
Primary commodity	27.2%	13.2%	9.4%
Intermediate inputs	22.9%	22.7%	16.2%
All commodities	24.1%	17.0%	9.7%

There was considerable success in implementing the underlying agriculture strategy during the 6th Plan. Average agriculture sector GDP growth reached

⁴⁴ Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh', above n 7.

3.5%, along with exceptional performance during FY10 and FY11. The slowdown in domestic demand has reduced the growth of the crops sector but forestry and fishing have gained momentum. Consistent with the ongoing structural transformation of the Bangladesh economy, the share of agriculture in GDP is falling but agriculture continues to be the largest source of employment and a major contributor to poverty reduction. The achievement of food self-sufficiency is a major milestone for Bangladesh. Steady progress with diversification in favour of fish, meat and vegetable production is also contributing to the nutrition strategy of Bangladesh.

When the international diesel price came down from a high price in 1980, the reform got benefit because even if reformers cut subsidy on fertilizer, the price fell on the domestic markets. Similarly, as irrigation equipment got more available, and cheaper, the price of diesel to keep the pumps operating was falling.⁴⁵

With the key reforms in the input markets, the fall in the prices of inputs was so strong that allowed more efficiency in distribution of inputs with reduced marketing margins. But in large share they came from movements in international prices. Reformers, at that time, were able to take advantage of incidental events in world markets.

The opening up imports and abandoning rules for importing certain standard model reduced the cost of pumps and tube-well equipment on the open market than before. This was a great step to sustain agriculture sector in that time.

⁴⁵ Ibid.

The input market reforms accelerated the use of fertilizer and tube-well irrigation, which allowed winter cultivation of, irrigated rice (the Boro crop). Formerly the bulk of domestic rice production came from the Aman crop that planted during the summer. Double cropping along with the use of modern varieties and increased fertilizer led to major increases in rice production. While technology accounted for some the improvements, reforms encouraged its use. In 1992 Bangladesh was producing between 20% and 32% more rice than it would have done had the reforms not taken place.⁴⁶

Most of these reforms mainly related to the domestic support policies and input management. But the major agriculture policy reform was introducing in the collaborative policies, which involves the liberalization of import and export of agriculture commodities. Bangladesh is now in the trade liberalization policies and also following the rules of WTO agriculture policies.

The major issues and challenges Bangladesh agriculture would encounter during 7th Five Year Plan and beyond will be promoting the use of agricultural technology with supportive policies, reforms, regulations and incentives in place for raising productivity and profitability; increasing diversification of production in line with consumption diversification to promote nutrition; increasing private sector participation in the agriculture and improving agro-processing value chains; reducing instability of production; increasing resource use efficiency; reducing loss of arable land; minimizing yield gap; maintaining food security, safety and quality; expanding irrigation and farm mechanization through appropriate technology; and developing resilience to climate change impacts.

⁴⁶ Ahmed, 'Liberalization of agricultural input markets in Bangladesh: Process, impact, and lessons', above n 38.

4.8 Agricultural Trade Policy Reform: Bangladesh

Over the last three decades, Bangladesh's economic and policy orientation has evolved considerably, from a highly interventionist regime with widespread control on trade, the exchange rate and investment, to a substantially liberalized economic regime. At independence in 1971, Bangladesh faced the daunting challenge of rehabilitating its economy, which had suffered serious dislocation and devastation during a bloody war. The situation with regard to the external sector was particularly difficult. Faced with very low foreign exchange reserves, a shallow export base and rising import prices, the Government resorted to severe import controls, ranging from extensive use of non-tariff barriers (NTBs) to high and even prohibitive import duties. These protectionist measures were not dictated by a deliberate industrialization strategy aimed at influencing inter-sectoral or inter-industry resource allocation. Instead, these policies reflected desperate attempts to rein in a worsening balance of payments situation.⁴⁷ The major trade and exchange rate policy liberalization also involved broad liberalization of trade and exchange rate policies of agricultural trade and pricing reforms. By the mid-1990s, the distortion in the agricultural output price had been virtually eliminated on rice and wheat, and total distortions were minimal. Bangladesh sharply raised import tariffs on rice in response to subsidized exports by India in 2001, but domestic rates of assistance calculated relative to international market prices indicate only small overall agricultural price distortions in Bangladesh in the present decade.⁴⁸

⁴⁷ Sadiq Ahmed and Zaidi Sattar, *Trade liberalization, growth and poverty reduction: The case of Bangladesh* (World Bank Washington, DC, 2003) 46.

⁴⁸ Nazneen Ahmed et al, 'Distortions to Agricultural Incentives in Bangladesh' (2007) *World Bank, Development Research Group*.

Historically, like many other developing countries Bangladesh relied on tariffs and quantitative restrictions to protect domestic activities and raise revenue. Roughly 40% of its total tax revenue still comes from import taxes. Average protective tariffs are currently at 20.1%, with average agricultural tariff at 28.8% and non-agricultural tariff at 18.5%. A noteworthy feature of the present tariff structure is the significant application of para-tariff called supplementary duties, which account for about 31% of the average protection. The average customs duty, which registers a decrease over time, is currently 13.8% with four non-zero duty slabs of 3%, 7%, 12% and 25%. Food stuff, fertilizer, seed, plastic trays used in poultry and dairy, medicines and raw cottons are not subject to any custom duty. Some consumer goods, mainly the non-food luxury items, have high protective rates even up to 463%- well beyond the top custom duty rate.⁴⁹

After independence in 1971, Bangladesh followed an of a highly restricted trade regime strategy. This was characterized by high tariffs and non-tariff barriers to trade and an overvalued exchange rate system that was supported by the import-substitution industrialization strategy of the Government. This policy was pursued with the objectives of improving the balance of payment position of the country and creating a protected domestic market for manufacturing industries.⁵⁰ The trade regime registered a major shift in the mid-1980s, when a policy of moderate liberalization was initiated. However, in the early 1990s, large-scale liberalization of trade was implemented. Since then, successive Governments

⁴⁹ World Bank, *Bangladesh: Trade Policy and Integration* World Bank
<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/EXTSARREGTOPINTECOTRA/0,,contentMDK:20592516~menuPK:1465862~pagePK:34004173~piPK:34003707~theSitePK:579448,00.html>.(Accessed on 11 Aug 2016).

⁵⁰ Ayubur Rahman Bhuyan and Mohammed Ali Rashid, *Trade regimes and industrial growth: a case study of Bangladesh* (Bureau of Economic Research, University of Dhaka, 1993).

have reaffirmed their commitment to the development of a more liberal trade regime.⁵¹

The beginnings of policy reform and liberalization can be traced to deregulation measures starting in 1976 under a new government, which increasingly distanced itself from the earlier socialist approach. However, initial reform efforts had neither a clear direction, nor a broad time frame for implementation. This phase of muddling through lasted for about a decade. Four notable features of policy during this period of greater market orientation were: reduction of restrictions on investment; gathering momentum of denationalization of public sector enterprises; limited reduction of tariffs and NTBs; and incentive packages for the emerging ready-made garments sector. During the latter half of the 1980s, a more coherent picture of reforms began to emerge under structural adjustment policies (SAPs). In the area of tariff reforms, SAPs emphasized rationalization of the import regime, simplification and reduction of effective protection, elimination of negative and restricted lists of industrial imports, and facilitation of imports of raw materials and intermediate and capital goods, including the imports needed for direct and indirect exporters.⁵²

Trade policy from 1972 to 1980 consisted of significant import controls. The major administrative instruments employed in implementing the import policy during that period were the foreign exchange allocation system and import policy orders (IPOs). Under IPOs, it was specified whether items could be imported,

⁵¹ Selim Raihan, 'Trade liberalization and poverty in Bangladesh' (2008) *Macao Regional Knowledge Hub* 18.

⁵² Nurun N Rahman, 'Policy reforms and trade liberalization in Bangladesh' (Paper presented at the Meeting on Adjusting to Trade Reforms: What are the Major Challenges for Developing Countries. , Geneva.(2005).

were prohibited or required special authorization. With the exception of a few cases, licenses were required for all other imports. The argument behind the import-licensing system was that it would ensure the allocation of foreign exchange to priority areas as well as protect vulnerable local industries from import competition. However, the system was criticized for not being sufficiently flexible to ensure its smooth functioning under changing circumstances. Moreover, it was characterized by complexity, deficiency in administration, cumbersome foreign exchange budgeting procedures, poor interagency coordination, rigid allocation of licenses and time-consuming procedures.⁵³

In the beginning of restrictive trade policy, most agricultural commodities were on the restricted or banned lists of imports. It was aimed to ensure remunerative prices to producers by protecting them from external competition. Simultaneously, there were also restrictions on the export of agricultural commodities. Even some agricultural exports were subject to export duties. The purpose was to ensure sufficient availability of agricultural commodities in the domestic market.⁵⁴

During the 1980s, moderate import liberalization took place. In 1984, a significant change was made in the import policy regime with the abolition of the import licensing system, and imports were permitted against letters of credit. From 1986, significant changes were made in the import procedures and IPOs with regard to their contents and structure. Whereas, prior to 1986, IPOs contained a lengthy Positive List of importable goods, in 1986 it was replaced by

⁵³ Bhuyan and Rashid, above n 50.

⁵⁴ Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh', above n 7.

two lists – the Negative List (for banned items) and the Restricted List (for items importable on fulfilment of certain prescribed conditions). Imports of any items outside the lists were allowed. These changes may be considered as significant moves towards import liberalization, since no restrictions were imposed on imports of items that did not appear in IPOs. With the aim of increasing the elements of stability and certainty of trade policy, IPOs with relatively longer periods replaced the previous practice of framing annual import policies. In 1990, the Negative and Restricted Lists of importable items were consolidated into one list, that is, the Consolidated List.⁵⁵

Direct cash subsidy for agricultural export was launched since 2000; a cash subsidy of 20 to 30 per cent (depending on the degree of local content) was launched to boost exports of agricultural commodities and processed items. From FY2004-05, a fertilizer (non-urea) programme aimed at providing 25 per cent subsidy on imported DAP (diammonium phosphate), MoP and TSP fertilizers was introduced with a view to reducing price differences between urea and non-urea fertilizers, ensuring a balanced use of various types of fertilizer, maintaining soil fertility, and reducing production costs for crops. Besides fertilizer, private sector and non-government organizations (NGOs) are also allowed to import improved germplasm for research and development. They are also allowed to produce or import foundation seeds to sell in the local market. Import of food grains through private channel played a major role in providing both supply and price stabilization since FY1992-93. Private sector contribution in importing food

⁵⁵ Ahmed, above n 48.

grain started in FY1992-93 with a 32.2 per cent share, which increased to 68.4 per cent in FY2000-01 and reached as high as 83.9 per cent by FY2009-10.⁵⁶

Selective and careful agricultural trade liberalization in Bangladesh in the coming days needs to focus on a number of areas. These include: agro-processing sector, trade in climate-resilient technologies, high-yielding variety (HYV) seeds and technologies that can be easily adapted to local conditions for production of food grains, horticulture, fisheries, sea food, poultry and other agro-based industrial products. Opening up the local market for global competitors will need to be carefully done taking into cognizance the interests of, domestic agro-processing and industrial units, and also the interests of small and marginal farmers.⁵⁷

4.8.1 Trade Liberalization and its Impact on Market Access and Development: 1990s

With a decade long half-hearted attempt towards trade liberalization, the democratic government in 1991 took courageous steps towards reforming the trade regime. Reforms instigated during this period included reducing and compressing tariffs, implementing and publishing a less complicated import tax structure, gradually eliminating non-tariff import restrictions, and promoting exports through income tax exemptions, bonded warehousing, and flexible exchange rate management. Throughout the 1990s, Bangladesh consistently reduced its import duties. The average unweighted customs duty fell from 47 per cent in 1993 to less than 16 per cent in 2004. During the same period, the average weighted import customs duty fell from 23 per cent to 12 percent. The share of

⁵⁶ Mustafizur Rahman et al, *Agricultural Trade between Bangladesh and India: An Analysis of Trends, Trading Patterns and Determinants*, Centre for Policy Dialogue (CPD) No (2012).

⁵⁷ Ibid.

bound duties remained unchanged between 1997 and 2003, at 13.2 per cent, while the share of duty-free tariff lines increased nearly fourfold in a decade, from 4 per cent in 1992 to over 15 per cent in 2002. The maximum import duty was reduced drastically from 350 per cent in 1992 to 30 per cent in 2003. The 2004/05 budget provided a further reduction of the maximum tariff rate. The percentage of tariff lines with duties over 15 per cent fell from 80 per cent in 1992 to 42 per cent in 2002.

Table 4.7: Impact of tariff reforms on average customs duty rates

Financial Year	Unweighted Average (%)	Import Weighted Average (%)
1992-93	47.4	23.6
1993-94	36.0	24.1
1994-95	25.9	20.8
1995-96	22.3	17.0
1996-97	21.5	18.0
1997-98	20.7	16.0
1998-99	20.3	14.1
1999-00	19.5	13.8
2000-01	18.6	15.1
2001-02	17.13	9.73
2002-03	16.51	12.45
2003-04	15.62	11.48

Source: Government of Bangladesh (2004)⁵⁸ and Rahman⁵⁹

Before 1990s, Bangladesh was heavily dependent on quantitative restrictions to control imports, mainly for agricultural commodities. Around 37% of the tariff

⁵⁸ Government of Bangladesh, *Bangladesh Economic Review 2004*.

⁵⁹ Nurun N Rahman, *Policy reforms and trade liberalization in Bangladesh*, Meeting on Adjusting to Trade Reforms: What are the Major Challenges for Developing Countries. Geneva: UNCTAD. above n 52.

lines for agricultural commodities (21% of all commodities) were either banned or restricted in 1987.⁶⁰ By 1984, all quantitative restrictions on agricultural commodities were removed and imposed only 2% of tariff lines of all commodities faced quantitative restrictions. Precisely, private sector imports of rice and wheat were permitted in the early 1990s, ending the government monopoly of imports on food grain. The export ban of fine quality rice was lifted but ban remained for exports of ordinary coarse rice.

In the early 1990s trade liberalization brought tariff rates down sharply. Total protective import duty (both customs duties and para tariffs) declined from 74% in 1991 (unweighted average off all tariff lines) to only 32% in 1995. Similarly, import tariffs and total tax incidence on the import of major agricultural goods declined sharply during the early 1990s. Duties on refined edible oil, sugar, milk-powder, and spices were subject to comparatively high duties, while raw cotton, wheat, rape seed and lentils faced lower duties.⁶¹

Trade reforms have caught up in recent years. Though customs duties declined from 29% in 1995 to 19% in 2003, para tariffs such as surcharges, license fees, regulatory duties, value added tax and supplementary duties increased sharply, mainly due to a sharp increase in supplementary duties. As a consequence, total protective import duty rates have remained essentially unchanged on average since the mid-1990s. For some commodities that were already protected (including processed fruits, cement, soap, cotton shirts and sheets, some ceramic and steel products, batteries, bicycles and toys), total protection rates increased by

⁶⁰ World Bank, 'Bangladesh: From Stabilization to Growth' (1994). Washington, DC.

⁶¹ Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh', above n 7.

more than 30% between 1997 and 2003.⁶² It is important to agriculture's competitiveness within the economy that the extent to which non-agricultural tradable sectors is assisted by government policies. The collective effect of import tariffs and quotas on domestic prices of non-farm import-competing goods could be stated as an implicit tariff rate, defined in terms of the ratio of domestic prices (measured at the border) to import prices.⁶³

4.8.2 Recent Trade Policies and its Impact on Development

Following the rapid liberalization programme of the past few decades, the economy grew at a commendable rate. Above all, the fall in the incidence of poverty has also been impressive. Therefore, the impact of trade liberalization on poverty is a very interesting area of research. However, no ex post econometric study of Bangladesh has analyzed the link between trade policy and poverty. The main constraint is the unavailability of data, as poverty estimates only become available intermittently. Apart from the scarcity of detailed household data, measuring the direct impact of trade liberalization on poverty is very complicated. In other words, it is often difficult to disentangle the impact of trade reform from the impacts of other reforms, events and shocks that affect household poverty dynamics. All these constraints have prevented economists from undertaking sophisticated econometric exercises to investigate the relationship between openness and poverty. However, there have been a number of studies based on

⁶² World Bank, 'Trade Policies in South Asia: An Overview' (1994), Washington, DC.
<<http://documents.worldbank.org/curated/en/668411468759596200/An-overview>> (Accessed on 11 August 2014).

⁶³ Ahmed et al, above n 48.

time series data that have tested the relationship between trade and economic growth in the context of Bangladesh.⁶⁴

Bangladesh's current trade policy is a mixed policy, which is regulated by number of policies, order and acts structured under a broader liberalization framework. The objective of export policy is to strengthen export-led industrialization through increasing export, enhancing productive capacity of export-oriented industries and facilitating the sector by capacity building of local industries. On the other hand, the import policy is aimed to make import regime compatible to WTO. It also aims to simplify the procedure to import capital machineries and raw materials, provide facilities for technological innovation and permit import of essential commodities on emergency basis. The Import Policy Order 2009-2012 and the Export Policy 2009-2012 explain export and import targets, priority sectors which need special support, strategies to promote import-substituting, domestic market oriented and labour intensive industries. The Ministry of Finance determines the export and import policies are formulated and implemented by the Ministry of Commerce and import tariff, para-tariff and other duties. The monetary policy highlights on inflation management and equitable growth by adjustment of different monetary variables such as money supply, level of interest rate and exchange rate etc. Industrial Policy 2010 and SME Policy Strategies 2005 postulate policy directions with reference to industrialization particularly in case of micro, small, medium and public sector enterprises. The Sixth Five Year Plan (2011-15) and Ten Year Perspective Plan (2011-21) have

⁶⁴ Selim, above n 51.

outlined the long-term targets connected to export and import during 2011-2021.⁶⁵

So a numerous policies of short, medium and long term, rules, regulations, acts and orders are in operation in Bangladesh to regulate international trade. This is important to state that while import policy is a legally binding document; export policy is not legally binding. The reduction of tariff of agriculture and industrial commodities doesn't reduce at the same pace. While agriculture product tariff was high like 18.5% in 2000s, the tariff rates for intermediate agricultural products have experienced faster reduction. Industrial product got higher reduction in 2000s.⁶⁶

4.9 Challenges to Bangladesh's Agricultural Trade

Being an agriculture-dependent economy with a growing population and one of the world's lowest land areas per caput, the most important issue in Bangladeshi agriculture is to enhance and sustain growth in crop production. The most pressing problem is therefore the current state of stagnating yields and declining productivity in a range of food and non-food crops. Projections of food grain supply and demand are consistent in their conclusions that there is a widening food grain supply gap.

Narrowing gaps between actual and potential yields, however, is easier said than done, for there are various underlying issues and constraints in terms of productivity that are beyond the bounds of technology and another green

⁶⁵ Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh', above n 7.

⁶⁶ Ibid.

revolution. To think that the growth of crop production and the goal of self-sufficiency depend almost entirely on technological progress is not only deceiving but also detrimental to the long-term sustainable development of the country. Aside from the fact that Bangladesh is prone to frequent natural disasters, there are other significant factors, both institutional and socio-economic, that play a part in determining the productivity of the agricultural sector and food security situation of the country. Bangladesh faces the following challenges in relation to agricultural trade:

Promoting Agricultural Technology Systems: The average farm size in Bangladesh is becoming smaller each year and the cost-risk-return structure of farming is becoming adverse. While adequate production and income growth at national level are necessary, these are not sufficient for eradicating under nutrition. The research programmes of the National Agricultural Research System (NARS) organizations have been striving to develop technologies of crops that are both economically viable as well as ecologically sound. The recent achievements in agriculture have mainly been on development and adoption of new technologies. However, many challenges still remain. Post-harvest infrastructure is generally poor particularly for perishable high value products. This calls for developing technology choices according to agro-ecological conditions and market demand, soil health management, enhancement of water conservation to allow ground water recharge, quality and affordability of inputs, credit and insurance.

Increasing private sector interest/investments in agriculture value chain: Another challenge is to sustain and further develop the capacity of agriculture to effectively respond to market signals – to ensure that what is grown can be sold at

remunerative prices, both to maximize rural income generating opportunities and optimize the use of limited natural resources. The small and marginal farmers need to be supported in producing diversified crop suitable for both markets and household consumption to improve their nutritional status. They also need to be supported in selling their products at remunerative prices by developing linkages with domestic and international markets.

Sustaining climate change challenges: Sustaining agricultural production and developing resilience to climate change will continue to be a key issue. Bangladesh agriculture is still largely dependent on nature particularly weather, hence is full of uncertainties and vulnerabilities. Flood, drought, water logging, salinity intrusion, tidal surge, uncertain rainfall, land degradation, extreme temperatures are common events of vulnerabilities. Because of these and other factors new issues keep coming and there are no one go solutions to these.

The Comprehensive Disaster Management Programme (CDMP) and other analyses done at the Climate Change Cell of the Department of Environment suggest that 10-15% land of the country will be inundated due to sea level rise of 45 cm by 2050. Therefore, effective implementation of the Bangladesh Climate Change Strategy and Adaptation Plan (BCCSAP) 2009 will have to be a priority issue; and new policy options and actions should ensure that cutting edge technologies are embedded in integrated farming options, and should provide backward-forward linkage, diversification, farmer market links and post-harvest loss and value addition so as to provide additional stimulus for farmers' income.

Commercialization of Agriculture: Crop agriculture is mainly operated yet at subsistence or semi-commercial level, which needs to be commercialized with high value crops such as aromatic rice, vegetables and fruit production and processing. Good agricultural practices need to be employed for production and post-harvest management. Meanwhile, agriculture has started to transform from subsistence mode in the past to semi commercial level at the current stage. In the wave of globalization, small holders need to be enabled to integrate in the markets to effectively contribute to the production of high value crops. To this effect, they need better access to credit and other agricultural services - such as extension, information and local market infrastructures and services. Most importantly there needs to be more private participation and investments in the agriculture value chain development. Fair price and market access to encourage farmers will be ensured to further intensify jute production in order to satisfy domestic and export demand.

Agriculture, as defined by the URAoA (Uruguay Round Agreement on Agriculture), does not cover most activities that are commonly covered under the agricultural sector in Bangladesh.⁶⁷ While agriculture, as defined in Bangladesh, constitutes 25 percent of the country's international trade, the URAoA-defined agriculture constitutes only about half of that. Moreover, the entire URAoA-defined agriculture is unimportant for Bangladesh as far as export trade is

⁶⁷The agricultural sector in Bangladesh consists of four subsectors: crops, livestock, fisheries, and forestry. The URAoA-defined agriculture excludes fish and fish products as well as jute, a major crop of the country, while it includes certain tree products, which are normally not included in agriculture in Bangladesh.

concerned.⁶⁸ For Bangladesh, agricultural imports appear to be more important as imports soared under a liberalized trade regime in recent years. Domestic producers are coming under increasing pressures from cheap imports from abroad. Also a long porous border with India enables illegal imports of many agricultural commodities to pour into Bangladesh all year round.⁶⁹

Over the years Bangladesh has fulfilled most of the commitments or requirements of the WTO. The agricultural trade regime was liberalized much further under the auspices of the SAP and ESAP than what was required under the WTO. Major amber box support measures in fertilizer, irrigation, and seed production were eliminated. Existing price supports and trade distortionary subsidies are well within the limits of the WTO. In some cases, they may well be increased without violating the provisions of the WTO. Export subsidies/support is minimal. Only a few quantitative restrictions still exist, but their role is not substantial. The role of the state trading organizations has been trimmed down to bare minimum. Bangladesh, however, needs to put a tariff on the remaining quantitative restrictions in agricultural trade, because tariffication would presumably benefit more than harm the economy.⁷⁰

Bangladesh's concern in respect to new generation issues, such as trade-related environment and labor issues, food safety, and investment and competition policy, are largely similar to those of other developing countries. Bangladesh joins other

⁶⁸Except tea, all other agricultural export commodities—such as jute and jute products, fish and fish products—are excluded from the domain of URAoA agriculture.

⁶⁹C.A.F Dowlah, 'Bangladesh' in Merlinda D. Ingco (ed), *Agriculture, Trade, and the WTO in South Asia*

(World Bank, 2003) 38-95.

⁷⁰ Ibid.

developing countries in asserting that the multilateral trading system under WTO should protect the interests of the developing countries, which are dependent on the industrialized world for knowledge and technology. Bangladesh argues that the bargaining power should be shifted away from producers of knowledge toward the developing countries to bridge the gap in knowledge and promote transfer of technology. Moreover, Bangladesh is also concerned, as are other developing countries, that the industrialized world, especially the United States and the European Union countries, still maintain high government support for their farmers while pushing for further lowering of tariffs and subsidies in the developing countries.⁷¹

4.10 Regional Integration and Free Trade Agreements in South Asia

Intra-regional trade is not a novel concept for the South Asian economies. That being said, they are indeed new to the concepts of regionalism and regionalization.⁷² Around the time of their independence (in 1948) almost a-fifth (19 percent) of their total trade was intra-regional. This was the period when their tariff barriers and NTBs were yet to be raised and as legacy of the Great Depression of the 1930s the tariff barriers and NTBs in the industrial economies were high. Historically, this was the high point of intra-regional trade in South Asia. After this point it went into a monotonic decline; it was 4 percent of their total trade in 1960 and 2 percent in 1970. With minor fluctuations, it continued to remain by and large at this level (2.4 percent) until 1990. As a proportion of total

⁷¹ Ibid.

⁷² Dilip K Das, 'Market-driven regionalization in Asia' (2005) *Asian Economy and Finance: A Post-Crisis Perspective* 77.

trade it began to rise slowly to reach approximately 4 percent in 1999.⁷³

South Asia is increasingly becoming an important and large market in the global economy, with the region witnessing steady economic growth accompanied by a growing large, young and dynamic work force and a middle-class population. Since the 1990s, the region has registered an annual average output growth of 6 per cent, while consideration of the past decade (2000-10) alone would result in an even more impressive performance of about 7.5 per cent, which is much higher than the corresponding global GDP growth of 2.8 per cent and more than one percentage point higher than the average growth achieved in developing countries as a group. This remarkable economic growth has contributed to declining poverty incidence and improvements in other socio-economic indicators. Nevertheless South Asia continues to render one of the highest poverty levels in the world: a recent World Bank estimate suggests more than 500 million people in the region is living on less than US\$1.25 a day.⁷⁴

There is a broad-based consensus that promotion of regional integration and co-operation including enhanced intra-regional trade will constitute an effective avenue for accelerating economic growth, employment generation and poverty reduction, advancing the well-being of South Asian citizens. In fact, the issue of regional integration and co-operation has been on the agenda of policy-makers and under active consideration for a long time, as reflected in the establishment of the South Asian Association for Regional Economic Cooperation (SAARC) in

⁷³ Garry Pursell and Nihal Pitigala, 'Trade agreements in the South Asia region' (2001) *The World Bank, Mimeo (August)*. Washington, DC.

⁷⁴ Mohammad A Razzaque and Yurendra Basnett, *Regional integration in South Asia: Trends, challenges and prospects* (Commonwealth Secretariat, 2014) 517.

1985; the setting up of the SAARC Preferential Trading Arrangement (SAPTA); and finally moving towards the implementation of a South Asian Free Trade Area (SAFTA) by 2016.⁷⁵

Notwithstanding these developments, South Asia remains among the least integrated regions. The proportion of intra-regional trade in South Asia to SAARC countries' global trade, currently estimated to be 5 per cent, appears to be the lowest among major regional integration schemes.² Unilateral trade liberalization and implementation of various bilateral deals over the past decades have resulted in a significant opening up of individual South Asian economies, as evident in the region's rapid rise in trade orientation, measured by trade-to-GDP ratio, from 19 per cent in 1990 to 52 percent in 2012. But this has not translated into raising the significance of intra-regional trade.⁷⁶

Although it is evident that South Asian global exports grew at a rate of 18 percent per annum, the countries are reluctant to do business with each other. Given their comparative advantages and established market niches, most South Asian countries are trading more with global partners. Particularly as the relatively large countries in the region - Bangladesh, India and Pakistan - manage to achieve relatively high export growth from world markets, the share of intra-regional trade can be low. Nonetheless, in absolute terms, the current volume of intra-regional trade is abysmally low. If the region can achieve an annual average growth of intra-regional exports of 10 per cent, which is quite realistic given recent performance and current low base of trade volume in the region, such

⁷⁵ Ibid.

⁷⁶ Ibid.

exports will reach more than US\$40 billion by 2020 and US\$110 billion by 2030. This suggests that enormous potential exists for regional trade.

Since the Uruguay Round (1986-94) of multilateral trade negotiations (MTNs) India and during the Doha Round (2001-2006) of MTNs Bangladesh and Pakistan begun participating in the multilateral trade negotiation with some zeal. During the Doha Round negotiations of the World Trade Organization (WTO), India was one of the leaders of the Group-of-Twenty (G-20) economies, which represented the medium and large developing economies and influenced the rule-making process of the multilateral trade regime. Similarly, Bangladesh played an effective role on behalf of the LDCs in the Doha Round.⁷⁷ Intra-regional trade and regional integration endeavors in South Asian economies continued to be very low even during the Uruguay Round, albeit they picked up markedly during the Doha Round. However, trade agreements were primarily aiming at improving the economic wellbeing of the poor by focusing on the structural transformation of agricultural economies.⁷⁸

A related issue is promoting exports and thereby regional integration through trade-policy-induced mechanisms. This is being attempted through the implementation of SAFTA, which will dismantle tariffs imposed on goods' movements across regional borders. However, it is worth noting that not all trade taking place globally among countries belonging to the same preferential arrangements is actually preferential in nature. Indeed, only a very small proportion of within-preferential trading arrangement (PTA) trade, 16 per cent,

⁷⁷ Due to serious disagreements among the participating members and differences in negotiating positions the Doha Round of MTNs was formally suspended on July 24, 2006.

⁷⁸ Dilip K Das, *The evolving global trade architecture* (Edward Elgar Publishing, 2007) 209.

can be attributed to preferences exchanged under their regional integration initiatives, according to the 2011 World Trade Report of the World Trade Organization (WTO). In other words, more than four-fifths of the trade among regional partner countries tends to take place, not because of tariff preferences, but on the basis of the most favoured nation (MFN) principle, even when they belong to a particular trading bloc. This is because many countries belonging to PTAs are actually 'natural trading partners'. There are numerous empirical studies to show that distance between countries (as reflected in the transportation costs) has significantly large negative effects on trade and that, potentially, neighbours are able to engage in trading activities with relatively low transportation and transaction costs.⁷⁹

By contrast, it is widely recognized that even without tariffs, countries in South Asia have formidable trade barriers between themselves on regional trade flows. Such restrictions are widespread and cover all spectrums of cross-country flows including goods, services and capital movement. South Asian nations tend to impose more stringent barriers on intra-regional trade flows compared to their imports coming from the rest of the world. This is particularly true when goods are channeled through land borders, which are exclusively accessible by neighboring countries. These barriers, coupled with weak trade facilitation measures at ports and land borders and poor transport infrastructure in carrying goods, make the cost of trading so excessive that South Asian countries are often more like distant trading partners rather than neighbors.⁸⁰

⁷⁹ Razzaque and Basnett, above n 74.

⁸⁰ Ibid.

4.10.1 Trends in Agricultural Inputs: SAARC

Agricultural inputs are categorized into two types: consumable inputs, which have a short shelf life (like agrochemicals, seeds, diesel/oil, electricity, labour, etc.) and capital inputs which have a comparatively longer shelf life and are capital intensive (like land, agricultural machinery, implements, credit etc.). In South Asian countries, many of these key inputs are locally produced and procured with due help from the private sector. But, export restrictions and trading bans isolate local markets and give small farmers little incentive to expand production for the next season, limiting the potential supply required to meet the national trade deficit or surplus. However, organizations like the fertilizer and seed associations in SAARC nations have started extending help to negotiate price subsidies and tariff rates for intra-regional trade in specific products. This has shown to actively promote self-sufficiency in food and agricultural production in the countries through proper use of fertilizer and other agricultural inputs and thereby improving the economic and social aspect for small holder farmers. Hence, agricultural input trade matters for food security everywhere.⁸¹

⁸¹ Susan Mathew, 'Agricultural Input Trade and Food Security in South Asia' CUTS International.2015, 14.

Table 4.8: Total Trade Share of Agricultural Inputs to SAARC Countries during 2010-2014

Country share in SAARC import	Imported Value (%)			
	Cereal Seeds	Fertilisers	Pesticides	Agro-machinery
Afghanistan	1.06	0.12	0.04	0.95
Bangladesh	12.42	12.32	10.41	19.01
Bhutan	0.03	0.01	0.03	0.12
India	0.06	74.66	71.14	56.94
Maldives	0.03	0.01	0.13	0.04
Nepal	20.65	0.99	1.21	4.01
Pakistan	48.08	8.69	12.12	11.91
Sri Lanka	17.68	3.19	4.93	7.02
SAARC Import Share In the World	2.44	12.30	3.51	1.53
Total World Import (US\$ Thousand)	31894070.00	374781892.00	154978886.00	155941066.00

Source: ITC Trade Map⁸²

The characteristics of smallholder farming in South Asia are evident in the total import trade share of agricultural inputs of SAARC countries from 2010 to 2014. Overall, the import share of the SAARC countries in the world trade of agricultural input is maximum in fertilizers with 12.30 percent and minimum in agro machinery with a nominal 1.53 percent. This trend can be explained by the possibility that smallholder farming demands high fertilizer inputs for maximizing production from a restricted area and also less usage of machinery due to fragmented small farm sizes. Among the SAARC countries, India leads the import market share with more than 56 percent imports in all the inputs except cereal seeds. This establishes that, combined with the growing population

⁸² http://www.trademap.org/Product_SelCountry_TS.aspx?nvpm=1||18| (Accessed on 17 July 2016).

demand, India has a substantial market for majority of the agricultural inputs. The data also shows that for cereal seeds, Pakistan has the largest import market share (48.08 percent) among the SAARC countries.

Comparing the import market share with the export market share for agricultural inputs yields interesting results. Table 4.9 shows the total export trade share of agricultural inputs of SAARC countries from 2010 to 2014. Overall, the export share of the SAARC countries in the world trade of agricultural input is maximum in pesticides with 5.61 percent and minimum in fertilizers with a nominal 0.13 percent. Among the SAARC countries, India leads the export market share with more than 82 percent exports in all the inputs considered in this study. The maximum exports in India have been observed in pesticides with 99.72 percent and minimum exports in fertilizers with 82.28 percent market share. Bangladesh seems to have close to five times less export market shares in fertilizers with only 16.69 percent. Maldives has not recorded any export trade in any of the agricultural inputs considered for this paper. The rest of the countries recorded marginal export trade shares for all the agricultural inputs.⁸³

⁸³ Mathew, above n 81.

Table 4.9: Total Trade Share of Agricultural Inputs from SAARC Countries during 2010-2014

Country share in SAARC export	Exported Value (%)			
	Cereal Seeds	Fertilisers	Pesticides	Agro machinery
Afghanistan	0.02	0.01	0.00	0.0002
Bangladesh	0.12	16.69	0.004	0.09
Bhutan	0.00	0.00	0.00	0.00
India	87.34	82.28	99.72	98.15
Maldives	0.00	0.00	0.00	0.00
Nepal	0.01	0.04	0.01	0.02
Pakistan	12.40	0.19	0.23	1.66
Sri Lanka	0.12	0.80	0.05	0.08
SAARC Export Share In the World	2.13	0.13	5.61	0.34
Total World Export (US\$ Thousand)	24572001.00	341428434.00	147549626.00	158389318.00

Source: ITC Trade Map⁸⁴

During the past decade, SAARC has launched notable initiatives for greater integration through liberalization, but has achieved little in terms of intraregional trade.⁸⁵ The share of intra-SAARC agricultural trade is much higher for all SAARC countries (except Nepal) as compared to the proportion of intra-SAARC total trade. South Asia has become a major trade destination for agricultural trade for most of the SAARC countries due to the inherent characteristics of perishability, quality and similarities of taste and preferences of SAARC customer

⁸⁴ Above n 82.

⁸⁵ AID ADB–Aus, 'Study on Intraregional Trade and Investment in South Asia' (2009). Manila.
<<http://www.adb.org/sites/default/files/publication/28658/intraregional-trade-investment.pdf>>
(Accessed on 11 Aug 2014).

base. Intra-SAARC agricultural trade ranges from 7 per cent in India to 95 per cent in Bhutan.⁸⁶

4.10.2 Gains from SAPTA and SAFTA

One of the first few major regional integration initiatives in South Asia was launched in 1995 when the South Asian for Regional Cooperation (SAARC) Preferential Trading Arrangement (SAPTA) was signed. It took more than 10 years for SAARC member countries to establish a South Asian Free Trade Area (SAFTA), the full implementation of which will result in the abolition of custom duties on trade goods within South Asia by 2016. The transition towards deeper regional integration schemes has taken place in parallel to the establishment of unilateral trade liberalization programmes in individual South Asian countries.

The SAFTA mechanism is expected to provide member countries with improved market access in the region, helping boost their exports and thereby augmenting the significance of intra-regional trade and the associated investment flows. SAFTA is likely to generate immediate trading opportunities triggered by tariff differentials between individual members' most favoured nations (MFN) vis-à-vis regional tariff regimes, giving rise to so-called static gain. The prospect of the expansion of intra-regional trade is argued to be not very substantial. This concern is further backed up by the fact that all South Asian countries rely heavily on the Western markets, which are the principal detriments of demand for

⁸⁶ Raka Saxena et al, 'Agricultural Trade Structure and Linkages in SAARC: An Empirical Investigation' (2015) 28(2) *Agricultural Economics Research Review* 311.

exports from the region. It is also feared that SAFTA may lead to substantial trade diversion for some countries.⁸⁷

The critics of SAFTA often alleged that, through this regional trading arrangement Indian exporters may find a 'captive market' for their exporters in Bangladesh.⁸⁸ As a result, even when an importing country, e.g. Bangladesh, reduces the tariff for Indian products, the prices of those products may not fall by the full extent of regional tariff cuts, as the Indian exporters can benefit from increased margins keeping prices up to the level at which the products from the rest of the world are sold in the domestic market.⁸⁹ Baysan et al.⁹⁰ argued that the economic case for SAFTA was relatively weak. The authors pointed out three important features of the South Asian economies that might make an internal free trade agreement (FTA) economically unattractive. First, these economies are relatively small in relation to global economy, in terms of both GDP and trade flow. The second reason relates to the relatively high levels of protection among the SAARC. The third and final reason that the economic case is weak for SAFTA concerns the political economy of the selection of excluded sectors and rules of origin (RoO).

In contrast to the arguments, policy makers and many business people in South Asia, and especially in Bangladesh, are rather optimistic about SAFTA. They see

⁸⁷ Razzaque and Basnett, above n 74.

⁸⁸ Garry Pursell and Zaidi Sattar, *India-Bangladesh Bilateral Trade and Potential Free Trade Agreement* (World Bank Office, Dhaka, 2006).

⁸⁹ Selim Raihan and Mohammad A Razzaque, 'Assessing Gains from SAFTA' (2014) *Regional Integration in South Asia: Trends, Challenges and Prospects* 38.

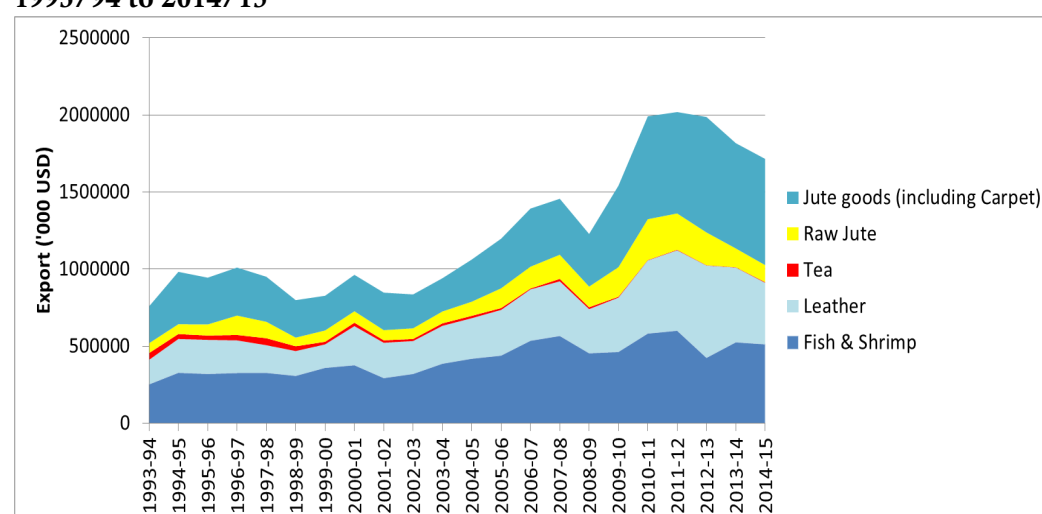
⁹⁰ Tercan Baysan, Arvind Panagariya and Nihal Pitigala, 'Preferential Trading in South Asia' (2006)(3813) *World Bank Policy Research Working Paper*, 29.

SAFTA as having significant potential to expand trade among the member countries. It is also hoped that the member countries will be able to gain significantly by having greater market access in other South Asian countries, and especially in India.

4.11 Global Agricultural Trade Flows: Bangladesh Situation

Bangladesh has transformed itself from an aid-dependent nation to a trade dependent nation over the last four decades. Value of both agricultural exports and imports has increased substantially over time. In the early seventies raw jute, tea and leather were main agricultural products for exports. Over time it has changed. During the last two decades (FY1996 to FY2015), value of export of primary and processed agricultural products has tripled, increased from 801 million dollars to 2420 million dollars. During this period, export of frozen foods has increased by 81percent while leather export increased by 88 percent. Export of jute and jute products quadrupled, increased from 220 million dollars to 868.53 million dollars. During the Sixth FYP, export of all agricultural commodities increased by 49 percent, from 1622 million dollars in FY2010 to 2420 million dollars in FY2015.

Figure 4.3: Trends in export of selected agricultural commodities by Bangladesh, 1993/94 to 2014/15



Source: Bangladesh Bank⁹¹

Export market faces global competition for some agricultural commodities like rice, jute, sugar, fruits and vegetables. In spite of that Bangladesh has a growing track record in export. More than 100 fruits and vegetables are exported from Bangladesh. Export of fresh fruits and vegetables from Bangladesh significantly increased from \$ 9.5 million in 1993-94 to \$182.2 million in 2012-13. Exports of fruits and vegetables are targeted mainly for the ethnic market (of Bangladeshis living abroad).

Jute has traditionally been an important export item from Bangladesh for many years. New technologies are becoming available on diversified use of jute towards value addition, and for making high grade value added pulp from inferior quality of jute (SMR jute, jute cutting). Such pulp is better than imported conifer pulp. This pulp has good potential for export for making currency paper, document paper, cigarette paper etc. The export potential of such pulp can be explored

⁹¹ Annual Report (2015), Bangladesh Bank. < <https://www.bb.org.bd/pub/> > (Accessed on 17 July 2016).

through Bangladesh missions in different countries. However, a mill would still need to be established to utilize new jute pulping technologies.

Table 4.10: Export performance of fresh fruits and vegetables in Bangladesh

Fiscal Year	Quantity exported (MT)	Export Value (Million US\$)	Export growth
2004-2005	29100	46.41	--
2005-2006	19460	39.59	-14.69
2006-2007	19805	40.53	+2.37
2007-2008	33626	69.12	+70.54
2008-2009	24670	50.71	-26.63
2009-2010	29370	64.21	+26.62
2010-2011	48428	109.41	+70.39
2011-2012	59573*	134.59	+23.01
2012-2013	80660*	182.23	+35.39

Source: Planning Commission, Bangladesh⁹²

Exporting rice in years of surplus production is an option to provide incentives to farmers. Since rice production in the country enjoys substantial amount of direct and indirect subsidies⁹³, the benefits of the subsidies would partly accrue to the foreign buyers of exported rice. The Government can lift ban on export of rice up to certain limit so that the farmers are not induced to produce rice beyond domestic consumption requirements, drawing on public financial and natural resources. The alternative option is to scale up domestic procurement to preserve farmers' interest during surplus production and accumulate stock to be distributed in the following year with possible price hike. This will require expansion of

⁹² Sixth Five Year Plan, Bangladesh Planning Commission.
<http://www.plancomm.gov.bd/ecnec/> (Accessed on 17 Aug 2016).

⁹³ While fertilizer prices include a good amount of direct subsidy, free extension services fall within the category of indirect subsidy in agricultural production.

improved storage facilities for preserving grains for more than one year.⁹⁴ The recent Government initiative to expand modern storage facilities by building grain silos in strategic locations is a right move in this direction.

After liberation Bangladesh started exporting fish and fisheries products in the international market. Initially it was exporting fresh fish or chilled fish in neighboring countries and gradually entered the international market with value added products with frozen fish (shrimp/prawn) and dried fish. Currently Bangladesh is exporting several items of fish and fisheries product to EU, US, Russia, Asian and African markets. The exported fisheries commodities are shown in Table 4.11.

Table 4.11: Export markets for different types of fish and fish products

Commodity	Main Market	Major type/ species
Frozen Shrimp & Prawn	EU, USA, Japan, Russia, Asia	Golda, Bagda and Misc. shrimp & prawn
Value added shrimp & prawn		
Chilled and Iced (fresh) Fish	India, Singapore, Hongkong, Middle East	Hilsa, Carp, Catfish, eel and Misc
Frozen Fish (Fresh Water)	EU, USA, Africa, Middle East, Asia	Carp, catfish, Misc
Frozen Fish (Salt Water)		Seabass, Perch, eel, Misc
Dried fisheries product	EU, USA, Middle East	Misc fresh and marine water
Salted and dehydrated fish	Asia (China, Hongkong, Singapore)	Carp
Live Crab and Fish		Mud crab and eel
Fish Scale and Crustacean Shell	China	Shrimp/prawn carapace, crab shell and fish scale

Source: Ministry of Agriculture

⁹⁴ FPMU, *National Food Policy Plan of Action and Country Investment Plan Monitoring Report 2014*. Food Planning and Monitoring Unit (FPMU). Ministry of Food., Government of the People's Republic of Bangladesh, Dhaka.

Table 4.12: Year-wise annual value of export (in crore taka) of fish and fish products from Bangladesh

Year	Frozen shrimp	Frozen fish	Dry fish	Salted fish	Crab/ Eel	Shark fin/ Fish maws	Others	Total
1999-00	1612.2	137.19	3.65	25.96	1.44	31.17		1811.61
2000-01	1885.2	94.89	2.02	27.73	2.33	20.63		2032.8
2001-02	1447.8	137.39	8.32	9.53	7.07	27.07		1637.18
2002-03	1719.9	158.64	7.02	19.12	14.58	22.35		1941.61
2003-04	2152.8	202.24	4.16	1.38	1.39	1.53		2363.5
2004-05	2281.6	256.2	3.71	28.97	0.86	0.39		2571.73
2005-06	2698.4	294.14	2.19	19.84	12.95	0.8	1.57	3029.89
2006-07	2992.3	325.9	1.34	12.8	15.48	4.11	0.93	3352.86
2007-08	2863.9	495.46	2.67	26.97	4.88	1.82	0.56	3396.26
2008-09	2744.1	450.89	11.99	3.92	11.98	1.77	18.736	3243.386
2009-10	2885.2	458.11	25.06	0	10.41	12.66	17.07	3408.51
2010-11	3568.2	911.05	5.57	30.86	54.11	0	34.015	4603.805
2011-12	3640.2	916.92	9.43	27.46	95.77	0	14.18	4703.96
2012-13	3376.2	563.22	36.03	0	169.49	0.9	13.93	4159.77

Source: Fisheries Resources Survey System (FRSS), Department of Fisheries⁹⁵

Table 4.12 shows changes in the values of total fisheries exports disaggregated by types of products. The total value of fisheries export from Bangladesh increased from Taka 1812 crore in 1999-00 to Taka 4160 crore in 2012-13, which was more than two fold increase. During 2011-12, Bangladesh earned Taka 4703.96 crore from fisheries export. The decline occurred due to decrease in shrimp and frozen fish export. Shrimp occupies the lion's share of fisheries export. In 2012-13, frozen shrimp/prawn contributed 81.16% of total earnings from fisheries export. Export earnings from frozen and chilled fish increased from Taka 137.19 crore in 1999-00 to Taka 916.92 crore in 2011-12, but reduced to Taka 563.22 crore in 2012-13. Export of other fisheries items (e.g. dry fish, salted/dehydrated fish, crab/eel and shark fin/fish maws) are not of any substantial magnitudes.

⁹⁵ Fisheries Statistical Yearbook of Bangladesh 2014-2015.

<<http://document.bdfish.org/2015/08/fisheries-statistical-yearbook-of-bangladesh-2014-2015/>> (Accessed on 17 July 2016).

Bangladesh has limited scope for export of forest products. There is however some potential in exporting agar wood and agar oil, decorative products with wood and bamboo and herbal medicine, etc. Agar wood is one of the most expensive non-timber wood products of the world. Bangladesh is producing three major products namely agar-wood, agar-oil and agar dust/powder in agar sector. The wood has multidimensional uses in the production of perfume, cosmetics and medicine. Major buyers of agar wood and oil are the Middle Eastern countries (UAE, KSA and other Arabian countries) and North East Asian countries (Taiwan, Japan and Korean Republic). International market price of Agar wood chips is up to US \$ 6,000 per kilogram based on its quality. Distilled agar oil is valued as high as US\$ 30,000 per kilogram and the wood itself is valued up to US\$ 10,000 per kilogram. There are about 100 enterprises producing agar wood and agar-oil in Bangladesh, mainly based at Baralekha upzila of Mouvlibazar district.⁹⁶

Import of Agricultural commodities: Bangladesh is a net importer of both rice and wheat even in normal years. It is also a net importer of pulses, edible oils, spices, fruits, sugar, milk and milk products. Prior to 1993, private sector was not allowed to import food grains. Only government agencies used to import rice and wheat. Since 1993, the government allowed private sector to import food grains. Most of the imports of rice and wheat are done by the private sector in recent years. The import of rice has declined in normal years but increases substantially in years of floods and cyclones. Import of wheat has increased in recent years due

⁹⁶ Uttam Dev, 'Agricultural Transformation in Bangladesh: Extent, Drivers and Implications' (Paper presented at the BAEA 15th Annual Conference, BARC Auditorium, Dhaka, Bangladesh, 22-23 January 2016).

to (a) decrease in domestic production (b) substantial reduction in food aid and (c) increase in demand for products made from wheat flour in urban areas. During the last two decades, import of pulses, edible oils, spices, and sugar have been on the rise at a rapid rate to meet the growing demand-supply gap. Value of import of all food items in 2014/15 was about 12 times than that of 1993/94. Total import of food items increased from 408 million dollars to 5.104 billion dollars. Compared to 1993/94, value of total import of food grains (rice and wheat) in 2014/15 was 10.4 times while it was 8.2 times for milk & dairy products, 9.8 times for spices and 14.3 times for pulses. In case of oilseeds, import value was 8.9 times and for edible oil it was 13.1 times than that of 1993/94. On the other hand, total value of sugar import has increased from 13 million dollars to 730 million dollars in 2014/15. Increase in import of sugar is also linked with rise of companies in agro-processing sectors and some of the companies also export processed food items. Liberalized import of food grains helped the country to meet the shortfall in domestic production particularly after the floods in 1998 and 2004. During the Sixth FYP, value of import of all food items has increased by 18 percent, from 4326 million dollars in FY2011 to 5104 million dollars in FY2015.⁹⁷

To reduce the dependency on imports, Bangladesh needs to develop and disseminate labour saving rice production technologies. They need to put emphasis on farm mechanization measures and policies which is beneficial for landless labour, smallholder farmers and youth. Also, Bangladesh has to facilitate

⁹⁷ Ibid.

integration of farm and non-farm activities in rural areas through development of better infrastructure, transport, storage, credit and market access which will ensure higher employment and income in rural areas and stable supply of rice and other agricultural commodities at a lower price.

4.12 Conclusion

Bangladesh agriculture has experienced major structural changes and achieved major successes over the last three and a half decades. Despite having numerous problems and constraints, a quiet agricultural revolution has taken place, which has enabled the country to achieve its national food security in the production of food, grain. Agriculture continues to advance in response to various factors including natural calamities, socio-political changes, population growth, urbanization, new technology, opportunities in the rural non-farm sector and commercialization. Besides government macroeconomic, trade and agricultural pricing policies, which have contributed a major role in shaping price incentives in production and consumption, will continue to be significant determinants of agricultural growth as well. Bangladesh has gained major benefits from trade liberalization in terms of food security for example private sector imports have helped stabilize markets after major production shortfalls. The domestic prices of most agricultural commodities, by keeping near border prices, have also resulted in overall efficiency gains in the agricultural sector.

Bangladesh has made remarkable progress in agricultural development and structural transformation has taken place over the years. Production of various agricultural commodities (crops, livestock, fisheries and agro-forestry) has

increased and diversified. During the Sixth Five Year Plan period, agriculture sector performed well in terms of agricultural production, addressing the challenges of floods and natural calamities, diversification towards high value crops and non-crop agriculture. Specialization among districts in production of various crops, vegetables, pond fish production, poultry and dairy production was observed. Increased rural credit for farm and non-farm sectors and separate credit program for the tenant farmers with opening Bank Accounts for more than 10 million farmers contributed towards financial inclusion of the rural households. More than 70 new varieties and hybrids of different crops were developed and released along with new breeds for poultry during last six years. In FY2015, compared to FY2010, value of exports of agricultural commodities has increased by 49 percent. During the same period, import of agricultural commodities has also increased by 18 percent. Rural economy has diversified and increased dependence on rural non-farm sector for livelihoods was observed. Based on major sources of income and employment, two types of households, farm and nonfarm, have emerged in rural areas. Farm households depend on agriculture for more than 80 percent of the total income. Along with expansion of rural non-farm economy part-time farming has expanded. Part-time farming is going to increase further in the coming years due low per capita availability of land. Increased production and import of agricultural commodities accompanied by targeted distribution of food under social safety net programs increased per capita availability and consumption of food items by both poor and non-poor households. However, inequality exists between poor and non-poor in consumption of nutritious food items such fruits, vegetables, milk, meat and fish items.

Reducing the remaining disincentives for agricultural production will be a necessary part of any future strategy for agricultural growth and rural poverty reduction. Even a liberalized trade policy of Bangladesh would not automatically guarantee increasing incomes for farmers. The policies aimed at increasing production and stabilizing prices should not necessarily rely mainly on price subsidies or large increases in public stocks. Instead, investments in agricultural research and extension service that increase agricultural productivity and efficiency, improvements in post-harvest management and agro-processing, and investments in market infrastructure can complement agricultural price and trade policies and support rapid agricultural growth and increasing farmer earnings in Bangladesh, even in the environment of shifting world prices.

Promoting regional integration in South Asia entails efforts in key areas such as infrastructure, trade facilitation, investment, governance and implementation. The most critical element of the integration process in South Asia is building confidence and filling the huge trust deficit between the countries. Economic interests (i.e. the potential of increasing trade and investment) and strategic interests (i.e. better positioning to have a say in global governance) have the potential of uniting South Asian countries, sidelining political differences to pursue regional integration. With increased political will and commitment towards integration, greater efforts will have to be made towards integration. In this respect, India will have to take on disproportionately greater responsibility while the other South Asian countries will have to commit to cooperation and openness. SAARC needs to be reinforced and be a professionally staffed institution. Like the ASEAN, SAARC needs to assume a central role in creating conditions for deeper integration by promoting investment, trade, transparency,

harmonizing standards and simplifying procedures through a multilateral process. Additionally, measures of soft diplomacy should be adequately utilized to mould public opinion, bring South Asians closer and create an understanding of the value of increasing regional integration and cooperation. Agreements such as the SAFTA need to be made more meaningful with appropriate emphasis on non-tariff barriers and strict timelines for tariff reduction.

Within the above context, several questions arise. Firstly, why Bangladeshi agricultural exports have declined while imports have risen, and what could the main factors be that led to these changes? Secondly, how can agriculture play a role in improving the situation, and what factors influence agriculture to play a more prominent role? The third question pertains to the role of trade and government's open trade policy. The final analysis looks at how trade policy in the agricultural sector is the foundation for achieving economic growth objectives. Further we need to provide answers in relation to Bangladesh's engrossment in open trade regimes especially in the agricultural sub-sector and whether agricultural trade liberalization could make an impact in overall economic growth. Also, it is a necessity to find out whether the current policies are sufficiently sequenced and linked to an open trade regime.

Therefore, this study seeks to assess how Bangladesh's agricultural sector benefited from trade liberalization and how the sector should be improved for local food security, poverty reduction and agricultural trade induced export income. Besides identifying potentially new export opportunities and formulating appropriate strategies and policies, Bangladesh needs to carefully monitor and effectively participate in the trade negotiations, since their outcome will not only

have important implications for its future global trade, but also affect its international competitiveness in existing and potential export sectors. At the same time, it would be necessary to undertake detailed sectoral and sub-sectoral studies to identify export opportunities based on revealed comparative advantage and identify supply-side constraints, including access to infrastructure and credit. This study also considers the question of which trading agreement bloc should give more emphasis in order to promote economic growth, poverty reduction and food security. This would be discussed further in Chapter 6.

Chapter Five

Agricultural Trade Issues in the WTO and the Doha Round: Bangladesh in Context

5.1 Introduction

The chapter provides a succinct background paper on the WTO and an overview of the contents of the Uruguay Round and the Doha Round agreements. The focus of this study is the negotiating dynamic of Bangladesh of the World Trade Organization's (WTO) failed Doha Round. The author also reviews the recent institutional changes created by the new agreements and highlights key problems in their implementation. Also, it provides a basis for further analysis and discussion on the steps taken by developing countries to strengthen their bargaining positions, through consultations in regional and interregional groups and issue-based coalitions.

5.2 The Political and Intellectual Origin of WTO: A Brief History

The WTO represents the institutionalization of one of the primary components of the liberal model of development: the reduction of international trade barriers. The epistemic basis for most contemporary trade agreements is rooted in the economic theories of classical liberal scholars such as David Hume, Adam Smith, and David Ricardo.¹ Specifically, countries entering into trade agreements are

¹ Arie Reich, 'From Diplomacy to Law: The Juridicization of International Trade Relations in the Framework of GATT and Israel's Free Trade Agreements' (1999) 22 *Tel Aviv UL Rev.* 781; Michael J Trebilcock and Robert Howse, *The regulation of international trade* (Psychology Press,

often guided by the logic of Ricardo's theory of comparative advantage.² The theory of comparative advantage puts forth that each country should focus on producing goods with the lowest associated opportunity costs.³ That is to say, although some countries will not have an absolute advantage in any given area of production (e.g.: there is no good that they are able to produce using fewer inputs than other countries), there will still be some goods that they can produce more efficiently than others.⁴ By focusing productive efforts on those goods that it can make most efficiently, it is proposed that a country will maximize total output.⁵

Free trade is a central component of the theory of comparative advantage.⁶ This theory proposes that a country can make the best use of its resources and increase prosperity by concentrating on producing those goods that it can make most efficiently, and then trading with other countries to obtain what is not available domestically.⁷ Therefore, free trade allows domestic producers to specialize in order to maximize output, while simultaneously permitting domestic consumers to choose from a wide selection of goods that can be purchased at a relatively cheaper price than domestically produced alternatives.⁸ For these reasons, free trade is said to promote a more efficient division of labour and allocation of

2005); Simon Lester, Bryan Mercurio and Arwel Davies, *World trade law: text, materials and commentary* (Bloomsbury Publishing, 2012).

² Trebilcock and Howse, above n 1.

³ Ibid. John Black, Nigar Hashimzade and Gareth Myles, *A dictionary of economics* (OUP Oxford, 2012) 461.

⁴ Black, Hashimzade and Myles, above n 3.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

resources, thereby increasing economic prosperity and raising the standard of living in all participating economies.⁹

Nearing the end of the Second World War, realizing that military victory was imminent, the United States and Britain began crafting policies designed to rebuild and reshape the world economy.¹⁰ In 1944, they entered into the Bretton Woods Agreement, which provided the framework for three multilateral institutions: the IMF, the International Bank for Reconstruction and Development (IBRD), or World Bank, and the International Trade Organization (ITO).¹¹ The creation of the IMF and the World Bank took place soon after the signing of the Bretton Woods Agreement; however, the ITO was never established.¹²

5.2.1 The General Agreement on Tariffs and Trade (GATT)

Between 1948 and 1994, the General Agreement on Tariffs and Trade (GATT)¹³ served as the contractual foundation for multilateral trade negotiations.¹⁴ Originally intended as a non-binding provisional agreement and precursor to the ITO, the GATT was far less extensive in scope than the eventual WTO

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid. 23-24

¹² Ibid.

¹³ *General Agreement on Tariffs and Trade*, opened for signature 30 October 1947, 58 UNTS 187 (entered into force 1 January 1948).

¹⁴ Reich, above n 1, 786-788.

Agreements.¹⁵ The GATT lacked clear rules governing non-tariff barriers to trade,¹⁶ and only covered a small and narrowly defined set of subsidies.¹⁷ In addition, disputes about the terms of the contract were often resolved through negotiation and diplomacy between the Contracting Parties.¹⁸ Under the GATT, international trade in agricultural goods was not subject to a coherent set of regulations at the multilateral level.¹⁹ While some provisions in the GATT were applicable to trade in agriculture,²⁰ in practice, these proved difficult to enforce.²¹

Domestic political realities encouraged governments to take measures to protect producers, regulate food price stability, and promote self-sufficiency in food

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid.789-791.

¹⁸ Ibid.794-799;Trebilcock and Howse, above n 2, 174-175;Lester, Mercurio and Davies, above n 1, 183. The terms of the GATT required the consensus of all Contracting Parties (including the approval of those disaffected by the decision) before a dispute panel ruling came into force. Because it was difficult to achieve consensus on matters related to agriculture, it was difficult to enforce the terms of the GATT that applied to trade in agricultural goods.

¹⁹ Reich, above n 1,435-436; according to Trbilcock et al., during the time the GATT was being negotiated the US maintained aggressive subsidy programs aimed at stabilising food prices and supporting producers. These subsidy programs were initiated in the 1930's, during the aftermath of the Great Depression. Had the terms of GATT infringed upon these measures, it is unlikely that they would have signed the agreement. This is evidenced by the US's subsequent actions as a Contracting Party to the GATT. Facing the prospect of having to reduce certain export on subsidies dairy products, the United States threatened to withdraw from the Agreement until it was granted an indefinite waiver from GATT restrictions on agricultural export subsidies in 1955. This made it difficult to promote adherence to the conditions of export subsidy restrictions amongst the other Contracting Parties.

²⁰ Ibid.435-438; for example, the regulations regarding quantitative restrictions contained in Article XI of the GATT applied, with some exceptions, to agricultural goods. The regulations regarding export subsidies contained in GATT XVI(2)-(5) also applied to agricultural products, if said subsidies had the effect of harming another Contracting Party's market share of the trade in said product.

²¹ Ibid.345-346.

production.²² As such, many states were unwilling to limit their sovereignty over the agricultural sector.²³ Conveniently, the GATT dispute resolution system allowed any Contracting Party to veto the adoption of any Panel resolution that might negatively affect their interests.²⁴ Accordingly, countries seeking to protect their agricultural sectors could (and often did) quash interpretations of the GATT provisions that would have required agricultural support reductions or market access concessions.²⁵

5.2.2 The Development of WTO

The WTO rule-based trading system has evolved gradually over the period of nearly six decades and is in the process of continuous evolution. The first steps towards adopting rules that should govern trade in goods were taken in 1948 when the General Agreement on Tariffs and Trade (GATT) was adopted. Since then, a number of associate agreements, clarifying the rules of the GATT, taking into account the experience of their operation to make them more responsive to the trade and development needs of developing countries have been adopted. In 1995, the scope and the coverage of the rules, which applied until then only to trade in goods, was broadened to include trade in services and trade-related

²² Ibid.440-443.

²³ Ibid.

²⁴ Ibid.435.

²⁵ Ibid.435,437-438; global protection for domestic agricultural sectors was so prolific that it created challenges for GATT Panels trying to estimate the 'real' market price of agricultural goods. This made it difficult to determine whether a policy or program had the effect of distorting trade, and, therefore, complicated the process of enforcing any GATT restrictions on agricultural protection.

aspects of intellectual property. For overseeing the operation of the new broadened system, a new organization, the WTO, was established. As a result, the GATT ceased as a separate entity and became an integral part of the WTO system.

Bangladesh is a founder member of the WTO. In fact, the country is one of the core founder members in sense. Bangladesh signed GATT within one year of independence, on 16 December 1972 and became the 76th member of the organization. There were 128 GATT signatory countries at the time of signing the Marrakesh Agreement in 1994. In fact, signing the GATT has immense importance for Bangladesh, as it is one of the very first international systems where the newly born country gets acceptance. Many predicted that Bangladesh would not be able to join WTO within the first few years of its inception. David Li and Changqi Wu²⁶ showed in their paper that Bangladesh was one of the 14 economies predicted not to join WTO by 1998.²⁷ Nevertheless, after the formal inception of WTO, Bangladesh has gradually become an important representative of the LDC group in the global trade platform.²⁸

The WTO as an organization is responsible for continuous surveillance to monitor the extent to which its member countries adhere to the rules of the multilateral trading system created by it. In addition to providing a legal

²⁶ David D Li and Changqi Wu, *GATT/WTO accession and productivity*, Growth and Productivity in East Asia, NBER-East Asia Seminar on Economics, Volume 13.

²⁷ It was due to very small size economy, very low per capita income, and very negligible trade in 1980s. For instance, the paper mentioned that population size of Bangladesh was around 71 million in 1987 and per capita income was only \$191.

²⁸ Asjadul Kibria, 'Twenty years of WTO and Bangladesh', *The Financial Express* (Dhaka, Bangladesh), 23 April 2015 <<http://print.thefinancialexpress-bd.com/2015/04/23/89866>>. (Accessed on 14 April 2016).

framework for the conduct of international trade and for the settlement of disputes, the multilateral trading system urges member countries to hold negotiations. The primary objective behind holding such negotiations on periodic basis is to promote further liberalization of trade by securing more reductions in tariffs and the removal of non-tariff barriers to trade.

The WTO multilateral system recognizes that the developing countries, particularly those that are of least developed countries, may not be able to derive full benefits from the rule-based system unless positive efforts are taken to secure for them a share in growth of international trade that is commensurate with their needs for economic development. Over the years, a number of special provisions have been added to the legal instruments. These provisions can be broadly grouped into the following three categories:

- Principles, guidelines and rules that should be taken into account in the conduct of negotiations;
- Grant of preferential access to imports from developing countries by developed countries; and
- Extension of special and differential (S&D) treatment to developing countries in the application of the rules.

The structure of the WTO can be thought of as analogous to a 'three branches of government' model. The Ministerial Meeting system is the 'legislature' where alterations and additions to the agreements are negotiated. The permanent member missions in Geneva constitute the WTO General Council, a sort of executive branch, which is headed by the Director- General of the WTO and handles day-to-day administrative matters. And finally, the WTO version of a

judiciary is its Dispute Settlement Mechanism, which includes a Dispute Settlement Body (really, just the General Council meeting under a different name) and a standing panel of seven experts in international trade law called the Appellate Body.²⁹

The Uruguay Round was not meant to be the end state of the WTO. Rather it was seen as a platform, which would be expanded upon in future comprehensive negotiations and agreements. For this reason, the WTO holds what is called a Ministerial Meeting every two years or so, always in a different city. It is attended by member delegations, usually led by a member government's minister of trade or equivalent. It is here that major decisions towards new agreements are taken. Early optimism that this institution would soon replace the Uruguay Round agreements with something even more comprehensive went unfulfilled.³⁰

5.3 Agriculture: From GATT to the WTO

Agriculture has traditionally enjoyed a distinct status in international trade negotiations. After World War II, the idea that agricultural products should not be treated as regular goods gained strength, and this was reflected in the GATT architecture. Given its status as a sector of economic activity that deserved special treatment, so went the idea, agriculture was not to be treated as a bargaining chip at the multilateral negotiating table.

As a consequence, developed country markets for agriculture were in practice

²⁹ Christopher L Blackden, 'Transnational Policy Articulations: India, Agriculture, and the WTO' (2014) 13.

³⁰ Ibid 13.

exempt from implementing GATT; thus, they became the wonderland of subsidies and market barriers. Layers of protectionism accumulated over decades with respect to agriculture, while trade liberalization proceeded in industrial goods.

During the Uruguay Round (the series of negotiations that led to the establishment of the WTO) a number of agreements were developed to encourage regulatory uniformity and market liberalization in the agricultural sector. As a whole, these agreements provide a sophisticated framework for the regulation of agriculture.³¹ In addition to the Agreement on Agriculture (AoA), these include the Agreement on Sanitary and Phytosanitary Measures,³² which establishes common health and safety standards for plant and animal products, and the Agreement on Trade Related Aspects of Intellectual Property Rights³³, which provides protection for plant patents or “breeder’s rights.”³⁴ The AoA is the foremost of the WTO’s agricultural agreements; it is designed to increase market access by reducing barriers to trade and to improve competition by regulating

³¹ Bernd Van der Meulen, 'The global arena of food law: emerging contours of a meta-framework' (2010) 3(4) *Erasmus law review* 217. According to Trebilcock et al., above n 447-450, removing barriers to trade in the agricultural sector was one of the main objectives of the Uruguay Round negotiations (at 447). By this time the United States had become perhaps the most ardent proponent for reigning in domestic support and reducing market access conditions. At the time of the negotiations, both the US and the European Union (EU) operated large support programs for their agricultural producers. However, the US wanted to pursue the abolition of all domestic support within ten years, whereas the EU wanted to retain the capacity to protect their agricultural producers (at 448). The Blair House Agreement, signed by the US and the EU on December 7th, 1993, established a compromise between these two countries, which formed that basis for the regulation of agricultural support under the WTO (at 449-450).

³² *WTO:Agreement on Sanitary and Phytosanitary Measures*, 1867 U.N.T.S 493.

³³ *WTO:Agreement on Trade Related Aspects of Intellectual Property Rights*, (signed and entered into force 1994).

³⁴ Van der Meulen, above n 31.

subsidies.³⁵

One of the functions of the URAA (Uruguay Round Agreement on Agriculture) was to set up the regulatory framework for agricultural subsidies. This is important, because it was and remains one of the most contentious issues in the negotiations. Subsidies are a less obvious trade barrier than tariffs, the policy instrument with which the WTO is most concerned. Tariffs are taxes on trade, primarily on imports, which shield domestic producers from international competition by adding to the cost of imported products. In contrast, subsidies protect domestic producers by paying part of the production costs, thus lowering the price of domestically produced goods in relation to the price of imports. Another major difference, from a fiscal perspective, is that tariffs provide revenue to the government while subsidies cost the government revenue. This is an important difference especially for developing economies, which are less able to foot the bill for expensive subsidies than developed economies, and at the same time are in more need of the revenue that tariffs provide.

It is argued that the GATT policies that regulated agricultural trade before the UR produced extreme distortions in the production, consumption and trade of agricultural and food commodities. These are particularly detrimental to the terms of trade of the developing countries and the LDCs. Because of subsidies farmers receive in the developed countries there has been an increase in the supply of agricultural commodities on the world markets, thereby depressing

³⁵ Ibid.

world prices.³⁶ On the other hand, if domestic and export subsidies are reduced the world prices of agricultural commodities will increase because reduced supplies of commodities will cause the world prices to increase. It needs to be understood, however, that a possible tariff reduction will have a different effect on world prices than subsidy reductions. The reason for this is that a tariff imposed on any commodity increases the cost of that commodity, resulting in increased prices.³⁷

The magnitude of world price changes, which overall are expected to increase, will be determined by the extent of the support (domestic and export subsidies) and protection (tariffs) provided. Logically, the more support and protection are provided, the greater the magnitude of change will be. In summary, it is argued that world prices will increase by approximately 12% relative to the index of other prices if all agricultural trade distortions (domestic and export subsidies and tariffs) are removed. Such an increase in world prices may negatively affect the net importers of agricultural commodities, most of which are developing countries. The reason for this is that an increase in the cost of importing will translate into an increase in the domestic prices of imports. It is important to note that such domestic price increases will affect food security.³⁸ It is necessary to distinguish which of the three pillars distorts trade the most or will account for the

³⁶ Eugenio Díaz-Bonilla, Søren Elkjær Frandsen and Sherman Robinson, *WTO negotiations and agricultural trade liberalization: the effect of developed countries' policies on developing countries* (CABI, 2006).

³⁷ Ibid.

³⁸ Ibid.

biggest proportion of the possible 12% world price increase.³⁹

5.4 Major Agricultural Negotiations within Multilateral Trade

The AoA regulates agricultural market access (tariffs), domestic support (subsidies), and export competition (export subsidies).⁴⁰ The Agreement requires WTO Members to undertake spending reductions in these three areas. These reductions are outlined in Part IV of each Member's Schedule, and are based on an average of the dollar value of a member's aggregate yearly spending during the reference period of 1986-88.⁴¹ The AoA is complex and its terms are subject to a variety of exceptions and conditions. Here, I will simply present a basic overview of the Agreement.

5.4.1 Domestic Subsidies in UR

Domestic subsidies refer to the funding that farmers receive from the government, regardless of commodity market conditions. This kind of funding is most common in the EU, Japan and the USA. It is argued that the EU, Japan and the

³⁹ Xinshen Diao, Paul Dorosh and Shaikh Mahfuzur Rahman, 'Market opportunities for African agriculture: A General Equilibrium examination of demand-side constraints on agricultural growth in East and Southern Africa' (2007).

⁴⁰ Shona Hawkes and Jagjit Kaur Plahe, 'Worlds apart: The WTO's Agreement on Agriculture and the right to food in developing countries' (2013) 34(1) *International Political Science Review* 21.

⁴¹ WTO, Trade Topics: Agriculture: Explanation, online: <https://www.wto.org/english/tratop_e/agric_e/ag_intro00_contents_e.htm> accessed: 2015-01-19; for a complete analysis of the terms of the AoA and an outline of which conditions are set out in the Articles and member Schedules, refer to: WTO, Key elements of the Agreement on Agriculture and related commitments, online: <https://www.wto.org/english/tratop_e/agric_e/ag_intro07_summary_e.htm> (Accessed on 19 Jan 2015).

USA account for approximately 90% of known domestic subsidies. One of the problems with domestic subsidies is that they are generally considered not to have a direct effect on the trading partners of the country providing them. Any form of domestic support that directly influences commodity prices and quantities produced is regarded as detrimental.⁴² According to Beierle⁴³, there are three different boxes or descriptions of domestic subsidies:

- The amber box includes payments to farmers that are linked to quantities or prices, such as those made in the form of market support, input subsidies and direct per-unit payments.
- The blue box is closely related to the amber box in that it entails the adoption of policies that are linked to quantities and prices while limiting production. Although exempt from any disciplinary measures, it is recognized as being trade distorting. Beierle argues that this box was created as the last compromise at the UR to allow the EU to continue with its compensatory payments. At the same time, it also allowed the USA to continue with its annual domestic support, aimed at supporting the amount of farm income used.
- The green box includes decoupled payments to farmers made in terms of the policy goals laid out in the AoA, such as those relating to environmental protection and research and disaster relief. For such

⁴² Beierle Thomas C., 'Agricultural trade liberalization-Uruguay, Doha, and beyond' (2002) 36(6) *Journal of World Trade* 1089.

⁴³ Ibid.

programmes to qualify for the green box they should be publicly funded and must either not distort trade at all or minimally distort trade.

Developing countries promised to cut their spending by 13.3% over a 10-year period while LDCs did not have to reduce their subsidies. There was, however, a loophole in the commitments made with respect to the amber box. The amber box is based on total spending rather than on a product-to-product basis and this resulted in total spending declining significantly while spending on certain products increased. This scenario emerged in Iceland where the total spending on the amber box declined by 27% in 1997 while spending on milk increased by 240%.⁴⁴ It is regretful to note though that even where developing countries are willing and able to grant amber box relief to their farmers, the Uruguay Round Agreements on Agriculture (URAA) only permit them to give such support if they are below the *de minimis*.

The green box does not distort trade; it was therefore not subjected to any reduction commitments. Interestingly, the blue box was also exempt from reduction commitments. The blue box exemption raised a number of questions from developing countries about the fairness of keeping such a box. A reduction in the value of the amber box may be recovered by increasing the allocations to the green box, as was the case with the USA. Developing countries regarded this

⁴⁴ Ibid.

readjustment as a reclassification of the amber box.⁴⁵

5.4.2 Market Access in the UR

Pursuant to the AoA, developed countries were required to reduce tariffs by 36 percent of their 1986-88-reference value over a period of six years (1995 to 2000).⁴⁶ Tariffs for each product-category (eg: rice, wheat etc...) were subject to a minimum reduction of 15 percent.⁴⁷ Developing countries were required to reduce tariffs by 24 percent of their reference value over a period of ten years (1995-2004).⁴⁸ They also committed to reducing product-specific support by at least 10 percent in each product category during this time period.⁴⁹

⁴⁵ Kym Anderson, Will Martin and Dominique Van der Mensbrugghe, 'Market and welfare implications of Doha reform scenarios' (2006) *Agricultural trade reform and the Doha development agenda* 333.

⁴⁶ Ibid. 38.

⁴⁷ Hawkes and Plahe, above n 40.

⁴⁸ Ibid.

⁴⁹ Ibid. market access regulations are found in Article 4 and 5 of the AoA. Article 4 requires Members to convert all non-tariff-barriers into tariffs, and to bind all tariffs to their reference value. A system of tariff quotas was also established by guaranteeing minimum market access opportunities for any agricultural products that accounted for less than five percent of domestic consumption during the reference period. Article 5 contains a Special Safeguard provision (SSG). The SSG allows any Member to raise tariffs in relation to an agricultural product if the volume of imports of that product exceeds a predetermined trigger level. Tariffs on a given agricultural product may also be increased if the price at which imports of that product are entering the domestic market falls to a price that is equal to or lower than their reference value.

5.4.2.1 Bangladesh's Commitments on Market Access in UR: Tariffs and Non-Tariff Barriers

The fact that Bangladesh was not fully prepared to safeguard its economic interests in the global trading arena on an objective and rational basis is reflected in its declared tariff bounds for most agricultural and agribusiness products. Bangladesh became a victim of the “fear” psychology. The country was afraid that reduced tariffs and liberalized trade may “flood” its markets with cheap imports and damage its capacity for agricultural and agribusiness production. The country was so overwhelmed with this fear that it ignored its own reality. For most products, Bangladesh declared 200% tariffs as tariff bounds. In most cases, bound tariffs are much higher than actual tariffs operating during the mid-1990s. In all fairness, it must be said that Bangladesh was not alone in such declarations. Many other developing countries and LDCs also declared high tariff bounds.⁵⁰ Keeping bound tariffs at an unnecessarily high level risked giving a false signal to the outside world.

Bangladesh, like other signatory countries, is obliged to eliminate all NTBs on agricultural products and replace them by tariffs. This tariffication of NTBs is incumbent on Bangladesh in the case of agriculture while in the case of nonagricultural products, Bangladesh, as an LDC, has been exempted from making any commitments on NTBs. Between 1991/92 and 1995/96, the number of four-digit items in both agricultural and nonagricultural products subject to trade-related quantitative restrictions (QRs) was reduced from 137 to 41. As an

⁵⁰ The GATT Secretariat, 'Uruguay Round of Multilateral Trade Negotiations: Legal Instruments Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations Done at Marrakesh on April 15, 1994 —Schedules,' (1994) Various.

LDC, Bangladesh was not obliged to make any significant concessions under the UR. It chose, like many other developing countries, to bind tariffs at well above the actual operative levels. Whereas, in the case of a set of nonagricultural products, tariffs were bound at 50% plus a 30% additional charge, in the case of agricultural products included in the URAA, tariff bounds have been set at a uniform ceiling rate of 200% for all agricultural goods except 13 (six-digit HS code) items for which the bound rate is 50%.⁵¹

In addition, a license fee of 2.5% has been bound as other duties and charges for all agricultural products with certain exceptions. Five of these committed rates are scheduled for implementation by 2004, while the rest of the items was implemented in 1995. The base rates of the five items for which the bound rate is implementable by 2004 were 100% in one case and 150% in four others. These base rates were implemented during the negotiation period or at the beginning of the implementation period starting with 1995. Only on two agricultural products (green and black tea), the tariffs were bound at lower than actual operative levels. It should be noted, however, that effective prior to the Uruguay Round, Bangladesh already had a set of most-favored-nation concessional duties on many other agricultural products. These duty rates, along with the commitments under the Uruguay Round, were shown as a second post-UR-bound consolidated schedule.⁵²

⁵¹ Balu Bumb, 'Implications of the Uruguay Round Agreement for Agriculture and Agribusiness Development in Bangladesh' (1999) *Round Table on the Consequences of the Uruguay Round Agreements for Bangladesh Agriculture*, Dhaka.

⁵² Ibid.

Bangladesh's UR-bound tariff rates on agricultural products show that the products for which tariffs have been bound below 200% number 37 at the four-digit level and 75 at the six-digit level. A comparison of the bound tariffs with the actual operative ones of 1995/96 when the highest operative tariff, including the license fee, was 52.5% suggests that the 200% bound tariff was unnecessarily set for most agricultural products. Also, with a few exceptions, the bound tariffs are considerably higher than the applied average rate.⁵³

As part of ongoing structural reforms, Bangladesh unilaterally made some liberalizing changes in its overall tariffs over time. The maximum tariff rate was reduced to 40% plus an extra 2.5% in FY 1998/99 from the 1994/95 rates of 60% plus 2.5%. The tariff spread or dispersion has been reduced during the same period, perhaps in large part, due to the cut in the maximum tariff but also due to a reduction in recent years in the number of products subject to tariffs lower than 7.5 % and reduction of the total number of tariffs including the zero rate from seven to six. As a result of this reform, the un-weighted and import weighted average tariff rate (customs duty part) has come down to 20.7% and 16.8%, respectively, in FY 1997/98 from the respective corresponding numbers of 25.9% and 20.8% in 1994/95 [Bangladesh Government, 1998].⁵⁴ This has reduced tariff escalation and introduced some element of rationalization in their incentive

⁵³ Ibid.

⁵⁴ Ministry of Finance, 'Economic Review' (1998) 30. Government of Bangladesh, Dhaka, Bangladesh.

effects on domestic production activities. However, the tariff dispersion still remains quite excessive with a wide spread in the resulting structure of incentives or effective protection rates.

5.4.3 Export Subsidies in the UR

Export subsidies exist in many forms and typically consist of payments that make up the difference between world prices and a guaranteed price for domestic farmers.⁵⁵ Because of subsidies in the 1980s, the EU and USA engaged in subsidy wars by increasing their budgetary allocations for agricultural sectors, making their commodities cheaper on the world market.

Developed countries committed to reducing expenditures on export subsidies by 36 percent of their reference period value, and reducing the volume of products receiving export subsidies by 21 percent.⁵⁶ Developing countries committed to reducing total expenditures on export subsidies by 24 percent, and reducing the volume of products receiving export subsidies by 14 percent.⁵⁷ As with the market access concessions discussed above, the period of implementation for export subsidy reductions is six years for developed countries and ten years for developing countries, beginning in 1995.⁵⁸

⁵⁵ Hawkes and Plahe, above n 40.

⁵⁶ Beierle, above n 42.

⁵⁷ Hawkes and Plahe, above n 40.

⁵⁸ Ibid. these reduction commitments apply to all export subsidies enumerated in Article 9 of the AoA. According to Article 9(1), these reduction commitments apply to government subsidies contingent on export performance; non-commercial stocks exported at sale prices below the domestic market price; payments on exports derived from a levy or surcharge on the product concerned, or on like products; subsidies towards the costs of marketing, handling, processing,

5.4.3.1 Bangladesh's Commitments on Export Subsidies

Bangladesh declared no export subsidies in its Schedule of UR Commitments [GATT, 1994—Schedule LXX].⁵⁹ There are two possibilities here. First, Bangladesh did not have any subsidies on agricultural exports. Second, if it had, it did not have adequate information to prepare such estimates and report them. By exploring and assessing the information that existed during the 1986-90 period, an attempt is made to verify Bangladesh's reported declaration of export subsidies. A detailed search of old records revealed that Bangladesh did not provide any direct price subsidies on its UR-related agricultural exports. However, there were some special incentives provided to export activities, especially to nontraditional export products, which were in the nature of export subsidies. It should be noted, however, that as generally typical of developing countries, Bangladesh's agricultural products have always been rather taxed (negatively subsidized) relative to manufactured products through higher protection to the latter products and through exchange rate distortion in the form of overvaluation of the domestic currency.⁶⁰

and transporting exports internationally; favourable domestic transportation costs for export products; and, subsidies for agricultural products that are contingent on their use in exported products. Article 3(3) prohibits the introduction of export subsidies that were not in effect during the reference period of 1986-1988. Any export subsidies that were in effect during the reference period, and not specifically prohibited in Article 9, are subject to the non-circumvention restrictions established in Article 10. Article 10 contains provisions to ensure that export subsidies, non-commercial transactions, and the provision of food-aid are not used to circumvent a Member's export subsidy reduction commitments. Article 10 also establishes an undertaking towards harmonizing the use of export credits and export insurance programs.

⁵⁹ Secretariat, above n 50.

⁶⁰ Bumb, above n 51.

Hutcheson⁶¹ found in his study, which used input-output matrices of that period for selected sectors and the nominal protection rates for those sectors, that exporting activities received an average effective rate of protection (ERP) of a mere 2%, compared with 104% for import substitution industries. The relative high protection of import substitution activities with extensive import and exchange controls and high import tariffs, by artificially depressing the demand for foreign exchange, also caused a significant distortion in the exchange rate (in this case, overvalued the domestic currency), which is also a factor that appeared to have significantly disadvantaged the agricultural sector, in general, and agricultural exports, in particular. The exchange rate distortion seemed to have more than offset some export incentives offered during this early period, when the trade regime was highly inward looking with a very high tariff and nontariff protection to import substitution activities. Export Incentives Providing Subsidies During the 1986-88 Period The relative taxation faced by agricultural products notwithstanding, it is nevertheless required by the URAA that any measure that could be identified as falling in the nature of an instrument that enhances export competition should be noted and measured. Although Bangladesh reported no export subsidies to have existed during the 1986-88 base period as already mentioned and no direct export subsidies were provided to any of the UR-defined agricultural products, some of the export incentives existing during that period were essentially export subsidies in character.⁶²

⁶¹ T. L. Hutcheson, 'Effective Protection: An InputOutput Approach' (Paper presented at the Trade and Industrial Policy Reform Program (TIP), Dhaka, Bangladesh.1985.

⁶² Bumb, above n 51.

Bangladesh, as an LDC, is not obliged to reduce such subsidies but is required to freeze such subsidies at the 1986-90 period levels. Besides such subsidies for exports, which have been subject to reduction commitments by developed and developing countries other than the LDCs, there were in Bangladesh also some other subsidies existing during that period such as some freight concessions on shipments of exported products by the national airline and shipping line and some concessions on fire and shipping insurance charges.

5.4.4 Special and Differential Treatment (SDT) of the UR

The framework of the AoA calls for SDT for developing countries. SDT involves longer implementation periods and lower reduction magnitudes for all types of trade-distorting subsidies and for continued access involving tariff reductions. The 10-year implementation period for developing countries can be seen as an aspect of SDT, compared to the five-year period for developed countries.⁶³ For a long time SDT in developing countries has allowed specific products to enjoy duty-free access to developed countries, and this preferential treatment still exists.

5.5 Exploring the AoA's Innate Basic Disparity

In the area above, I bequeathed a brief appraisal of the terms of the AoA. To add to this exchange, I investigate a percentage of the basic contribution on the Agreement. This examination is imperative to my proposal, as it analyzes the material outcomes of the AoA, and exhibits why numerous developing nations

⁶³ Hawkes and Plahe, above n 40.

have been disappointed with the WTO's regulation of the agricultural sector.

Critical legal scholars studying the AoA have argued that the Agreement codified and entrenched pre-existing inequalities between developed and developing countries.⁶⁴ These researchers contend that the US and the EU were able to use their political and economic clout to secure preferential treatment for their agricultural producers within the WTO.⁶⁵ Their research demonstrates that the terms of the AoA have provided disproportionate benefits to corporations and large-scale producers that were able to lobby powerful governments to promote their interests.⁶⁶ It also outlines how these benefits have come at a great cost to small producers and marginalized populations in developing countries.⁶⁷

Although the AoA imposes higher reduction commitments on developed Members, due to the structure of the Agreement, developed Members still have much more leeway to legislate and spend on agricultural issues than their developing counterparts.⁶⁸ Because the AoA's reduction commitments are measured according to the support and protection schemes in effect during the base period of 1986-88, the Agreement effectively codifies the inequalities that

⁶⁴ Frank J Garcia, 'Beyond special and differential treatment' (2004) 27 *Boston College International and Comparative Law Review* 291.

⁶⁵ *Agreement on Agriculture (AoA)*.441; Carmen G Gonzalez, 'Institutionalizing inequality: the WTO Agreement on Agriculture, food security, and developing countries' (2002) 27 *Columbia Journal of Environmental Law* 433.411,414.

⁶⁶ Penelope C Simons, 'Binding the hand that feeds them: The agreement on agriculture, transnational corporations and the right to adequate food in developing countries' (2008) *Transnational Corporations and the Right to Adequate Food in Developing Countries (May 1, 2008)*. W. Shan, P. Simons, D. Singh (eds) *Redefining Sovereignty in International Economic Law* (Hart Publishing, Oxford 2008) 399.478; Gonzalez, above n 65,414-421.

⁶⁷ Simons, above n 66,438.

⁶⁸ Gonzalez, above n 65, 410-411.

existed between developed and developing countries when the Uruguay Round negotiations began.⁶⁹

During the oil crisis of the 1970s and the ensuing debt crisis of the 1980s, a growing number of government defaults prompted many developing countries to take conditional loans from the IMF.⁷⁰ The conditions of these loans required borrowing states to adopt Structural Adjustment Programs (SAPs), which were designed to reduce state expenditures and promote the liberalization of trade, investment, and finance.⁷¹ The objective of these deflationary, liberalizing policies was to make the goods and labour in developing countries cheap and accessible. This strategy was intended to stimulate economic growth by promoting exports and foreign investment.⁷²

Many developing countries were subject to IMF SAPs; as such, they lacked both the policy space and the financial capacity to provide large subsidies to their agricultural sector at the time of the base-year period.⁷³ For this reason, most of the WTO's developing Members do not have reduction commitments in Part IV of their Member Schedule, which means that their domestic support programs (aside from Blue and Green box programs) cannot exceed the 10 percent de

⁶⁹ Simons, above n 66.

⁷⁰ Gonzalez, above n 65.

⁷¹ International Monetary Fund (IMF), *IMF, About the IMF: IMF Factsheet: IMF Lending* <www.imf.org/external/np/exr/facts/howlend.htm>. (Accessed on 28 Aug 2016).

⁷² Mark R Brawley and Nicole Baerg, 'Structural Adjustment, Development, and Democracy1' (2007) 9(4) *International Studies Review* 601.

⁷³ Ibid.

minimis limit.⁷⁴

Meanwhile, during the reference period of 1986-88, developed Members such as Canada, the EU and the US were providing generous subsidization programs and protection schemes to their agricultural sectors.⁷⁵ Moreover, because domestic support reductions are based on the value of Current Total AMS (which does not factor in Blue and Green box subsidies) compared to 1986-88 Base Total AMS (which does), many of developed countries were able to meet their domestic support reduction requirements without cutting funding.⁷⁶ These aspects of the AoA have allowed developed countries to continue to provide extensive subsidies to their agricultural producers.

Like its declaration on export subsidies, Bangladesh did not declare any support (AMS) to agriculture when it submitted its schedule to WTO in April 1994. However, in its revised and consolidated schedule submitted in November 1994, Bangladesh recognized that it provided exempted support for food security stocks, food aid, and natural disaster reliefs. Other support included investment aid or input subsidies to resource poor farmers who are exempted under the Green Box measures. The government also paid the administrative costs of distributing seeds of paddy, potato, wheat, etc., at government-fixed prices. Nevertheless, total AMS declared remained zero. Being an LDC, Bangladesh is exempted from reducing AMS, but it has to freeze its support at the 1986- 88 levels. To ensure

⁷⁴ Gonzalez above n 65; Simons above n 66 at 451.

⁷⁵ Trebilcock and Howse, above n 1.

⁷⁶ Gonzalez above n 65; Simons above n 66.

that Bangladesh's AMS was zero, an attempt was made to quantify such support.⁷⁷

The Uruguay Round bid farewell to a certain configuration of power in the world economy and a certain way of doing business in trade negotiations. The power configuration at the establishment of GATT and throughout its rounds of negotiations was clear: the US and Europe were the trade powers and rule-setters of the multilateral trade regime. The *Quad* (the US, Europe, Japan and Canada) was the decision-making powerhouse of the Uruguay Round. Its conclusion came only after an agreement was struck between the US and Europe on agriculture. And presented to the whole membership as a *fait-accompli*. The bargain accommodates their reciprocal interests. As a result, agriculture remained the most distorted part of international trade, with intricate layers of tariff barriers and subsidies, lagging behind other areas in terms of regulation and disciplines favouring liberalization.

5.6 Agriculture - at the Heart of the DDA Negotiations

Agriculture is the central component and the driving force of the Doha Development Agenda (DDA). Insufficiently regulated during the years when international trade was under the General Agreement on Tariffs and Trade (GATT), agriculture has effectively been brought into the multilateral trading system only very recently. Current rules accommodate decades of trade-distorting policies and practices by the developed world; thus, agriculture trade reform is the challenge and main objective of the Doha Round.

⁷⁷ Bumb, above n 51.

The Doha Round started in 2001 with the goal of reforming and strengthening the current international trading rules. Agriculture reform was the main reason for the launching of a new Round of trade negotiations. In 1995, members of the newly created World Trade Organization (WTO) promptly recognized the unfinished business of agriculture reform. Article 20 of the Uruguay Round Agreement on Agriculture mandated the continuation of the reform process:

Recognizing that the long-term objective of substantial progressive reductions in support and protection resulting in fundamental reform is an ongoing process, Members agree that negotiations for continuing the process will be initiated one year before the end of the implementation period.

The Doha Round negotiations comprise a complex set of actors, interests and geometries that need to be balanced out under the negotiating principle known as “single undertaking.” Therefore, the final level of ambition of the Round is supposed to reflect an overall balance of trade-offs. After ten years of negotiations, the current deadlock in the DDA reveals the impasse between established and new actors; between the unresolved past of trade rules and new challenges of the trade regime. Agriculture reform incorporates all these impasses and remains the key to the eventual conclusion of the Doha Round.

But why is agriculture - a sector that accounts for just 9.6 percent of total world trade according to WTO statistics - so important? First, agriculture rules are a symbol of protectionism and distortions in world trade. Developed countries

normally protect their agricultural sectors with a mixture of subsidies and market access barriers. Despite the history of the GATT, agriculture was not brought into the multilateral trading system until 1995 as a result of the Uruguay Round. Second, agriculture is an essential component of the economies of a large number of developing countries, where the majority of the workforce is employed in the agriculture sector and thus livelihoods depend on it. Many of these countries face difficulties not only in selling to the developed country markets, but also they have to compete with subsidized products from advanced economies.

Thus, reforming agricultural trade disciplines to level the playing field of multilateral rules and to bring the development dimension into the WTO is at the heart of the Doha Round. A successful conclusion of the DDA in line with the Doha Mandate for Agriculture would be of significant importance to all developing countries.

5.6.1 Agriculture in the Doha Round

The negotiations of the DDA were set in motion in 2002. The initial expectation was to complete the Round by 2005. The Doha Mandate in Agriculture was ambitious: substantial access to markets, substantial reduction of domestic support subsidies and the elimination of export subsidies. If development was the goal, agriculture had to be the driving force, or so the developing world believed and hoped.

It is possible to divide the negotiations into four phases, each of them with different actors, issues and configurations:

- from 2001 to the 2003 Cancun Ministerial, when “business as usual”

confronted new forces;⁷⁸

- from 2004 to the 2005 Hong Kong Ministerial, with the definition of key concepts and landing zones for the agricultural negotiations;
- from 2006 to the July 2008 Mini-Ministerial in Geneva, with the definition of the general level of ambition;⁷⁹ and
- from 2008 to this day, with the US attempt to redefine the level of ambition.

The negotiations on agricultural and on nonagricultural reforms were undertaken independently, although it is clear that members would, in the final analysis, weigh up perceived benefits in one negotiation against any perceived losses in the other. Of course, in the WTO, nothing is agreed until everything is agreed, so some modifications to the proposals currently on the table would be likely if an overall—or a partial—agreement were to be reached.⁸⁰

From an analytical point of view, an important difference between this round and earlier negotiating rounds has been the availability of much more detailed data on trade and trade barriers, and much greater capability for quantitative analysis, which has allowed researchers to keep up with the details of agreements as they evolved and to provide assessments at critical times. In contrast with the Uruguay Round, when data on actual tariffs and trade policies became available only for a

⁷⁸ Gonzalez, above n 65; Trebilcock and Howse, above n 1.

⁷⁹ Kym Anderson, Bernard Hoekman and Anna Strutt, *Agriculture and the WTO: Next steps* (Centre for International Economic Studies, 2001).

⁸⁰ Kym Anderson, Will Martin and Dominique Van der Mensbrugghe, 'Doha merchandise trade reform: what's at stake for developing countries?' (2006).1.

limited number of countries, and only long after the event, analysts have had access to much more detailed information and analytical tools during the Doha negotiations.⁸¹

Unfortunately, the complexity of the negotiating proposals grew even more quickly than the ability of researchers to analyze them, making it a serious challenge to keep up with the details and to form an assessment of their implications.⁸² Further, communicating the results of research is not necessarily easy. When the estimated economic value of a round was revised downward in line with changes in trade and protection data—and with evident reduction in the likely achievement of the round in terms of trade barrier reduction—the reasons for the changes in estimates needed to be very carefully explained.⁸³

5.6.1.1 Trade Reforms: Agricultural Versus Non-Agricultural

Trade liberalization, and particularly tariff cutting in manufactures, was the core of the multilateral trade liberalization process until the Uruguay Round. This might have seemed surprising in the initial days of the General Agreement on Tariffs and Trade (GATT), given the contemporary focus on the development of the manufacturing sector in many countries and the strength of many of the

⁸¹ David Laborde and Will Martin, *Agricultural trade: what matters in the Doha round?* (Intl Food Policy Res Inst, 2013) vol 1251.1.

⁸² Ibid.

⁸³ Gary Clyde Hufbauer, Jeffrey J Schott and Woan Foong Wong, *Figuring out the Doha round* (Peterson Institute, 2010); Yvan Decreux and Lionel Fontagné, 'Economic impact of potential outcome of the DDA' (2011); David Laborde, Will Martin and Dominique van der Mensbrugghe, 'Potential real income effects of Doha reforms' (2011) *Unfinished Business? The WTO's Doha Agenda* 281.

protectionist interests in manufacturing.⁸⁴ However, the multilateral process of tariff cutting was able to progressively reduce the barriers in manufactures in the participating countries until—by the time of the Uruguay Round—they had reached very low levels in the industrial countries.⁸⁵ The reason for this inclusion appears to have been in part the potential balance of interests created by the interest of agricultural exporters in increased market access, and in part a desire to use international negotiations to achieve needed domestic reforms in this sector.⁸⁶ The trenchant criticism of industrial- country policies in the media and by nongovernmental organizations may also have played a role. After repeated—and strenuously resisted—attempts to include agriculture in the negotiating process, agricultural negotiations were finally introduced in the Uruguay Round, along with trade in services and a wide range of other extensions in the scope of the trading system.

The reform of agricultural trade has much more in common with reform of trade in manufactures than with reform of trade in services. At least after the initial process of converting nontariff measures in agriculture to tariff measures—a step undertaken in the Uruguay Round⁸⁷—the process of reform involves reductions in tariffs. As had been found in negotiations in nonagricultural trade, such negotiations provide a quantitative basis for negotiation, which is much more

⁸⁴ Dominique Van der Mensbrugghe, 'Estimating the benefits of trade reform: why numbers change' (2006) *00 Trade, Doha, and Development* 59.68.

⁸⁵ Laborde and Martin, above n 81.

⁸⁶ P. Messerlin Martin W., 'Prospects, Global Economic: Sources of tariff reduction' (2005) *World Bank*.

⁸⁷ Gordon Rausser, *GATT negotiations and the political economy of policy reform* (Springer Science & Business Media, 2012).

tractable than the yes–no negotiations on trade in services. Progressive liberalization since the founding of the GATT had also made clear that the world does not end—and indeed many good things happen—when barriers are lowered; liberalization does not require administrative costs since the country receiving concessions gains from improved market access and the country making concessions gains from improved economic efficiency, so there is no need to keep careful track of the “balance” of concessions.

Given the difficulties involved in securing effective liberalization of trade in agriculture, an important question that arises is whether it is worth continuing to attempt liberalization of this sector. As noted by Martin and Messerlin⁸⁸, one key reason for doing so was to attempt to generate a balance of interests by adding more countries with export interests, many of which are developing countries, to the potential coalition of gainers; and at the same time to deal with the fact that the traditional *fuel* for multilateral negotiations—the scope for tariff cutting of nonagricultural products in the industrial countries—was much depleted following eight multilateral rounds focused on this issue. Another important reason was that the remaining barriers to trade in agriculture were much more important than the sector’s diminutive share of world trade would suggest. This reflects not only the level of these barriers and the fact that many are prohibitive, but also the costly variations across sectors and over time in rates of protection.⁸⁹

International trade in goods can be differentiated by stage of processing depending on their intended use along the production chain. Goods are therefore

⁸⁸ D. Hathaway, M. Ingco., *Agricultural Liberalization and Uruguay Round* (Cambridge University Press, 1996) 73.

⁸⁹ Martin W., above n 86.

classified as primary, intermediates, consumer and capital (the latter comprising machinery used for the production of other goods). Goods can also be differentiated by broad category; including natural resources, agriculture and manufacturing. With regard to the stage of processing, intermediate products make up the bulk of world trade.

Developed countries account for the bulk of world trade, both in terms of goods differentiated by stage of processing and broad category. Besides other developing country regions, a significant amount of trade is linked to BRICS⁹⁰, especially in relation to the trade of intermediates and manufacturing. They also tend to import few consumer goods whilst exporting a relatively large share. Developing countries tend to export more natural resources than they import, which is the opposite of developed countries. LDCs only represent a small share in all types of goods, with a larger share in the exports of primary products and the imports of manufacturing goods.

With agriculture making up such a small share of world trade, it might seem reasonable for the WTO to pass on this particularly fractious sector. Such a conclusion cannot, however, be reached without careful consideration, including the level and variability of protection in each sector. A widely held view of agricultural trade policy has been that poor countries typically tax their agricultural sectors. Historically, part of the motivation for this policy has been

⁹⁰ "BRICS" (i.e. Brazil, Russia, India, China and South Africa) is the acronym for an association of five major emerging national economies. The grouping was originally known as "BRIC" before the inclusion of South Africa in 2010. The BRICS members are all developing or newly industrialized countries, but they are distinguished by their large, fast-growing economies and significant influence on regional and global affairs; all five are G-20 members. Since 2009, the BRICS nations have met annually at formal summits. Russia hosted the group's seventh summit in July 2015. India currently holds the chair of the BRICS group.

seen as due to the political weakness of an agricultural sector composed of numerous, widely dispersed small farmers, many of whom are net buyers of food and hence not supportive of agricultural protection; and part has been the need for easy-to-collect revenues from sources such as export taxes.⁹¹

The tendency for agricultural protection to rise as countries develop was very strong in the industrial countries historically and seems likely to be repeated in today's developing countries in the absence of effective WTO disciplines.⁹² As discussed by Anderson and Nelgen⁹³, it has strong behavioral underpinnings, including the decline in the share of urban expenditures on food, the increasingly commercial orientation of farmers, and their increasing reliance on purchased inputs. That such a large share of the potential benefits from trade reform accrue from the agricultural sector vindicates the decision of WTO members to include agriculture within the trade reform agenda of both the Doha Round and the Uruguay Round negotiations. Indeed, it would seem very difficult to exclude agriculture given that the overwhelming majority of the potential benefits of merchandise trade reform would accrue from reforms in this sector.⁹⁴

⁹¹ Joseph Francois and Will Martin, 'Formula approaches for market access negotiations' (2003) 26(1) *The World Economy* 1.

⁹² Laborde and Martin, above n 81.

⁹³ Ibid.

⁹⁴ Kym Anderson and Signe Nelgen, 'What's the Appropriate Agricultural Protection Counterfactual for Trade Analysis?' (2011) *Unfinished Business? The WTO's Doha Agenda* 351.

5.6.1.2 Bangladesh's Position in Doha Round

The core challenge for Bangladesh in the Doha Round was to ensure an early implementation of the DFQF decision, imposing an 'anti-concentration clause' on the remaining 3 per cent of the US list for granting DFQF market access to Bangladesh's exports, and ensuring that key products of export interests are included in the 97 per cent DFQF list. Secondly, there was a complementary challenge. This challenge was to include more tariff lines in the absence of the US DFQF list and also to seek the same treatment that had been granted to Pakistan and Sri Lanka, in case Bangladesh was not provided with the DFQF market access to developed countries' markets. The issue of contingent challenge was also a major issue of concern for a country like Bangladesh. In other words, DFQF treatment of agricultural goods would be subject to similar treatment as under NAMA products.⁹⁵

Accessing service markets in developed countries has been a constant challenge for Bangladesh who has witnessed buoyant growth in remittance in recent times. Bhattacharya mentioned that it was urgent to seek modalities in services whereby LDCs' interests could be prioritized and more importantly, negotiations in this area can kick-off. Overall, in Bhattacharya's opinion, the services sector is comprised of a double jeopardy between – (a) an enabling mechanism for

⁹⁵ Hasanuzzaman, 'Ongoing WTO Doha Round Negotiations Concerns and Interests of Bangladesh and other LDCs' (Paper presented at the The dialogue on WTO Doha Round Negotiations Concerns and Interests of Bangladesh and other LDCs, Dhaka, Bangladesh. Centre for Policy Dialogue (CPD) 2009.

according priority to sectors of LDCs interest needs; and (b) prioritizing LDCs' sectoral interests, particularly in Mode 4 of GATS negotiations.⁹⁶

The fifth challenge was the consequential challenge. The challenge was that, there would be pressure on developing countries and particularly LDCs with regard to accepting the rules on anti-dumping measures, TRIPS, CBD, GI etc. One of the formidable challenges for Bangladesh was 'alliance building'. It is evident that there was a coalitional challenge especially in the backdrop of the proliferation of country groups and coalitions across the globe and it was imperative for Bangladesh to build political alliances in order to assuage the apprehensions of other LDCs who are weary about her competitiveness in the global apparels market.

5.6.1.3 Alliances within the WTO

The positions of developing countries on the Doha Development Agenda are influenced in complex ways by its designation as a development agenda. Because of the tradition of special and differential treatment for developing countries in the WTO—widely interpreted as meaning that developing countries should make smaller, or no, cuts in their own protection—many developing countries are reluctant to make substantial cuts in their own agricultural protection, even in cases where lower protection would lower poverty rates by lowering the cost of food to their low-income consumers.

Alliances of varying degrees of formality and persistence are often formed among

⁹⁶ Ibid.

members seen as having similar interests on specific issues. These informal groupings of countries often meet among themselves prior to Ministerial Meetings to hammer out a common position on specific issues. Some of the most important of these blocs include the Quad, consisting of the EU, United States, Japan, and Canada; the Cairns Group, consisting of many agricultural exporters, developed and developing; the G20, consisting of about 20 (membership tends to fluctuate) of the larger developing economies, formed mainly to advocate for stronger rules against agricultural subsidies; and the G33, another coalition of developing countries formed to advocate for special and differential treatment for developing economies in the application of WTO rules.⁹⁷

In the Doha Agenda, agreement between the United States and Europe being necessary, but far from sufficient, for an agreement. Key proposals were put forward by different countries and groups, including the United States; the European Union (EU); the Cairns Group of agricultural exporters; the G-20 group of developing countries; the G-10 group of high-income net importers; and the G-33 group of developing countries, the latter concerned about excluding some special products from tariff cuts and about safeguard measures.⁹⁸

The proposals offered by the United States in 2005 were the most ambitious in many areas, including cuts of 90 percent in the highest tariffs, abolition of export subsidies, and cuts in domestic support of 60 percent for the United States and 83 percent for the EU and Japan. The United States sought to limit to 1 percent the number of tariffs classified as “sensitive” and subject to reduced cuts. The EU

⁹⁷ Laborde and Martin, above n 81.

⁹⁸ Blackden, above n 29.

was much less ambitious on market access, with cuts of 60 percent proposed for the highest tariffs, subject to treatment of 8 percent as sensitive. By 2005, it was also willing to eliminate export subsidies. On domestic support, the EU agreed to a 70 percent reduction in its domestic support, versus a 60 percent cut in US domestic support.⁹⁹

The Cairns Group of agricultural exporters was strongly focused on liberalizing agricultural markets, with a vision statement (Cairns Group 1998) seeking the abolition of export subsidies, liberalization of market access barriers on the same basis as in non-agriculture (where deep cuts in tariffs were envisaged for the industrial countries), and major reductions in domestic support. They present themselves as champions of the poor farmers in developing countries that would benefit from higher agricultural prices and also claim to support the special and differential principle, which they interpret as giving developing countries more time and flexibility to implement reforms. In arguing for indiscriminate liberalization, however, the Cairns Group limited its appeal among developing countries, like Bangladesh, which seek to protect their domestic markets from dumping and/ or have concerns about food security.

According to Kwa and Jawara¹⁰⁰ some countries within the Cairns Group were less committed to liberalization than others. They credit some members - notably Indonesia and Philippines - with splitting the group over concern for their own modest protection policies in the run-up to the 2003 Cancun ministerial summit.

⁹⁹ Tim Josling, 'An overview of the WTO agricultural negotiations' (2007) 1 *Agricultural Trade for Developing Countries* 20; Charles Hanrahan and Randall Dean Schnepf, *WTO Doha round: Agricultural negotiating proposals*.

¹⁰⁰ Laborde and Martin, above n 81.

A diverse group of developing countries that benefit from tariff preferences was concerned about the possibility that the value of these preferences would be eroded through reduction in most-favored nation (MFN) tariffs. The least-developed countries were particularly concerned because they receive deep preferences in many markets and duty-free, quota-free access into the EU. Other country groups with concerns in this area included the Africa, Caribbean, and Pacific (ACP) group of former European colonies.¹⁰¹ The enthusiasm of these countries for MFN liberalization was tempered by concerns about reductions in the prices they receive in protected export markets, and sometimes by concerns about increases in the prices of food they import from world markets.¹⁰²

The positions of the different countries raised many questions and ignored some important questions. In particular, many proposals—such as those of Europe and many developing countries— focused on reducing domestic support, despite evidence that this is much less important economically than reducing barriers to market access. The widely different proposals for flexibility to deviate from the proposed tariff-cutting rules raised important questions about the effects of these flexibilities. The virtual absence of proposals to reduce policies that insulate domestic prices from changes in world prices was perhaps important, particularly given the extent to which these policies contributed to the dramatic rise in world prices of food in 2008.¹⁰³ Virtually the only way that the issue arose in the negotiations was through the proposed special safeguards designed to increase the

¹⁰¹ Fatoumata Jawara and Aileen Kwa, *Behind the scenes at the WTO: The real world of international trade negotiations* (Zed Books, 2004) 319.

¹⁰² Bernard M Hoekman, Will Martin and Carlos Alberto Primo Braga, *Trade preference erosion: Measurement and policy response* (World Bank Publications, 2009).

¹⁰³ Laborde and Martin, above n 81.

degree of price insulation.

5.6.1.4 Market Access Versus Domestic Support

Within the Doha Agenda negotiations on agriculture there are three pillars: (1) market access, (2) domestic support, and (3) export competition. As argued by Martin and Mattoo¹⁰⁴, the selection of these three pillars reflects the focus of the Doha Agenda on the issues of the 1990s, particularly the concern in that period about low agricultural prices. Both market access and domestic support provisions have been analyzed extensively, with the extreme complexity of the provisions on domestic support requiring particular care if they are to be interpreted correctly (see, for example, Blandford and Josling¹⁰⁵ and Orden, Blandford, and Josling¹⁰⁶ on domestic support). In contrast, export restrictions have barely been addressed except for a brief mention in the 2008 modalities (WTO 2008b). Although their abolition is systematically important, export subsidies received relatively little negotiating attention because the proposals under discussion—their abolition—were generally quite simple, and the levels of export subsidization were low and declining throughout the negotiations. The critical step on this pillar was the agreement to abolish them—rather than merely to limit them—secured at the Hong Kong Ministerial in 2005.¹⁰⁷

¹⁰⁴ Will Martin and Kym Anderson, 'Export restrictions and price insulation during commodity price booms' (2011) *American Journal of Agricultural Economics* 94:105.

¹⁰⁵ A Mattoo and W Martin, 'Unfinished Business' (2011) *The WTO's Doha Development agenda. World Bank, London*.

¹⁰⁶ DAVID BLANDFORD and TIM JOSLING, 'The WTO agricultural modalities proposals and their impact on domestic support in the EU and the United States' (2011) *Unfinished Business? The WTO's Doha Agenda* 95.

¹⁰⁷ David Orden, David Blandford and Tim Josling, *WTO Disciplines on Agricultural Support: Seeking a fair basis for trade* (Cambridge University Press, 2011).

The relative importance of the three pillars of the negotiations has been hotly debated, partly for economic and partly for political reasons. The economic reason for differences of view turns out to be very simple—estimates of the economic implications of different forms of agricultural support depend very heavily upon whether one measures their impact on the costs of protection or on international food prices. The political reason for debate arose from differences in the ability of different countries to move ahead under the different pillars. Most developing countries had little by way of domestic support or export subsidies, and hence their negotiators felt comfortable when discussion focused on domestic support. The European Union had committed to deeply reforming its domestic support and likewise felt comfortable when negotiations focused on this pillar. In contrast, the United States had a number of key domestic support programs and had not made sufficient preparations to move ahead with reductions in these subsidies in line with possible WTO agreements.¹⁰⁸ Most economists have concluded that market access barriers contribute around 90 percent of the economic costs of agricultural distortions and have therefore tended to argue that it made sense for the primary focus of attention in the agricultural negotiations to be on this pillar.¹⁰⁹

5.7 Contextualizing Bali Package: Agricultural Trade Flows

The Ninth Ministerial Conference of the World Trade Organization (WTO) in Bali, Indonesia in December 2001 included a number of decisions that will have an impact on agricultural trade and are currently under discussion by the

¹⁰⁸ Laborde and Martin, above n 81.

¹⁰⁹ Ibid.

Agriculture Committee. In particular, one ministerial decision, Public Stockholding for Food Security Purposes, was made that affects the ability of developing country governments to build stockpiles for the purpose of maintaining food security.¹¹⁰ Another decision, Understanding on Tariff Rate Quota Administration Provisions of Agricultural Products, as Defined in Article 2 of the Agreement on Agriculture, was made on how to deal with tariff-rate quotas (TRQs) that repeatedly fail to bind or remain unfilled.¹¹¹

5.7.1 TRQ Administration Provisions of Agricultural Products

A TRQ is a hybrid barrier to market access that combines elements of quantitative restrictions (e.g. import quotas) and price-based mechanisms (e.g. import tariffs). Under a TRQ, imports are allowed up to a determined volume within a given market period at one tariff rate (possibly but not necessarily zero), while beyond that volume imports face a higher duty. This type of intervention came about during the WTO's Uruguay Round negotiations.¹¹²

The essence of the Bali Ministerial decision Understanding on Tariff Rate Quota Administration Provisions of Agricultural Products, as Defined in Article 2 of the Agreement on Agriculture is that the WTO's Agriculture Committee is given a

¹¹⁰ Thomas W Hertel and Roman Keeney, 'What is at Stake: The Relative Importance of Import Barriers, Export Subsidies, and Domestic Support' (2006) 37 *Agricultural Trade Reform and the Doha Development Agenda*; Bernard Hoekman, Francis Ng and Marcelo Olarreaga, 'Agricultural tariffs or subsidies: which are more important for developing economies?' (2004) 18(2) *The World Bank Economic Review* 175; Kym Anderson, Will Martin and Ernesto Valenzuela, 'The relative importance of global agricultural subsidies and market access' (2006) 5(3) *World Trade Review* 357.

¹¹¹ WTO, *Public Stockholding for Food Security Purposes*, WT/L/913 ; WT/MIN(13)/38 (11/12/2013).

¹¹² WTO, *Understanding on Tariff Rate Quota Administration Provisions of Agricultural Products, as Defined in Article 2 of the Agreement on Agriculture.*, WT/MIN(13)/DEC – WT/L/914.78.

role in monitoring TRQs on agricultural products. When a WTO member's quota is repeatedly unfilled (i.e. the import volume specified in the quota portion of the TRQ is not met), other members may request information on the administration of the quota. In the case of TRQs applied by developed countries, members may ultimately request changes in the way a quota is administered (e.g. how import licenses are allocated). This is also a temporary peace clause to be reviewed in four years' time.¹¹³

Once again, the WTO notes on the decision provide the relevant economic context. The basic argument underlying the decision is that TRQ administration can become a trade barrier in itself, above and beyond the barriers implied by the TRQ instrument alone. For instance, import licenses under the quota may deliberately be allocated to parties that do not intend to fill them. The argument here is that when a quota is repeatedly under-filled, that is *prima facie* evidence that such deliberate allocation is occurring. The counter-argument is that the under-filled quota may be caused by demand and supply movements that temporarily cause the TRQ not to bind.

The decision provides details on how TRQs should be used and defines the process by which a WTO member may request monitoring and the outcomes that apply. The key provisions relating to modification of administrative mechanisms are provided in Annex A to the agreement, which indicates that: (a) a case may be brought to the WTO's Agriculture Committee when the fill rate is either below 65 per cent or unnotified, (b) the administering country is required to provide

¹¹³ Mia Mikic and Debapriya Bhattacharya, *Least Developed Countries and Trade: Challenges of Implementing the Bali Package*, United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) No (2015).

evidence pertaining to the fill rate, (c) when the fill rate remains below 65 per cent for two consecutive years, the member should take actions to increase the fill rate, and (d) if the fill rate remains below the threshold for a third consecutive year and has not increased significantly, the member will provide unencumbered access on either a first come, first served basis or an unconditional license on demand basis. Special and differential treatment applies to the last clause, which allows developing country members to opt out of its provisions.¹¹⁴

The two decisions made at the Bali Ministerial Conference may have serious implications for agricultural trade flows and, consequently, food-exporting and food-importing countries.

For LDCs such as Bangladesh, the Bali text has high significance. Bangladesh will need support to implement the TF agreement so that it can build infrastructure and an institutional framework to increase trade. Besides, the Bali declaration indicates that developing and LDC members will get waivers in implementing the TF agreement provisions until they acquire implementation capacity.

Only on the basis of their individual development, financial and trade needs or their administrative and institutional capabilities, LDC members will have to

¹¹⁴ Ibid.79

undertake commitments on TF. Though Bangladesh is not a food exporting country, it has to follow the implementation of the food subsidy issue carefully.¹¹⁵

The major component of the development package for Bangladesh is implementation of the DFQF market access. The MC9 stipulates that developed countries, which are yet to provide DFQF to LDCs will do so for more than 97 percent tariff lines before the next WTO round.

Developing countries are also required to start providing DFQF to LDCs. However, providing DFQF market access for more than 97 percent tariff lines by developed countries is not a legally binding commitment as is the case with services waiver.

Overall, the Bali package is expected to bring in a number of positives for Bangladesh as much as it will do for other member countries. The rest of the Doha Round work programme will be revisited in the next twelve months as to how to address them. Among these, the most important one would be making the commitments legally binding.

5.8 Conclusion

Agricultural trade liberalization has always been controversial and the sector was included only in the eighth round of multilateral trade negotiations, the Uruguay Round (1986–94). Given that the agricultural sector has accounted for as little as

¹¹⁵ Dr Fahmida Khatun, 'Bali outcome: implications for Bangladesh', *The Daily Star* (Dhaka, Bangladesh), December 10 2013 <<http://www.thedailystar.net/news/bali-outcome-implications-for-bangladesh>>. (Accessed on 27 July 2016).

6 percent of world trade, an obvious question is whether the inclusion of this sector is warranted. Further examination reveals, however, that this small but highly distorted sector is particularly important as a source of potential gains from trade liberalization. Because of the relatively high levels of protection and the substantial variation in protection rates across sectors, this Lilliputian sector accounts for almost 70 percent of the potential real-income gains from trade reform, making it extremely important that it be included in the trade reform process.¹¹⁶

Many protagonists in the debate surrounding trade negotiations have argued that reductions in domestic support are of the greatest importance to a satisfactory outcome. However, economic analysis strongly suggests that the greatest economic costs arise from restrictions on market access such as import tariffs and tariff rate quotas. This finding has been confirmed by a large number of analyses using a wide range of modeling approaches, including econometric, computable general equilibrium, and back-of-the-envelope models. One cause of the disagreement on this issue arises from a focus on mercantilist considerations, for which domestic support is considerably more important than for economic efficiency costs. Another is the political desire to focus attention on the reluctance of the United States to go further.¹¹⁷

The credibility of the WTO to deal with the new challenges of this century relies considerably on the conclusion of Doha Round in accordance with the mandate and taking into consideration the concerns of developing countries. Failure will

¹¹⁶ Mikic and Bhattacharya, United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) No (2015).

¹¹⁷ Laborde and Martin, above n 81.

have significant implications for the WTO as an institution and for the rules-based multilateral trading system. It will create incentives for more protectionism, more fragmentation of international trade and more instability.

In this chapter, we tried to ascertain whether Doha Round would be successful or not. The Doha Round will be concluded when balance and ambition are truly recognized as guiding principles. The contribution of developing countries in this Round is already unprecedented. The new millennium trade regime in agriculture needs to complete the reform process that started in the Uruguay Round. It should redress historical imbalances and serve as an instrument for development. This is the only way to firmly set the course in the direction of a multilateral trading system that is credible, legitimate and development friendly.

Chapter Six

Implications of Agricultural Trade Liberalization on Food Security in Bangladesh

6.1 Introduction

This chapter examines the state of impact of agricultural trade liberalization on food security in Bangladesh, based on an analysis of a selection of indicators of food security and nutritional wellbeing within the context of the WTO Agreements. Ensuring food security that is the access of the population to sufficient food to meet its nutritional requirements is a basic objective of governmental policies in agrarian developing countries like Bangladesh. Hence, food security issues cover not only issues related to the availability and stability of food supplies but also to issues of access to this supply i.e., related to the resources that may be needed to procure the required quantity of food.

The purposes of this chapter would be the following:

1. *What are the implications of agricultural trade liberalization on food security in Bangladesh?*

2. *To find out the possible answer of domestic policy options under the WTO Agreement which are available for Bangladesh to improve their food security situation.*
3. *How is it that this country, an agricultural producer and a driver of growth, is not able to ensure food security in Bangladesh?*

This chapter aims to help identify how a future multilateral agreement on agricultural trade can provide a secure framework within which Bangladesh can pursue effective policies to ensure their food security. Rising incomes, urbanization, and shifting consumption patterns have increased food consumption in many areas of the world. According to the Millennium Ecosystem Assessment, the prospect of providing sufficient food to sustain another 2 billion people by 2020 has rightly focused attention on the very real threats to food security if the productivity of agricultural systems cannot keep pace with this demand. As these systems are under increasing pressure to meet the growing need for food, it is also vital that the environmental challenges associated with food production are addressed effectively – water pollution, pesticide use, land degradation and greenhouse gas emissions, amongst others.¹ Since 2008, a large number of governments have shown markedly more interest

¹ International Centre for Trade and Sustainable Development, *What next for the trade, climate communities?* ICTSD
 <http://www.ictsd.org/search?search_api_views_fulltext=environmental+challenges+2009>. (Accessed on 15 Aug 2015).

in the question of how to manage volatility in global commodity markets, and how to protect people from escalating food costs.²

Agriculture remains the largest employment sector in most developing countries and international agriculture agreements are crucial to a country's food security. Some critics argue that trade liberalization may reduce a country's food security by reducing agricultural employment levels. Concern about this has led a group of World Trade Organization (WTO) member states to recommend that current negotiations on agricultural agreements allow developing countries to re-evaluate and raise tariffs on key products to protect national food security and employment. They argue that WTO agreements, by pushing for the liberalization of crucial markets, are threatening the food security of whole communities.

By 2050, the world's population will stabilize at about 9 billion, but because of increasing consumption in developing countries, it will be equivalent to 12 billion people placing demands on the global food system, compared to today's consumption rates. Given currently available technologies, current consumption patterns, and the negative effects of climate change, food security for all cannot be achieved. According to IFPRI research, the current recession and the corresponding reduced investment in the global economy will lead to an increase in agricultural prices in the medium term, with the number of hungry.³

² Sophia Murphy, 'Trade and Food Reserves: What roles does the WTO Play' (2010) *Minnesota: Institute for Agriculture and Trade Policy* 11.

³ Joachim Von Braun, 'Threats to security related to food, agriculture, and natural resources—What to do?' (Speech delivered at the IFPRI5, Berlin, Germany, March 26, 2009) <<http://ebrary.ifpri.org/utills/getfile/collection/p15738coll5/id/554/filename/555.pdf>>. (Accessed on 15 August 2015).

The aggregate impact of changes in trade policy on the food security of a particular country would depend on the relevant strategy pursued: food self-reliance or food self-sufficiency. Self-reliance in food is when a country pursues an externally oriented trade regime with a view to earning enough from its exports of goods and services to finance its food requirements. On the other hand, the food self-sufficiency approach entails the country meeting its food requirements—or a substantial part of it—from domestic production.⁴

But economists argue that trade liberalization should enhance food security, enabling imports to offset production shortages. The purpose of this research is to determine how the successive Bangladesh governments have addressed long-run chronic and short-run acute food insecurity, and whether that has changed as a result of the considerable trade liberalization already undertaken by developing country food importers, largely due to conditionality of structural adjustment programs. Lessons will also be drawn for the design of future trade policy reforms that could further impact food security. Ever since Bangladesh became a signatory to the WTO Agreement on Agriculture (AOA) in 1995, a concern that has been raised repeatedly is whether agricultural trade liberalization would destroy Bangladesh's food security.

Agriculture is important for food security in two ways: it produces the food people eat and (perhaps, even more important), it provides the primary source of livelihood for 36 % of the world's total workforce. In the heavily populated countries like Asia and the Pacific, this share ranges from 40 % to 60 % and in

⁴ Bindu Samuel Ronald, *Market Access for Agricultural Products*, Working Paper, School of Economic and Business Laws, West Bengal National University of Juridical Sciences & UNDP No (2006).

Sub-Saharan Africa; two-thirds of the working population still makes their living from agriculture.⁵ In Bangladesh, agriculture is the most important sector of economy due to its role in food security, employment and livelihoods. The current share of GDP is around 15.02 % of the total GDP of the country⁶ and employs about 48% of the population. However, substantial year to year fluctuations of GDP is declined due to the result of a loss of production in both food and cash crops happened through natural calamities. Agricultural production is influenced by seasonal characteristics and climatic variables such as temperature, rainfall, humidity, day length, etc.⁷ Furthermore, various types of climatic disasters like flood, cyclone, drought, etc. hinder it.

Bangladesh has made remarkable progress in agricultural development and food production in the recent decades. But the emerging impacts of global climate change are posing serious threats to food security of the people, particularly of the poor and marginal people of the society. Since independence in 1971, the national food production progress has been boosted through the use of high yielding varieties, fertilizer, irrigation and pesticide. However, a large part of the population still lacks access to sufficient, safe and nutritious food. Therefore, ensuring food security for everyone is a high priority for the Government of Bangladesh today.

⁵ Lawrence Johnson and International Labour Office, 'Key indicators of the labour market 2007' (2007) <<http://www.ilo.org/public/english/employment/strat/kilm/index.htm>>. (Accessed on 10 September 2015)

⁶ BBS (Bangladesh Bureau of Statistics) (2013) Planning Division, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh. http://www.bbs.gov.bd/WebTestApplication/userfiles/Image/BBS/GDP_2012_13.pdf. (Accessed on 12 July 2016).

⁷ MOEF (Ministry of Environment and Forest) (2009) National Adaptation Programme of Action. MOEF and United Nations Development Programme, Dhaka 2009.

6.2 Food Security: Definition and Dimension

Food (in) security is primarily a phenomenon relating to individuals, and is determined by three sets of factors concerned with supply, access and guarantees to food. In the multilateral world, by contrast, the issue is much narrower. Food security is considered as a state affair, and discussion tends to focus on adequate supplies of imported food. To widen the discussion, the entitlements approach⁸ has been used to identify the various ways in which international trade might impinge upon individual food security and, by analogy, to identify the characteristics that would tend to make some countries more food insecure than others.⁹

Food security as a concept originated in the 1974, in the discussions of international food problems at a time of global food crisis. The initial focus was

⁸ Patricia Allen, 'Reweaving the food security safety net: Mediating entitlement and entrepreneurship' (1999) 16(2) *Agriculture and human values* 117.

According to Allen, food security may be said to be determined by:

- production-based entitlements, which will be influenced by policies that affect the demand and supply of factors affecting production, some of which will relate to international trade;
- trade-based entitlements, which will be influenced by policies that affect the level and variability of food prices in relation to the price of what individuals are able to exchange for food; in cases where there are substantial agricultural exports, trade based entitlements are likely to be affected by policy on both sides of the trade balance;
- labour-based entitlements, which are influenced by the level and location of employment opportunities which may, in turn, be influenced by trade policy;
- transfer-based entitlements, which include formal transfers from governments and aid donors that may be influenced by multilateral trade agreements.

⁹ Christopher Stevens, *The WTO agreement on agriculture and food security* (Commonwealth Secretariat, 2000) vol 42.

the volume and stability of food suppliers. During that period, food security was defined by World Food Summit (WFS) in the 1974 as: “availability at all times of adequate world food supplies of basic food stuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices”.¹⁰ The most recent careful redefinition of food security is that negotiated in the process of international consultation leading to the WFS in November 1996. According to WFS (1996) definition, “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”. This definition addresses four key components of food supplies and security namely: availability, stability, access and utilization.¹¹

This definition utilized by the World Bank in its influential 1986 report on world hunger.¹² Like the World Bank report and the World Food Summit, this article recognizes that poverty is a major cause of food insecurity and that the eradication of poverty is critical to improving access to food.¹³ As the World Bank acknowledged:

¹⁰ Johnson and Office, above n ; Conference World Food, *Report of the World Food Conference, Rome, 5-16 November, 1974*, (1975) (New York).

¹¹ Stevens, above n ; Josef Schmidhuber and Francesco N Tubiello, 'Global food security under climate change' (2007) 104(50) *Proceedings of the National Academy of Sciences* 19703.

¹² The World Bank defined food security as "access by all people at all times to enough food for an active, healthy life." World Food, (1975) (New York).

¹³ Schmidhuber and Tubiello, above n ; UN Food & Agricultural Organization (FAO), *Rome Declaration on World Food Security* <<http://www.fao.org/docrep/003/w3613e/w3613e00.HTM>>. (Accessed on 23 Sep 2015).

The world has ample food. The growth of global food production has been faster than the unprecedented population growth of the past forty years. Prices of cereals on world markets have been falling. Enough food is available so that countries that do not produce all the food they want can import it if they can afford to. Yet many poor countries and hundreds of millions of poor people do not share in this abundance. They suffer from a lack of food security, caused mainly by a lack of purchasing power.¹⁴

Amartya Sen described food security as a matter of household entitlements, which he defined as the ability to command food, using the legal means available in society.¹⁵ He also identified four types of food-related entitlements: production-based entitlements, labor-based entitlements, trade-based entitlements, and transfer based entitlements.¹⁶

Food security is the condition in which all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life.¹⁷ It encompasses three major dimensions: the availability of, the access to and utilization and nutrition of food. In effect this means that food security is dependent upon agricultural production, food imports and food aid, employment opportunities and income earnings, intra-household

¹⁴ Shlomo Reutlinger and JVH Pellekaan, 'Poverty and hunger: issues and options for food security in developing countries' (1986), 80.

¹⁵ Amartya Sen, *Poverty and famines: an essay on entitlement and deprivation* (Oxford university press, 1981) 250.

¹⁶ Ibid.

¹⁷ World Food, (1975) (New York), above n 12.

decision-making power and resource allocation as well as sanitation and health care practices. Food security, thus, is a multi-dimensional development issue that requires cross-sectoral and integrated interventions.

Food Availability

Bangladesh has made remarkable progress in domestic food production over the past three decades. Total annual food grain production increased from less than 10 million tons in early 1970's to more than 33 million tons by the year 2009-10. There has also been substantial improvement in the availability of food.

Table 6.1: Food-grain (rice and wheat) production and availability in Bangladesh

Year	Gross domestic production ('000 m.tons)	Net domestic production ('000 m.tons)	National availability ('000 m.ton)	Per capita availability	
				Kg/year	oz/day
1991-92	19317	17385	18714	165.60	16.00
1995-96	19056	17150	19373	165.50	15.47
2001-02	25905	23315	25006	188.30	18.17
2005-06	27268	24541	27105	192.23	18.60
2009-10	33158	29179	32492	220.00	21.26

Source: FPMU Database, MoFDM, Dhaka¹⁸

Although domestic production of food grains, particularly rice, persistently increased over the past decades, leading to apparent surplus situation, import

¹⁸ www.mofdm.gov.bd (Accessed on 17 July 2016).

constitutes a significant proportion (around 10%) of total availability of food grains in the country. While public import represented an important component of total import during 1990s, private import increasingly dominated total import over the last years of the current decade. The government, at its present tenure, has resorted to bring back the trend of agricultural growth: from 3.2% in 2007-08 to over 4.3% in 2009-10. With the exception of wheat, pulses and oilseeds, the production of fish, meat, milk, fruits and vegetables have increased. Yet, the production of those crops and non-crops are still below that of a nutritionally balanced food basket. Nonetheless the agricultural is deemed to be the engine of pro-poor growth.

Access to Food

Increased domestic production, supplemented by imports and public food management, contributed to a relatively adequate availability of food at national level over the last years. However, producing more food does not guarantee access to food. People must have the purchasing power to buy food. Therefore it is indispensable that the economy as a whole has to grow. This has been manifested in the fact that in spite of steady growth in agriculture, Bangladesh has been facing persistent challenges like poverty, seasonal fluctuation of food supply and seasonality of prices etc. leading to stresses in access to food by the poor and vulnerable section of the population. Food security at household level is closely linked with poverty. These problems are massive, with approximately 40% of the

population lacking the resources to acquire enough food and consequently remaining below the poverty line.¹⁹

Food Utilization

Food Utilization is another dimension of food security which addresses not only how much food the people eat but also what and how they eat. It also covers the food production, intra-household food distribution, water and sanitation and health care practices. The nutritional outcome of the food eaten by an individual will be appropriate and optimum only when food is prepared/cooked properly, there is adequate diversity of the diet and proper feeding and caring practices are practiced. Stunting rate, wasting rate, prevention of diarrheal diseases, latrine usage, and weight for age, goitre, anaemia, night blinders etc. are the indicators at different level for this dimensions which can be assessed by demographic and health survey, immunization chart etc.²⁰

6.3 Food Security Situation in Bangladesh

According to the World Food Summit, “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and

¹⁹ Bangladesh Bureau Of Statistics, 'Statistical Yearbook of Bangladesh' (2011) *Dhaka, Bangladesh* 14.

²⁰ Umma Habiba, Md. Anwarul Abedin and Rajib Shaw, 'Introduction and Overview of Food Security and Risk Reduction Issues' in Umma Habiba et al (eds), *Food Security and Risk Reduction in Bangladesh* (Springer Japan, 2015) 5.

healthy life”. Food security encompasses many issues ranging from food production, distribution according to food preferences and food utilization including market and non-market (natural) factors. The understanding of people of Bangladesh stands food security means a stock of cereals that can be used to meet an unforeseen food crisis. Food certainly is not cereal alone, neither its security is just a sufficient amount of cereal stock. Food means balanced diet and its security refers to availability of such diet at a reasonable price.

Ensuring food security has been one of the major goals of Bangladesh since its independence in 1971.²¹ With rapid economic growth in the recent years, Bangladesh significantly improves its cropping practices and intensities with a view to fulfill the food requirements for its vast population. Feeding such a huge population is taking huge toll on croplands, private lands, pastures, fisheries resources and forests. With intensification of agricultural production system to meet the increasing demand of food there has been profound changes in the organization in the food production system in Bangladesh. Despite significant achievement in food grain production and food availability, food security at national, household and individual levels remains a matter of major concern for the Government of Bangladesh. Yet the entire production and distribution system have been under consistent change due to natural hazards and adverse impacts of climate change.

²¹ IFAD, *Investing in rural people in Bangladesh*

<<https://www.ifad.org/documents/10180/5623458d-a7cc-4020-9b61-cb971c4f58ac>>. (Accessed on 23 Sep 2015).

Bangladesh has achieved remarkable progress in increasing domestic production of food commodities as the principal means to ensuring adequate food availability for its people, especially the poor. The food production of the country (both rice and wheat) was 10.46 million metric tons in the year 1971–1972. Bangladesh attained self-sufficiency in food production in 2010–2011 with a gross production of rice and wheat of 35.0 million metric tons.²² Food security situation in Bangladesh has improved, especially on average per capita dietary energy supply has improved from 1,800 kcal in 1970s to 3,055 in 2009.²³ Food grain production, particularly rice production has tripled in the last 40 years with the use of Green Revolution technology (high yielding varieties, fertilizers, irrigation and pesticide) coupled with growth of institutional infrastructure and a positive shift in public policy and market forces. As a major staple, rice occupies 77 % of the gross cropped area and accounts for over 95 % of food grain production.²⁴ It provides about 75 % of the calorie and 55 % of the protein in the average daily diet of the people.²⁵ Rice thus occupies the center stage of food security and continues to draw major attention of the Government for further increasing the production.

In 2001–2002, rice production was 24.30 million tons, which has steadily increased to 33.54 million tons in 2010–2011 (Table 6.3). Wheat production also

²² BER, Bangladesh Economic Review. *Bureau of Economic Research (BER)*, University of Dhaka, 2011.

²³ Statistics, above n 19.

²⁴ IFAD, above n 21. BARC (2011) Study on rural households' food security in coastal region of Bangladesh Economic Impact of Climate Change on Crop Production in Southern Zone of Bangladesh.

²⁵ M Hossain, F Naher and Q Shahabuddin, 'Food Security and Nutrition in Bangladesh: Progress and Determinants, a report prepared for FAO' (2004).

decreased from 1.6 million tons in 2001–2002 to 0.97 million tons in 2010–2011. Similarly, pulses and oilseed production steadily declined mainly because of the loss of areas under these crops to Boro rice and other remunerative winter crops. Production of vegetables and fruits has increased, but at a slow pace from 1.59 million tons and 1.47 million tons in 2001–2002 to 11.19 million tons and 3.56 million tons in 2010–2011 respectively. Spectacular success has been achieved in the production of potato. It has made a quantum jump from 2.90 million tons in 2001–2002 to 8.30 million tons in 2010–2011 (Table 6.2). Fish production increased from 1.89 million tons in 2001–2002 to 2.89 million tons in 2010–2011 (Table 6.3). Meat, milk and egg production has also increased significantly over the last 10 years (Table 6.3).

Table 6.2: Domestic production (gross) trend of food grains, potato, pulses, oilseeds, vegetables and fruits (2001-2002 to 2010-2011) (Million MT)

Years	Food grain		Potato	Pulse	Oilseeds	Vegetables	Fruits
	Rice	Wheat					
2001-2002	24.30	1.61	2.90	0.35	0.39	1.59	1.47
2010-2011	33.54	0.97	8.30	0.72	0.84	11.19	3.56

Source: BBS, DAE (2011)

Table 6.3: Fish, meat, milk and egg production trend

Years	Fish (MnT)	Meat (MnT)	Milk (MnT)	Egg (Million)
2001-2002	1.89	0.78	1.78	4,424
2010-2011	2.89	2.95	1.98	6,078

Source: DLS, DoF (2011)

6.3.1 Food Security in the Context of Agricultural Trade Liberalization

Food security of a country is affected by different factors; one of which is international trade policy. Agricultural trade policy reform in the context of the WTO involves a reform in the three pillars of the Agreement on Agriculture (AOA): tariff, export subsidies and domestic support measures.²⁶ Reforms in each may one way or another have an implication on food security. For example, lower tariff in agricultural products may lead to increase in import, which may in turn bring the price of imported food down. This will enhance food security as food becomes affordable by many. On the other hand, this situation could also have a negative consequence on countries like Bangladesh, which largely depend on the agriculture sector as a means of GDP earnings and employment for the major share of the population.

²⁶ Melaku Desta, 'The law of international trade in agricultural products: from GATT 1947 to the WTO Agreement on Agriculture' (2002).

This is so as the lower prices of imported agricultural products could suppress the price of domestically produced products and discourage domestic production. The rules of AoA on domestic support and export subsidies may also have an impact on food security in that their reduction or removal may increase the price of food in the world market. This will in turn increase the import bills of food importing countries and decrease the amount of food supply to food deficit countries in the form of food aid. The removal of support, however, may become beneficial in the long run as it could enhance competitiveness of agricultural products from developing countries including Bangladesh.²⁷ WTO accession process has been burdensome particularly to LDCs and does not consider the special condition of these countries. This is so despite the different reiterations and adoption of different measures to help LDCs in their accession process.²⁸

Trade liberalization and globalization of agriculture is robbing the peasants and landless workers of already low incomes and livelihood security. There are three mechanisms by which the rural producers are either being super- exploited or they are being rendered dispensable.

- a. Destruction of the market support at domestic level both in terms of procurement and in terms of guarantee of Minimum Support Price (MSP).
The MSP is to agriculture what minimum wages are in the individual and service sectors, the minimum prices a farmer should receive to cover costs of production and her/his labour. However, as a result of globalization,

²⁷ Martha Belete Hailu, 'Food Security and Agricultural Trade Liberalization' (Paper presented at the Society of International Economic Law (SIEL), Second Biennial Global Conference, University of Barcelona, Barcelona, Spain.,2010.

²⁸ Ibid.

the government has started to withdraw from its role in procurement and price regulation.

- b. Diversion from food crops to perishable cash crops and promotion of monocultures thus creating market dependency on corporate monopolies. Globalization policies have promoted the idea that farmers should shift from food grains and staples to vegetables and fruits. Export promotion zones for fruits and vegetables are a major thrust area in the new agriculture policy. On the one hand this erodes food security for households and the nation. On the other hand it pushes farmers into distress sales, since fruits and vegetables cannot be consumed or stored at the household level.
- c. Removal of Quantitative Restrictions (QRs) on imports and dumping of subsidized, artificially cheap imports. A policy initiated by the U.S. in the WTO forced the removal of QRs. This has translated into destruction of domestic markets and prices in Bangladesh being perturbed by the artificially low international prices of commodities. While forcing Bangladesh to remove import restrictions and reduce domestic support to farmers and the poor. American farm subsidies are egregiously expensive, harvesting \$20 billion a year from taxpayers' pockets. Most of the money goes to big, rich farmers producing staple commodities such as corn and soybeans in states such as Iowa. According to the Government Accountability Office, between 2007 and 2011 US paid some \$3m in subsidies to 2,300 farms where no crop of any sort was grown. Between 2008 and 2012, \$10.6m was paid to farmers who had been dead for over a

year. Such payments explain why US, still promotes a rule to attempt to control the world food price.²⁹ Transnational agribusiness giants like Cargill, ADM and Conagra are, in fact, the only beneficiaries from the liberalization of imports and removal of import restrictions. They benefit both from using their immense financial clout to depress world prices during procurement and hike it during sales, as well as from the various subsidies that are given to them for both exporting as well as importing, from both exporting and importing countries.

6.3.2 Economic Transformation in Context of Liberalization

Bangladesh economy is in the process of economic liberalization and globalization in line with structural adjustment and stabilization policies since 1991. Structural adjustment policy advocated privatization, import liberalization, and export-led growth while stabilization policy emphasized reduction in fiscal deficit through withdrawal of subsidies given to industry, trade, agriculture and food distribution.

It is argued in one of the FAO study that structural adjustment in the economy impact the availability of food at the national level and food security at the household level (FAO, 1989).³⁰ The four components of perceived impacts are:

(i). With a shift in a strategy towards, export led growth, patterns of crop

²⁹ The Economist, 'Milking Taxpayers:As crop prices fall, farmers grow subsidies instead', *The Economist* (Washington DC), 14/02/2015 <<http://www.economist.com/news/united-states/21643191-crop-prices-fall-farmers-grow-subsidies-instead-milking-taxpayers>>. (Accessed on 17 July 2016).

³⁰ Food and Agricultural Organization(FAO), *Effects of Stabilization and Structural Adjustment Programmes on Food Security*, Economic and Social Development paper 89, Rome.1989.

production in the agricultural sector are likely to change and food production in the domestic economy may get affected due to changes in relative prices.

(ii). Devaluation and other macroeconomic changes will influence the food commodity prices and relative price trends. These price effects will in turn impact the area allocation decision.

(iii) Changes in the pattern of allocations in public expenditure would affect food subsidies and expenditure on agriculture, through changes in input subsidies. The changes in public expenditure will adversely impact capital formation.

(iv). Economy-wide changes in poverty; inequality and unemployment are all likely to affect real incomes and household food security.³¹

Bangladesh agriculture had endured a perceptible structural transformation due to the impact of liberalization. These transformations resulted in raising the prices of tradable agricultural commodities including food grains vis-a-vis manufactured products. For example, both the trade and fiscal compression may result in withdrawal of subsidies, tend to raise agricultural prices, higher prices benefit only surplus farmers. On the other hand, the main burden of the rise in prices of essential food grains falls on landless agricultural labourers, the urban unorganized workers and the rural and urban poor. Capital formation in the agricultural sector has a crucial role in its development. But considering the pattern of the budgetary outlays of the government, the fiscal contraction has inevitably resulted in a disproportionate cut in capital expenditure. Another reason, which had created problems for food security, is shifting of cropping

³¹ Ibid.

pattern, i.e., changing paddy cultivation to commercial cultivation like aqua culture.

Emphasis on export orientation in production alters cropping patterns and domestic production becomes more sensitive to the patterns of international demand and changes in international market. This as a result may bring down the area under food crops. It has been argued that given fixed resources, mainly land, an inverse relation is likely to emerge between export production and production for domestic consumption.³² If the consequent changes in land use end up in higher allocation of land towards export oriented crops, then the relative allocation towards food crops is likely to fall. This will probably have an impact on domestic food supply and, that needs to be corrected through growth in productivity of crops.

Further, in the present context of liberalization it is perceived that the process of commercialization will become stronger and thereby the area under food crops will be reduced. That will bring in Significant changes in cropping pattern. Such hypothesis is advanced under two strong assumptions: (i) improved market access may result in a situation where the poor and small cultivators may not be able to compete with foreign suppliers with their merge share of marketable surplus and hence may lose in terms of the marginal market shares and also in terms of price advantages if any. To that extent, it may immiserize the poor farmers and reduces their economic access to food grains. (ii) the consequent increase in food grain prices and instability in the prices is likely to affect the food security of the poor most adversely. Increase in relative prices of food grains would impoverish the

³² Utsa Patnaik, 'Export-oriented agriculture and food security in developing countries and India' (1996) 31(35/37) *Economic and Political Weekly* 2429.

poor and worsen their food insecurity. Because of the violent fluctuations in the international prices of agricultural commodities, the variability in domestic market prices is likely to get accentuated as a result of trade liberalization.³³

6.4 WTO and the Food Insecurity in Bangladesh

Congruence with nature, and the manifestation of appreciation to mother earth for bequeathing on us the fruits of our labour nurturing her, constitutes the core elements of the agrarian tradition in Bangladesh. Numerous developing countries including Bangladesh fear that with trade liberalization they have given up tools to address both chronic and acute food insecurity. Hence, food security is prominent in their WTO negotiating positions on agriculture. In Bangladesh as well as in South Asia, this is a precarious issue since a large section of the population is reliant on agriculture for their livelihood, and the poor consumers already spend an overwhelming share of their income on food.³⁴

The WTO Agreement on Agriculture affects food security in developing countries in two distinct ways. First, the Agreement increases food insecurity by exacerbating rural poverty and inequality. Second, the Agreement hampers the ability of developing countries to adopt measures to promote food security. This section begins with a brief summary of studies on the effects of trade liberalization on food security in developing countries and then examines how the WTO

³³ Ibid.

³⁴ Ramesh Chand, 'International trade, food security, and the response to the WTO in South Asian Countries' (2007) *Food security: Indicators, measurement, and the impact of trade openness* 262.

Agreement on Agriculture restricts the policy options available to developing countries to address food insecurity.³⁵

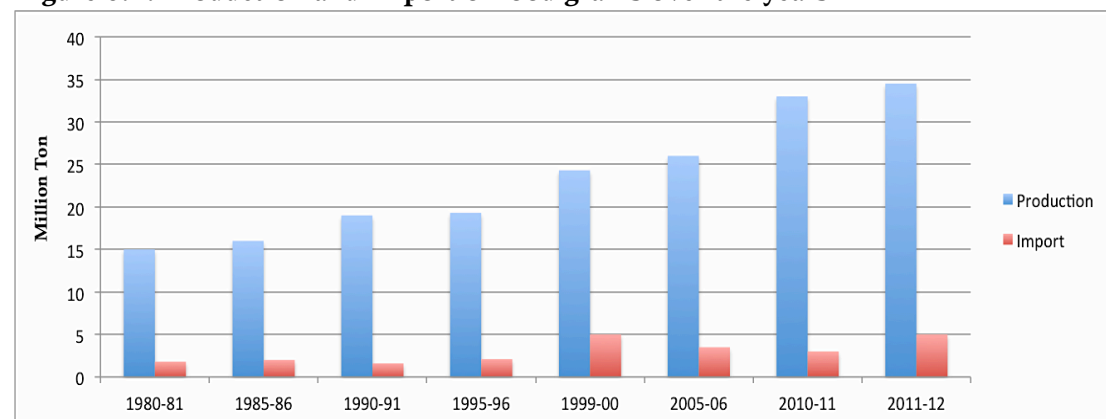
Agricultural trade liberalization, promoted under the AoA, threatens the strong base of farmer-oriented agriculture in favour of industrialized and mechanized agriculture largely carried out and controlled by transnational commodity producers and traders from developed countries. The consequence is often a de facto discrimination against the poorest and most vulnerable sectors of society, contrary to human rights. All agricultural products are subject to liberalization under the AoA. This is a concern especially with regard to staple foods that are vital for food security and which can guarantee the right to food. For example, the main food crop of Bhutan, Bangladesh, India, Nepal and Sri Lanka, is rice. A study on the import pattern of food grains in these countries reveals those most are not self-sufficient and are becoming increasingly dependent on rice imports.³⁶ Records of food import data for the last decades indeed imply that, in a production shortfall year due to natural calamities, import requirement increases up to 5.5 million tons. However, the given data for the period 1980 to 2012 show that although food grain production increased during this long period amidst the extremely vulnerable ecology, level of import also kept pace with it; i.e. food grain import increased -- ranging from 1.8 million tons to 5.5 million tons in different years (as shown in the figure). In fact, imports of cereals continued with substantial increase in different years, mostly following poor harvests due to floods and droughts. Import of wheat increased consistently over time despite its

³⁵ Carmen G Gonzalez, 'Institutionalizing inequality: the WTO Agreement on Agriculture, food security, and developing countries' (2002) 27 *Columbia Journal of Environmental Law* 433.

³⁶ Sheila Page and Michael Davenport, *World trade reform* (Overseas Development Inst., 1994).

increased domestic production and the reduction in food aid in recent years.³⁷

Figure 6.1: Production and Import of food grains over the years



Source: Shahe Alam³⁸

Think-tank economists postulate that, because of population and income growth, the demand for cereal foods (especially for rice) is expected to rise by over 1.5% per annum for the next few decades. An estimate clearly indicated that by the year 2020, 37 million tons of food grain will be required for a projected population of 172 million. It is, therefore, presumed that Bangladesh would probably face an enormous challenge over the next decade in achieving food self-sufficiency and ensuring food security for all individuals and groups. In a subsistence-oriented agrarian economy such as Bangladesh's, domestic food production has an important role to play in the quest for food security. As such, the obsession with rice and cereals is evident amongst the policy makers in the country.³⁹

³⁷ M. Shahe Alam, 'Food Grain Production: The Challenges', *The Daily Star* (Dhaka, Bangladesh) <<http://www.thedailystar.net/food-grain-production-the-challenges-49990>>. (Accessed on 27 Aug 2016).

³⁸ Ibid.

³⁹ Ibid.

A 1999 study by the U.N. Food and Agriculture Organization (FAO) on the impact of the WTO Agreement on Agriculture in 16 developing countries expressed concern that the Agreement on Agriculture, like the market-liberalizing structural adjustment programs that preceded it, would adversely affect food security in developing countries by exacerbating rural poverty and inequality.⁴⁰ The FAO study found that the Agreement resulted in an increase in food imports and an accompanying decline in food production.⁴¹ These increases in food imports, including surges in meat and dairy products, threatened key agricultural sectors in developing countries that were important for economic development, employment, food supply and poverty alleviation.⁴² The FAO reported that agricultural trade liberalization had resulted in a concentration of landholding in a wide cross-section of countries.⁴³ While large, export-oriented agricultural enterprises reaped the benefits of trade liberalization, small farmers frequently lost title to their plots of land.⁴⁴ In the absence of social safety nets,

⁴⁰ Alam, above n 37. U.N. FOOD & AGRIC. ORG. (FAO), FAO SYMPOSIUM ON AGRICULTURE, TRADE AND FOOD SECURITY, Paper No. 3: Experience with the Implementation of the Uruguay Round Agreement on Agriculture: Developing Country Experiences, at 18 (Sept. 1999), *available at* <http://www.fao.org/DOCREP/meeting/x3065E.htm> [hereinafter FAO Paper No. 3]. The countries studied by the FAO were Bangladesh, Botswana, Brazil, Egypt, Fiji, Guyana, India, Jamaica, Kenya, Morocco, Pakistan, Peru, Senegal, Sri Lanka, Tanzania, and Thai-land. *See also* U.N. FOOD & AGRIC. ORG. (FAO), AGRICULTURE, TRADE AND FOOD: COUNTRY CASE STUDIES, vol. H, ch. 8, *Kenya*, at 1, *at* <http://www.fao.org/DOCREP/003/x8731e/x8731eOO.htm> (Accessed on 15 Jul 2015).

⁴¹ *Ibid.* at 15, 42, 49, 57, 77.

⁴² *Ibid.*

⁴³ UN Food & Agricultural Organization (FAO), *Agriculture, Trade and Food Security: Experience with the implementation of the Uruguay Round Agreement on Agriculture - developing country experiences* 3mtg.

⁴⁴ *Ibid.*

rural unemployment grew and poverty increased.⁴⁵

These conclusions are supported by twenty-seven case studies that document the effects in thirty-nine developing countries of agricultural trade liberalization resulting from structural adjustment policies, regional trade agreements and the WTO Agreement on Agriculture.⁴⁶ The case studies confirmed that liberalized trade in agricultural products produced a flood of cheap food imports that depressed food prices and threatened the livelihoods of small producers in developing countries.⁴⁷ At the same time, government cuts in agricultural input subsidies increased the price of farm inputs.⁴⁸

In sum, the studies found that trade liberalization produced winners and losers. The winners are generally large enterprises, such as transnational corporations and domestic large-scale farming operations. The losers appear to be poor farmers and rural laborers, whose livelihoods were undermined by falling commodity prices and by the loss of rural employment.⁴⁹

6.4.1 Developing Country Policy Options to Promote Food Security: Possible Restrictions

The WTO Agreement on Agriculture restricts the policy options available to developing countries to promote food security. As detailed earlier, the Agreement

⁴⁵ Ibid.

⁴⁶ John Madeley, *Trade and hunger: an overview of case studies on the impact of trade liberalisation on food security: a report from Church of Sweden Aid Forum Syd* <<http://www.forumsyd.se>>. (Accessed on 25 Aug 2016).

⁴⁷ Ibid. at 8, 17-18, 21, 25-26.

⁴⁸ Ibid. 44 at 8, 16-17, 25-26, 28-29.

⁴⁹ Ibid.

was negotiated primarily between the U.S. and the E.U., and reflects the interests and priorities of these parties. The Agreement enables developed countries to continue to subsidize and protect domestic producers while requiring developing countries to open up their markets to foreign competition.⁵⁰

a. Market Access

The Agreement on Agriculture did not produce market liberalization in OECD countries. Developed countries were able to evade the Agreement's market access obligations through dirty tariffication, selective tariff reduction, strategic use of the Agreement's Article 5 safeguard provision and weaknesses in the minimum market access requirements. Consequently, the WTO Agreement on Agriculture did not open up developed country markets to developing country producers.⁵¹ Most developing countries, including Bangladesh did not engage in tariffication, they are not permitted to invoke the Agreement's Article 5 safeguard provision, which permits the imposition of additional duties in the event of import surges or particularly low import prices.⁵² While some countries have proposed elimination of the safeguard provision in order to combat developed country abuses and in order to create parity between developed and developing countries, others have proposed expansion of the provision to cover developing countries and restriction of the provision to policies designed to promote food security.

⁵⁰ Gonzalez above n 35 at 478.

⁵¹ Dale E Hathaway and Merlinda D Ingco, 'Agricultural liberalization and the Uruguay Round' (1995) *World Bank Discussion Papers* 1.

⁵² Ibid. at 15.

b. Export Subsidies

The WTO Agreement on Agriculture institutionalized the existing inequities between developed and developing countries with respect to the availability of export subsidies as a tool of agricultural policy. By permitting past users of export subsidies to maintain these subsidies, subject to certain reduction obligations, while prohibiting the introduction of new subsidies, the Agreement perpetuated the unfair competitive advantage held by developed country producers.

The Agreement's prohibition of new export subsidies deprives developing countries of an important tool of agricultural policy that may be used to enhance export revenues and create employment opportunities in the agro-export sector. In so doing, the Agreement hamstrings developing countries' use of trade-based entitlements and labor-based entitlements to promote food security while subjecting them to an influx of subsidized imports that may erode production-based entitlements by displacing domestic food production.⁵³

c. Domestic Subsidies

The WTO Agreement on Agriculture exacerbated inequities between developed and developing countries with respect to the use of trade-distorting "amber box" subsidies by permitting developed countries to use these subsidies (subject to reduction commitments) while restricting their use by developing countries. Most developing countries, including Bangladesh do not have domestic subsidy reduction obligations under the Agreement because Bangladesh did not provide significant domestic agricultural subsidies.

⁵³ Gonzalez above n 35 at 481.

The WTO Agreement contains a number of provisions, which provide significant leeway to Members, and especially to developing country Members, in respect of agricultural subsidies. In our view, these provisions claim that the contemporary international trade system demands that states surrender their regulatory authority in the area of agriculture and food security.

Developing countries may only use "amber box" subsidies in excess of de minimis levels if they fall within the "rural development" exemption (hereinafter the Special and Differential Treatment box or "SDT box") of the Agreement, which permits investment subsidies generally available to agriculture in developing countries. The case of Bangladesh illustrates why the restrictions on "amber box" subsidies may impose severe constraints on agricultural policy in developing countries, notwithstanding the availability of the "rural development" or "SDT box" exemptions. In Bangladesh, as in many developing countries, subsidies for the production of basic foodstuffs are very close to the de minimis levels prescribed by the Agreement.⁵⁴

6.5 Institutional Dimension, Policy and Planning Framework of Food Security in Bangladesh

Bangladesh's agricultural trade policy is often perceived as one of increasing openness to imports, but with significant anti-export bias. In reality however, trade policy has been actively used both on the side of imports for management of the staple grains and the side of exports in promotion of the exports of locally produced value added products. On the export side, the policy has been relatively

⁵⁴ (FAO), 3 mtg.above n 43.

consistent. On the import side, the focus is to minimize the potential negative impacts of trade on food security and as a result the interventions have been more ad-hoc in nature. In practice, both exportable and importable have therefore been subject to the use of instruments associated with trade promotion and trade restriction respectively. Although a significant number of quantitative restrictions have been dismantled and there has been a shift towards greater use of ad valorem tariffs, the average tariff has is still high at 32 %.⁵⁵

The Government of Bangladesh considers agricultural development a major priority for ensuring the food and nutrition security of the country. While Bangladesh has experienced steady advances in food availability and security, including the tripling of its annual rice production during the past several decades, by overcoming a number of persistent and emerging challenges.⁵⁶ Future agricultural growth and food and nutrition security are threatened by population growth, decreasing soil fertility and health, deteriorating access to limited and scarce natural resources, increasing pest and disease infestation and persistent poverty leading to poor access to food.⁵⁷

Bangladesh is also a signatory of GATT Uruguay Round Agreement in 1994 at which, among other issues, agricultural trade liberalizations was agreed. Following the recommendation of the Bangladesh Development Forum, the

⁵⁵ Habiba, Abedin and Shaw, above n 20 at 119.

⁵⁶ Akhter U Ahmed, Paul A Dorosh and Quazi Shahabuddin (eds), *Income growth, safety nets, and public food distribution* (Bangladesh Food Security Investment Forum, 2010).

⁵⁷ M Asaduzzaman, Claudia Ringler and James Thurlow, 'Investing in crop agriculture in Bangladesh for higher growth and productivity, and adaptation to climate change' (Paper presented at the Bangladesh Food Security Investment Forum, Dhaka, Bangladesh, 26-27 May, 2010).

process of consolidating the country's food security program at a larger scale was started in 2000 through a task force document entitled "A Comprehensive Food Security Policy for Bangladesh". Meanwhile a high priority was given to further strengthen and harmonize government's efforts to ensure food security for all. It was achieved through revisiting all existing related policies and strategies. The goal of the first national food policy, which was adopted in 1988, was to achieve food security for all people by increasing food production and attaining self-sufficiency. However, many important aspects of food security remained unattended in the food policy of 1988, which was based on availability of food grain alone.⁵⁸

6.5.1 Food Availability and Access in Bangladesh

According to FAO, per capita food supplies have increased from 2,309 kcal per day equivalent in 2000, to 2,435 kcal in 2004, and 2,481 kcal in 2009,⁵⁹ which is higher than several South Asian countries including India, Pakistan, Nepal, and Sri Lanka. This partially reflects increased crop productivity as production per ha increased by an annual average of 5.2% during 2006–2011, but production has lagged population growth with per capita food production declining by 2.5% annually during this period.⁶⁰ The shortfall has been filled by a significant increase in cereal imports, a decrease in cereal exports, and food aid.

⁵⁸ Habiba, Abedin and Shaw, above n 20 at 136.

⁵⁹ According to the BBS, the direct calorie intake method has defined 2,122 kcal per day or below defines "absolute poverty," while "hard-core poverty" refers to a calorie intake of less than 1,805 kcal per capita per day. FAO, *Asia's Women in Agriculture, Environment and Rural Production: Bangladesh* Food and Agriculture Organization (FAO) <<http://www.fao.org/sd/wpdirect/wpre0104.htm>>. (Accessed on 28 July 2016).

⁶⁰ Ibid.

Poverty remains the primary cause of food insecurity in Bangladesh. Although aggregate food supplies and caloric intake have increased, the large poor population is food insecure as they lack the resources to access an adequate diet. For all the economic and food production progress, a large portion of the population is poor and the prevalence of undernutrition among the population has increased from 15% in 2004-2006 to 17% in 2010-2012.⁶¹

Bangladesh is losing agriculture land at a rate of 0.05% per year due to various factors including urban encroachment of agriculture land, road infrastructure, water logging, depletion of ground water and soil fertility, erosion, and salinity.⁶² In the last three decades about 170,000 ha of agriculture land has been degraded by increased salinity.⁶³ Soil fertility degradation results from imbalanced fertilizer use (overuse of subsidized nitrogen fertilizers), absence of micronutrient application, less use of manure for crops and more for fuel, and cropping intensification combined with the increase of monoculture rice without rotation.

The majority of farming households (62.1%) farm 0.4 ha or less, and these households farm about 27% of all farmland in Bangladesh. The average farm size for these households is 0.26 ha (see Table 6.4). The average farm size for the country overall is 0.59 ha of which 0.51 ha is cultivated.⁶⁴ High poverty rates and food insecurity are associated with small landholdings, and 51% of households in

⁶¹ Ibid.

⁶² Md Nazmul Hasan et al, 'Trends in the availability of agricultural land in Bangladesh' (2013) *National Food Policy Capacity Strengthening Programme. Dhaka*.2013.

⁶³ Ministry of Agriculture Bangladesh and FAO, *Towards a Food Secure Bangladesh: Country Programming Framework 2010–2015*
<http://www.fao.org/fileadmin/user_upload/faobd/docs/Priorities/Bangladesh_CPF_Final_22_May_2011.pdf>.(Accessed on 29 July 2016).

⁶⁴ BBS, *Yearbook of Agriculture Statistics of Bangladesh*.2011.

rural Bangladesh are landless.⁶⁵ The relationship between poverty reduction and land ownership changed between 2000 to 2005 and 2005 to 2010; during 2005–2010 landless and functionally landless households experienced larger poverty decreases (see Table 6.5).

Table 6.4: Farm Holdings (2005)

Farm Size (ha)	Farm Numbers		Farm Area		Average Farm Size (ha)
	000s	%	000 ha	%	
Less than 0.2	5,829	38.6	1,011.3	11.2	0.17
0.2-0.4	3,553	23.5	1,398.8	15.5	0.39
0.4-0.6	2,112	14.0	1,283.3	14.2	0.61
0.6-1.01	1,858	12.3	1,695.6	18.8	0.91
1.01-3.03	1,561	10.3	2,726.4	30.2	1.75
More than 3.03	177	1.2	911.8	10.1	5.15
Total	15,090	100.0	9,027.2	100.0	0.59

Source: BBS, 2011⁶⁶

⁶⁵ Ahmed, Dorosh and Shahabuddin, above n 56.

⁶⁶ Bangladesh Bureau of Statistics.
<<http://www.bbs.gov.bd/PageWebMenuContent.aspx?MenuKey=230>>, (Accessed on 15 Jul 2015).

Table 6.5 Poverty Rates by Landholdings

	Poverty Rate (%)			Population Distribution (%)		
	2000	2005	2010	2000	2005	2010
Landless < 0.05 acre	63.5	56.8	45.6	48	45.8	50.9
Functionally Landless 0.05-0.5 acres	59.7	48.8	34.6	13	15.9	15.9
Marginal 0.5-1.5 acres	47.2	35.1	25	17.5	18.8	18
Small 1.5-2.5 acres	35.4	23.7	16.8	9.2	8.8	6.8
Medium/Large 2.5 acres or more	20.7	12.8	9.7	12.4	10.7	8.4

Source: World Bank 2013⁶⁷

6.5.2 Food Access

There has been a rapid decline in the proportion of population falling below the upper poverty line, from 48.9% (31.7 million people) in 2000 to 34.5% (15 million) in 2010.⁶⁸ The incidence of extreme (lower) poverty fell from 34.3% (22.2

⁶⁷ Bangladesh Poverty Assessment: A Decade of Progress in Reducing Poverty.
<<http://www.worldbank.org/en/news/feature/2013/06/20/bangladesh-poverty-assessment-a-decade-of-progress-in-reducing-poverty-2000-2010>> (Accessed on 23 April 2016).

⁶⁸ Poverty for both upper and lower poverty lines is measured by different methods. These

million people) in 2000 to 17.6% (8.4 million) in 2010. The poverty reduction between 2000 and 2010 (1.7% per year for upper poverty) was faster than the previous decade. The decline in poverty is attributed to increased farm incomes; a greater share of the population reaching working age, which has led to lower dependency ratios; and a tripling of migrants' remittances.⁶⁹

In addition to the poor and extremely poor, another vulnerable group are those that fall into the income category that is 25% above the poverty line, which accounts for 19% of the population (about 30.1 million people). Many if not most of this group are one major shock away from falling below the poverty line. Adding this group to the poor and extremely poor indicates that about 50% of the country's population is poor, extremely poor, or very vulnerable to falling below the poverty line.⁷⁰

6.5.3 Planning Frameworks and Food Security Policy Bangladesh

The Government of Bangladesh has undertaken an in-depth and consultative process of food security policy reform since the World Food Summit of 1996. This has provided the Government with a comprehensive food security policy framework “the National Food Policy – 2006” and programming document “the

include: the “cost of basic needs” method which addresses a basic food basket of 11 items that are scaled according to the nutritional requirement of 2,122 kcal per person per day plus an allowance for non-food items; the headcount rate; the poverty gap; and the squared poverty gap. To determine the lower poverty line (extreme poverty), the non-food allowance is the average non-food expenditures of households whose total consumption is equal to the food poverty line, whereas for the upper poverty line (poverty), the non-food allowance is the average non-food expenditures of households whose food consumption is equal to the food poverty line.

⁶⁹ FPMU, Ministry of Food and Disaster Management, Bangladesh, *Bangladesh Country Investment Plan*.2013.

⁷⁰ Bangladesh Planning Commission, General Economics Division, *Bangladesh National Social Protection Strategy*.2013.

National Food Policy Plan of Action (2008–2015)” as well as an investment plan for food security and nutrition “the Bangladesh Country Investment Plan”.

- *The National Food Policy, 2006 (NFP 2006)*

The National Food Policy of 2006 is Bangladesh’s main policy document on food security. It is a comprehensive and integrated approach to food security, including the availability, access and utilization dimension of food security. The NFP frame- work is articulated around three core objectives/outcomes and 12 more specific objectives/strategic lines of action.

The National Food Policy emphasizes the important linkages between availability, access, and nutrition outcomes, in line with the definition of food security adopted by the World Food Summit of 1996. It also recognizes that a combination of measures is needed to effectively reduce hunger and malnutrition, e.g. providing immediate access to food to the most vulnerable and promoting agricultural development and income growth.

- *The NFP and the Millennium Development Goal (MDGs)*

Bangladesh has made remarkable progress towards reaching the Millennium Development Goals (MDGs) by 2015, with indicators showing that Bangladesh is “on track” to reach 100 % enrolment rates and gender equality in primary and secondary education and in significantly reducing child and maternal mortality.

Evidence suggests that food security and nutritional well-being improves human potential, and reduces poverty by boosting productivity throughout the life cycle and across generations. Thus, the NFP agenda on sustainable and pro-poor agricultural and rural development, food diversification, women and vulnerable

groups' empowerment, skill development, sanitation, health and nutrition, is forcefully supportive of the overarching **Millennium Development Goal on poverty and food security (MDG1)**, and will clearly underlie progress towards many other Millennium Development Goals.

- *The National Food Policy Plan of Action (2008-2015)*

To provide programmatic guidance in implementing the National Food Policy, the Government formulated the National Food Policy Plan of Action (PoA). The PoA translates the provisions of the NFP towards achieving its three core objectives into 26 strategic areas of intervention and priority actions that cover all dimensions of food security. The Plan, which is in line with the Millennium Development Goals, for over the period of 2008–2015.

Apart from providing immediate access to food to the most vulnerable households through targeted cash and food transfers, the Plan also includes actions aimed at developing production capacity, income generation and nutrition through investments and accompanying policy measures. That means the Plan of Action adopts diversified approaches to hunger reduction. The Plan of Action is a dynamic document that is adjusted based on the results of monitoring activities, the experiences gained in the process of its implementation as well as possible changes in the key factors impacting on the development prospects of Bangladesh.

As a member of WTO, Bangladesh government has taken number of steps to sustain food security in Bangladesh. The government favors direct investment in household food security rather than rural infrastructure. Subsidies for farmers

appear likely to remain in place. Development and government agencies are piloting schemes for more sustainable farming practices. There are promising results from community management of groundwater resources, where neighborhood farmers recognize a shared interest in recharging aquifers. The pressures on Bangladesh are higher given that it is among the very few countries in which the bound tariffs (i.e. maximum tariffs allowed under the WTO regime) are at levels that are significantly higher than most developing countries. It is, however, important for Bangladesh to maintain tariffs on products that are critical from the point of view of maintaining food security and livelihoods given that the international prices of many of these commodities have remained sticky at low levels in recent years.⁷¹

6.6 Possible Solution to Food Insecurity in Bangladesh

To prevent an escalation of political insecurity resulting from the crises and to ease the burden on poor people, positive actions on Bangladesh are urgently needed. Particular attention should be given to vulnerable regions, which face major food security threats. The government of Bangladesh has introduced the Open Market System (OMS) program in order to ensure affordable food for people of low-income group. The program launched the initiative of selling rice and wheat at lower prices for the poor farmers. In this system, a consumer can buy either rice or flour or both the items separately up to a maximum of 5 kg at a time from the designated OMS truck dealers. According to the Department of Food, the country currently has now 1.2 million tons of rice and 0.25 million tons

⁷¹ Ahmed, Dorosh and Shahabuddin, above n 56.

of wheat at the public warehouses.⁷² This system has to be monitored, as there is always complaint about possible corruption by local administration.

The government of Bangladesh provides agricultural loan for the poor farmers. In the 2010–2011 fiscal years, the Bangladesh Bank, the central bank of Bangladesh, set a target of distributing US\$1,616,113,744.075829 (taka 12,617 crore) that was 6 % higher than the previous fiscal years. On 28 July, 2012, the Bangladesh Bank announced the agricultural loan policy for 2011–2012 fiscal years with a target to disburse US\$1,767,644,421.67 (taka 13, 800 crore) 9.4 % higher than the target of previous fiscal year.

Despite these initiatives, Bangladesh needs to promote environmentally and socially sustainable agricultural development as a cornerstone for economic growth. Further, Fostering broad based, sustainable agricultural and rural growth can help to ease food insecurity in Bangladesh case. Addressing the entire rural space and looking beyond farming to include off farm income opportunities can also impact on urban food security in Bangladesh. Promoting not only productivity growth, but also resource access, land tenure, returns to labor and education will also contribute to face the grim of urban food insecurity. Tackling the unique factors behind increasing urban poverty and improving food security in terms of availability and access, market development, management of natural resources and access to basic services is very important for achieving food security in the long run in a country like Bangladesh. In fact, national and international policies and issues that affect implementation and impact should not be ignored;

⁷² Habib TB, 'Food Stock Sufficient Govt Plans to Reduce OMS rice price.', *The Financial Express* (Dhaka) <<http://www.thefinancialexpressbd.com/index.php?ref=MjBfMTJfMDhfMTJfMV85MF8xNTI0NTE=>>.(Accessed on 20 July 2016).

these include public sector reform and decentralization, peace and security, trade and macroeconomic policy reforms.⁷³

Since small farms are predominant in Bangladesh and farm sizes are decreasing further, the productivity of smallholder agriculture is key for promoting agricultural growth. It is crucial to expand smallholder access to finance, risk management strategies, inputs, services, and extension, and increase investment in rural infrastructure.

6.7 Conclusion

The WTO Agreement on Agriculture adversely affects food security in developing countries by increasing poverty and inequality and by restricting the tools available to developing country governments to promote food security. In general, the current WTO rules on agriculture do not appear to be overly constraining for developing countries. The way that market price support is calculated under the current rules needs to be fixed, but India's proposal to exempt market price support for farmers if it is linked to public stockholding programs is short-sighted. It would deal a serious blow to international disciplines on trade distorting agricultural policies.⁷⁴ Given the stakes, the US refusal to negotiate changes to the method for measuring market price support is inexplicable. In addition to fixing that rule, the WTO also needs to address export restrictions. That would help rebuild confidence in trade as a tool of food security

⁷³ Habiba, Abedin and Shaw, above n 20 at 36.

⁷⁴ Elliot Kimberly Ann, 'Food Security in Developing Countries: Is There a Role for the WTO?' (2015) *Center for Global Development* <<http://www.cgdev.org/publication/food-security-developing-countries-there-role-wto>>. (Accessed on 20 July 2016).

and reduce the incentives for countries to pursue expensive and ineffective self-sufficiency policies. Pairing new rules on export restrictions with the elimination of export subsidies would then expand the beneficiaries from a WTO food security arrangement and broaden the pro-reform coalition. That makes the EU's refusal to agree to eliminate export subsidies that it no longer uses as baffling as the US negotiators position on market price support.⁷⁵

Domestic marketing reforms should be undertaken so that there is one integrated market for food within Bangladesh and restrictions do not prevent inter-regional flows in a timely and efficient manner. In the context, apart from price reform, a crucial link is institutional reform in both procuring and distribution, which must be undertaken to ensure better household food security. Proper targeting of food subsidies and eventually moving on to a food stamp system should also be pursued. In view of global food insecurity, use of biotechnology and innovations in agriculture can improve yields and provide relief to the farmers, say experts.

Every measure should be taken to safeguard the livelihood security of the farmers, the vast majority of whom are resource-poor operating small and marginal holdings. Hunger has always been an issue that needs attention for humanitarian as well as developmental reasons.

The WTO agreement also affects the food security in different way. Hence, it's now the high time to the Government to come out with a new strategy to secure food in Bangladesh for non-secured people.

⁷⁵ Ibid.

There is a lurking fear that trade liberalization and consequently, greater integration of Bangladesh agriculture into world markets through removal of restrictions on exports and imports would lead to a deluge of cheap imports threatening food security. This would wipe out the production base, creating unemployment and deepening poverty. Similarly, exports of agricultural produce would reduce domestic availability of cheap food. Also, the price volatility accompanying liberalization would push the poor to the very brink of destitution given their limited capacity to bear risks. There is also an overall feeling that the AOA is an 'unequal treaty' unduly favouring the rich countries. In order to evaluate these concerns, it is first and foremost essential to examine what the AOA entails for Bangladesh, how Bangladesh has implemented these commitments and in what ways these impinge on India's food security.⁷⁶ The AoA also recognize non-trade concerns, such as food security and the protection of the environment would have to be taken on-board while the Agreement was being implemented member countries. If so, farsighted donor and government investments in raising agricultural productivity, and policies on behalf of stable food production and prices, might go a long way to preventing food crises in the future.

The Doha and Bali WTO Ministerial Declaration reaffirmed the Agreement on Agriculture's long-term objective to establish a fair and market-oriented trading system. Significantly, the Doha and Bali Declarations also acknowledged the importance of taking into account the development needs of non-industrialized nations, including food security and rural development, during the next round of

⁷⁶ Anwarul Hoda et al, 'Indian Agriculture, food security, and the WTO-AOA' (2005) *Economic reforms and food security: the impact of trade and technology in South Asia* 115.

agricultural trade negotiations. In order to achieve these objectives, it is necessary to remedy the asymmetries in the Agreement that institutionalize the subsidies and protections accorded industrialized country agricultural producers while requiring market openness in developing countries. It is also imperative to recognize the underlying inequities in the global trading system that create food insecurity and to craft multilateral trading rules that enable developing countries to utilize a wide array of tools to ensure access by all people at all times to sufficient, safe and nutritious food.

Chapter Seven

Agricultural Trade Liberalization: Environmental Issues and their Significance in Bangladesh

7.1 Introduction

Agriculture is and may proceed for being a serious basis for environmental degradation, inducing the conversion of all-natural natural ecosystems to agricultural production as the sector responds to increased demand for food and fibres due to increases in population and wealth. Agricultural goods also comprise an important segment of international commodities trade and there can be important environmental effects, both positive and negative, from increased agricultural trade. In addition, domestic environmental regulations can significantly affect an industry's competitiveness.¹

Recognizing that the benefits of trade can strongly contribute to the improvement of basic living standards, many of the world's developing countries and countries with economies in transition, have sought to actively participate in the global trading regime. For most of these countries, efficient and effective participation in the global economy has required substantial economic restructuring at home.

¹ Jeffrey M Peterson, Richard N Boisvert and Harry de Gorter, 'Environmental policies for a multifunctional agricultural sector in open economies' (2002) 29(4) *European Review of Agricultural Economics* 423.

Thus, in recent years, national governments have implemented structural adjustment programmes to stabilize and reorient their economies in order to face the challenges of development. This included in the first instance the restructuring of economies to increase foreign exchange earnings through enhanced trade and trade liberalization as embodied in the set of WTO agreements.

Trade liberalization elements of restructuring programmes have provided countries with a wide range of trade-related benefits. This has been reflected in the rapid generation of increased domestic employment, income growth, and foreign exchange earnings. Trade liberalization has also facilitated countries' increased imports of strategic goods and services, and attracted foreign direct investment, yielding enhanced technology transfer, the development of endogenous capacities, and the establishment of basic infrastructure needed to support national objectives for industrial development. Trade liberalization may also indirectly benefit a nation's natural and environmental resource bases, as increased trade-related fiscal revenues can provide national governments with new financial resources to support environmental protection, conservation and remediation efforts.

However, there has been an increasing concern over the potential negative impacts of trade liberalization, particularly on the environmental and natural resources of developing countries and countries with economies in transition where trade has grown most rapidly. These countries have found that economic activities supporting, or supported by, rapidly expanded trade can result in serious environmental degradation when complementary environmental policies are not

in place.²

This chapter assesses the environmental impacts arising from the intensive use of land and water, extensive application of chemical fertilizers and pesticides and conceivable impact on bio-diversity.

7.2 Environmental Impacts of Trade Liberalization

Agricultural activities make use of natural resources — soil, water and air — and in many countries have shaped the natural environment and landscapes. Agricultural activities have both beneficial and harmful impacts on the environment through changing the quality or the quantity of locally available natural resources, which are also the foundations of natural habitats, biodiversity and landscapes. Across the countries the relative importance accorded to the beneficial and harmful environmental effects of agriculture is often related to the density of population and the pressure of population on agricultural land use and water supplies.³

To meet increasing food demands the sector has been evolving through an industrialization process characterized by farming practices using more agricultural chemicals, machinery inputs and knowledge. Technological and

² David Tilman et al, 'Forecasting agriculturally driven global environmental change' (2001) 292(5515) *Science* 281; Dale Colyer, *Environmental Issues in the FTAA*, 24th West Indies Agricultural Economics Conference, Grenada.

³ Mark R Metcalfe, 'Environmental regulation and implications for competitiveness in international pork trade' (2002) *Journal of Agricultural and Resource Economics* 222; Colyer, 24th West Indies Agricultural Economics Conference, Grenada.

economic developments have given rise to a marked intensification of agriculture (more output per unit of land or labour). Moreover, for many decades agricultural policies in most developing countries including Bangladesh have encouraged the expansion of commodity production, which has also been an important cause of the environmental impacts of agriculture.⁴

7.3 Trade and Environment Linkages

The environmental effects of trade policies have not received much attention from either economists or policy makers. Many economists tend to think environmental and trade issues should continue to be addressed in separate agreements, while environmentalists often think that it is essential to address relevant environmental issues in trade agreements.⁵ The basic view of many free trade proponents is that environmental regulations that affect trade are non-tariff barriers, are not justified, and generally should be avoided in trade agreements. This view is represented by what Bhagwati⁶ calls “the principle of two birds and two stones.” Although an oversimplification, the following summarizes this viewpoint: 1) free trade results in increased incomes; 2) higher incomes increase the demand for improvements in the environment and will result in increased expenditures on the environment; 3) environmental regulations in trade agreements become trade barriers which restrict trade and reduce incomes, with

⁴ Awudu Abdulai and Linda Ramcke, *The impact of trade and economic growth on the environment: revisiting the cross-country evidence* (Institute for the World Economy, 2009) 30.

⁵ OECD, 'Improving the Environmental Performance of Agriculture: Policy Options and market Approaches' (2001) 51.

⁶ Ibid.

an accompanying decrease in the demand for improvements in and expenditures on the environment; and 4) therefore, environmental issues should be left to domestic policies and multilateral environmental agreements that are separate from and that do not restrict or prevent the benefits of free trade. Many, however, recognize the need for coordination of activities to reduce and/or resolve conflicts between multilateral trade and environmental agreements.⁷

To many developing countries, the inclusion of environmental issues in trade agreements is just another way the developed world is imposing trade barriers on the goods produced by the world's low-income countries, which cannot afford to undertake the costly environmental programs being imposed on them as conditions to export products to the industrialized nations.⁸ GATT/WTO rules require that the same regulations must apply to domestic and imported products and that it is the final product that matters, not the production process. Environmental concerns, however, involve more than just production processes; they also include issues such as biodiversity, species extinction, quality of life, etc. Article XX of GATT permits regulations to protect animal life, which includes endangered species. The sometimes-conflicting provisions of the GATT/WTO agreements can be and are interpreted in different ways by those with varying views of environmental, development, trade, and related issues. Interpretations also vary as a result of differences between the views held by industrialized and developing nations. Thus, developing nations continue to be concerned that their manufactured, agricultural, or mineral products produced by methods not

⁷ Jagdish Bhagwati, 'On Thinking Clearly about the Linkage between Trade and the Environment' (2000) *Environment and Development Economics* 483.

⁸ Jagdish N Bhagwati, *Free trade today* (Princeton University Press, 2003) 80.

acceptable in the industrialized countries for environmental or other reasons may be subject to import restrictions.⁹

The environment and trade linkages are mainly related to the fact that a greater economic activity is based on a larger consumption of natural resources and a greater waste production; therefore, governments' efforts are supposed to be directed at avoiding these negative effects. This means that despite the scale and relevance of trade activity, the effects depend on the extent that appropriate measures are taken to reduce generated negative environmental impacts. However, measures might not have been taken when the harmful effects are related to the transitional process given sectorial or institutional problems that are not foreseen or not quickly overcome.¹⁰

With Bangladesh being increasingly exposed to the global economy following its implementation of structural adjustment policies (SAPs)¹¹, there is a growing apprehension that changes in the economy induced by these policies are causing adverse environmental impacts. Moreover, as resources switch from non-tradable to tradable sectors of the economy, and as major shifts occur in production and

⁹ Colyer Dale, Environmental issues in the FTAA, 24th West Indies Agricultural Economics Conference, Grenada, 2002.

¹⁰ Bernard Hoekman and Kym Anderson, 'Developing Country Agriculture and the New Trade Agenda*' (2000) 49(1) *Economic Development and Cultural Change* 171.

¹¹ The SAPs promoted by the Bretton Woods institutions have been of great influence in defining the development strategies of developing countries during the last decade and a half. An appraisal of the SAP policy package in Bangladesh is an appropriate point of departure for assessing the environmental impacts of the country's development efforts. The outcome of such inquiries may provide input for future policymaking with a view to integrating economic and environmental concerns into development strategies.

cropping patterns in response to the adjustment policies, resource degradation has been manifesting itself as a by-product of this particular pattern of growth.

7.3.1 Environmental Impacts of Agricultural Activities

Agricultural activities make use of natural resources — soil, water and air — and in many countries have shaped the natural environment and landscapes. Agricultural activities have both beneficial and harmful impacts on the environment through changing the quality or the quantity of locally available natural resources, which are also the foundations of natural habitats, biodiversity and landscapes.

7.3.1.1 Impact on Land Use: Soil Erosion

Agriculture is a land-intensive activity that determines the quantity and quality of habitat available for wildlife. It is considered one of the most devastating sources of forest and biodiversity depletion.¹² From the environmental economic point of view, forest and jungles are converted into agricultural lands because, despite their valuable uses, they are often classic non-market resources. This conversion into agricultural lands has reduced their capacity to provide key services such as water provision, carbon sinks, support to ecosystem, and cultural and recreational assets.¹³

The environmental implication of land-use change is not solely deforestation.

¹² Coltey, above n 9.

¹³ Gloria Soto, 'Environmental impact of agricultural trade liberalization under NAFTA' (2012) 40(3) *Politics & Policy* 471.

There are other ways in which land-use change affects biological diversity¹⁴:

- Alteration of the relative abundance of natural habitats results in the establishment of new land-cover types.
- Fragmentation of a once-connected or continuous habitat.
- Extending the boundaries and duration of natural fires, or increasing flooding.

In developing countries, market and institutional failures have led to a rapid degradation of natural resources. Subsistence farmers might reduce their natural capital to obtain short-term gains that do not compensate the long-term costs both individually and collectively. The challenge imposed by trade liberalization in developing countries exhibits a greater complexity because such states are often greatly dependent on agricultural activities and present significant heterogeneity in productivity capacity among groups of farmers while they confront problems of natural asset conservation. In these contexts, poverty, ineffective governance, and scarce financial resources can all contribute to increase the vulnerability of farmers to trade liberalization.¹⁵

According to official data from Soil Resources Development Institute (Land and Soil Statistical Appraisal Book of Bangladesh, SRDI, 2010) agriculture land

¹⁴ Millenium Ecosystem Assessment, 'Millennium Ecosystem Assessment: Overview of Findings' (2005) <<http://www.maweb.org/documents/document.752.aspx.ppt>

>.(Accessed on 05 April 2015).

¹⁵ Economics for Environment Consultancy (EFTEC), 'Economic, Social and Ecological Value of Ecosystem Services: A Literature Review' (2005) *Joint Nature Conservation Committee* <<http://jncc.defra.gov.uk/page-4025>>.11.(Accessed on 05 April 2015).

covers 9.5 million hectares in Bangladesh. On the other hand, according to Bangladesh Bureau of Statistics (BBS)¹⁶ and the Department of Agriculture Extension, DAE¹⁷ (2011) as stated in the Krishi (agriculture) Diary (2011), it is about 9.098 million hectares. According to BBS (as stated in the Hand Book of Agricultural Statistics, published by Ministry of Agriculture, 2007) and BBS (Yearbook of Agricultural Statistics of Bangladesh, 2011) availability of cultivable land since 1976-77 to 2010-11 are as follows (Table 7.1, Appendix C).

Most farmers in Bangladesh are involved in intensive rice cultivation and therefore using too much land in rice cultivation. Rice cultivation dominates the farming system, thereby adversely affecting the cropping diversity. The decline in cropping diversity in Bangladesh's agriculture portends adverse impacts on soil fertility and balance of soil nutrients. One of the consequences is the growing dependence on urea fertilizer because intensive rice cultivation requires a large proportion of urea in soil. Maintaining a balance between rice cultivation and other crops increases cropping diversity, with greater potential to maintain soil fertility in terms of more balance of soil nutrients.¹⁸

There are limits to the expansion of food production—an expansion that is needed in order to secure food supplies—because current agricultural practices lead to soil erosion and consequently to soil degradation and loss of productivity in all regions of the world including Bangladesh. The causes of soil degradation

¹⁶ Bangladesh Bureau of Statistics, 2011. *Agricultural Census of Bangladesh*. Dhaka: Ministry of Planning.

¹⁷ Department of Agricultural Extension, 2011. *Agricultural Land Census Bangladesh*, Dhaka: Ministry of Agriculture.

¹⁸ Eric F Lambin et al, 'The causes of land-use and land-cover change: moving beyond the myths' (2001) 11(4) *Global environmental change* 261.

may vary within the smallest of areas. More often than not degradation is due to a combination of causes influencing each other. To give a rounded and simplified idea of the global situation, more than 90% of soil degradation worldwide is caused simultaneously and in equal shares by deforestation, over-grazing and farming. In WRI (World Resource Institute) report five different causes of soil degradation were distinguished¹⁹:

- Over-grazing by livestock, which decreases vegetation and thus exposes soil to wind and water erosion. In addition, trampling leads to soil compaction. Overgrazing is the most pervasive cause of soil degradation (35% of all degraded land), occurring mainly in arid and semi-arid areas.
- Deforestation, which exposes soils to wind and water erosion through the removal of tree coverage, includes logging and the conversion of land to agricultural or industrial area. This accounts for 30% of all degraded area.
- Agricultural activities such as insufficient use of fertilizers and cultivation with too short a fallow period lead to a loss of nutrients and subsequently to loss of fertility. However, the application of too much fertilizer or manure leads to soil acidification and water pollution. Utilization of heavy machinery leads to soil compaction and poor management of irrigation to

¹⁹ Soto, above n 13.

salinization. Faulty agricultural practices are responsible for 28% of global soil degradation.

- Over-exploitation of fuel wood strips the land of vegetation and exposes it to wind and water erosion, causing 7% of global soil degradation, with the highest prevalence in dry areas.
- Industrialization, with the resulting accumulation of industrial waste and acidification of soils by airborne pollutants, accounts for only 1% of global soil degradation but is of importance in Europe (9%).

Increasing intensification of farming is recognized as one of the main causes for soil degradation in many industrial countries. Industrial agriculture is characterized by an increasing use of heavy machinery, consolidation of farmland, mono-cultivation of plants with a high yield, excessive use of fertilizers and pesticides and intensive irrigation. Although these measures have markedly increased productivity and crop yields, they have also taken their toll on soil and related ecosystems. Agricultural activities, for example, account for about 25% of total degradation in most parts of the world, with the important exceptions of Oceania (8%) and North America where 66% of the degradation is caused by agricultural activity.²⁰

²⁰ MT Iqbal, 'Groundwater Arsenic Variations in Bangladesh: The Role of Depth, Seasons, Locations and Age of Tube Wells' (2009) 6(4) *Asian Journal of Water, Environment and Pollution* 73; Dayal talukder, *Impact of Agricultural Trade Liberalization on the welfare of rural communities in Bangladesh*, Auckland University of Technology (2011).

7.3.1.2 Water and Irrigation

Water is a prerequisite for most biological processes on Earth. It is involved in soil formation and the shaping of landscapes. Fresh water is the single most important food for humans and the basic ingredient for the production of all other foodstuffs. The growing scarcity of the world's fresh water resources is seriously damaging ecosystems. It is setting limits on food production, putting people's health at risk and is giving rise to a number of regional conflicts over the distribution of water. Pollution of ground water, flowing waters and the oceans is also affecting water resources worldwide.²¹ Nutrients, chiefly nitrogen, phosphorus, and potassium, are important inputs in agricultural production systems. Of the three main nutrients, nitrogen and phosphorus may cause water quality problems in surface water and groundwater. In the case of agricultural nonpoint source pollution standard solutions for point source pollution, such as effluent standards and effluent taxes, cannot be applied directly, since pollution flows from nonpoint sources cannot be monitored with reasonable accuracy or at reasonable cost.²²

The expansion of food production in recent decades, including the 'Green Revolution', is generally seen as a direct consequence of increased irrigation. Water consumption in agriculture has risen by 60% since 1960. The problem this entails is that more and more ground water resources are being tapped, which are

²¹ WRI (World Resources Institute), 'World Resources 1992-93' (1992) 114-15. New York: WRI

²² Sigrid Stagl and Tobias Reichert, 'ON THE RISE A brief introduction' (2002) *The WTO, Agriculture and Sustainable Development* 189.

renewed at a very slow pace but at the same time represent the single most important source of drinking water. The additional withdrawal of water in developing countries for irrigation purposes has already led to considerably lower ground water levels and lower amounts of water in downstream river areas, endangering aquatic ecosystems especially in river deltas and reducing the availability of fish for human consumption.²³

In Bangladesh, the extraction of large amounts of groundwater for irrigation purposes through tube-wells and shallow tube-wells have made an impact on shortage of fresh drinking water. This situation became further complicated because evaporation- transpiration was highest during the dry season, the time of the highest extraction of groundwater for irrigation in the Boro rice fields with deep tube-wells and shallow tube-wells. Therefore, extraction of a large amount of groundwater for irrigation affects the availability of drinking water for many rural households. Similarly, irrigation with deep tube-wells and shallow tube-wells brings up hazardous underground-minerals such as arsenic and iron, thereby polluting surface drinking water.²⁴

Environmental problems in rural Bangladesh have manifested themselves in the form of degradation in the land and water resource systems. Due to intense population pressure the net cropped area (the area actually cultivated) has declined over the years while the effective (gross cropped) area has increased

²³ Ibid 244.

²⁴ James S Shortle and James W Dunn, 'The relative efficiency of agricultural source water pollution control policies' (1986) 68(3) *American Journal of Agricultural Economics* 668.

significantly due to increased frequency of cropping during one calendar year. The introduction of the new agricultural technology has led to a considerable increase in water use for crop production. The phenomenal increase in land area irrigated has been due primarily to increases in the use of both surface water and groundwater. The use of surface water for irrigation has increased only slowly from just over 1 million hectares in the late 1960s to around 1.2 million hectares over a period of three decades, to the late 1990s. Over the same period, the area under groundwater irrigation has registered a spectacular 76-fold increase from 32,600 hectares to about 2.5 million hectares.²⁵

7.3.1.3 Fertilizers and Pesticides

Agricultural trade liberalization made chemical fertilizers and pesticides cheaper, thereby encouraging both their intensive and extensive use. Farmers have begun to use more toxic chemicals for pest control that have reputations of speed and effectiveness. The Government of Bangladesh also promotes the use of pesticides to expand its agricultural frontiers and increase output per acre of land.²⁶ As a result, pesticide use in general is increasing.

Excessive and indiscriminate use of toxic agrochemicals generates different kinds of risks and troubles in water, soil and air environment. Soil gets a severe change in the values of PH and acidity – it is found that soil PH value declines and acidic value increases gradually. Besides the organic nutrients and water conservation of

²⁵ Sandra Postel, 'Gestaltung einer nachhaltigen und umweltgerechten Wasserpoltik' (1996) *World Watch Institute, Zur Lage der Welt, Frankfurt* 71.

²⁶ Talukder, above n 20.

soil day-by-day may be reduced causing a great threat to productivity and fertility. Man made threats to our soil quality include improper cultivation, inadequate organic fertilizers, and accelerated erosion particularly in the hilly and terrace soils accumulation of salinity in the coastal soil. If the fertilizer uses continue at the present scale, once the arable land may get completely desertification as the organic nutrients and water of the surface soil will gradually be going to acute scarcity.²⁷

All the watersheds of Bangladesh (river, canal, ponds, and streams) have already been more or less contaminated due to the toxin discharges occurred from industry, urban area, and agrochemicals of crop fields. Rainwater carries the toxin compounds from cornfields. Nitrate, phosphate, potassium, aldrin, dieldrin, chlordanes, endrin, cadmium, and arsenic are the major toxins. Chromium is a major toxin of agrochemicals that are frequently dumped into waters. Aquatic organisms or creatures are on seriously threats – many useful organisms are to be getting killed, extinct or endangered. Especially fishing culture has been greatly endangered since 1990s in Bangladesh. Biosphere is also a threatened aspect due to agrochemicals – lead, phosphorus, oxide etc. create the air polluted, as they are persistent in soil, water and air. Nitrogen containing fertilizers are converted to ammonium. As nitrates and phosphorus are transported to water, that alters aquatic ecosystem by depleting oxygen.⁶ Fertilizer and pesticide application increases the emissions of toxic gas such as carbon dioxide, nitrous oxide and methane. Nitrous oxide has been raised about 25 percent over the previous

²⁷ Mohammad Alauddin, 'Recent Developments in the Bangladesh Economy', *Economic Growth, Economic Performance and Welfare in South Asia* (Springer, 2005) 11-27.

century and one third of this increase is caused due to agrochemicals. The methane emission is being done mostly due to urea fertilizer.²⁸

7.3.1.4 Impact on Bio-diversity

Though Bangladesh is a small and densely populated country it is rich in biodiversity. Presently Bangladesh supports a total of 3813 species of vascular plants of which 486 species are threatened in different categories.²⁹ Bangladesh is the home of 1,952 species of invertebrates, 653 fish species (251 freshwater; 402 marine).³⁰ Forty-nine species of amphibians and 137 species of reptiles have been recorded but more than 100 species of amphibians and reptiles are estimated to occur in Bangladesh.³¹ There are a total of 690 species of birds including residents and migrants and 121 species of mammals.³²

²⁸ Golam Rasul and Gopal B Thapa, 'Sustainability of ecological and conventional agricultural systems in Bangladesh: an assessment based on environmental, economic and social perspectives' (2004) 79(3) *Agricultural systems* 327.

²⁹ KM Atikur Rahman and Sankar Chandra Debnath, 'Agrochemical Use, Environmental and Health Hazards in Bangladesh' (2015) *International Research Journal of Interdisciplinary & Multidisciplinary Studies (IRJIMS)* 5.

³⁰ Ibid.

³¹ Zia Uddin Ahmed et al, 'Encyclopedia of flora and fauna of Bangladesh' (2008) 5-12 *Asiatic Society of Bangladesh, Dhaka*; Haseeb Md Irfanullah, 'Conserving threatened plants of Bangladesh: Miles to go before we start?' (2011) 18(1) *Bangladesh Journal of Plant Taxonomy* 81.

³² MM Feeroz, MK Hasan and MMH Khan, 'Biodiversity of protected areas of Bangladesh' (2011) 214 *Rema-kalenga wildlife Sanctuary, Bio track, Arannayk Foundation, Dhaka, Bangladesh* 11.

Rice farmers of Bangladesh used the following chemical fertilizers: urea, triple super phosphate (TSP), muriate of potash (MOP) and gypsum. Organic fertilizers constituted only a very small proportion of all fertilizer use. The major pesticides used by rice farmer were endrin, DDT (Dichlorodiphenyltrichloroethane), aldrin and chlorane. DDT is a cheap pesticide and rice farmers used it as both a fertilizer and a pesticide because of their beliefs that DDT not only kills pests but also increases fertility of soil. According to the *Stockholm Convention on Persistent Organic Pollutants (POPs)*, all these pesticides are considered highly dangerous pollutants and they pose serious health hazards beyond the national boundaries; because these pesticides possess toxic properties and persist in the environment for a long period.³³

To reduce the productive loss due to pests, farmers have recourse to agrochemicals (pesticides, fungicides, herbicides and the like),³⁴ but these products also have damaging side effects on the environment and human health that spur governmental intervention.³⁵ However, restrictions on the use of pesticides may impede the competitiveness of agriculture on international markets. Governments, when designing these regulations, thus face a tradeoff:

³³ MK Hasan, MMH Khan and MM Feeroz, 'Amphibians and Reptiles of Bangladesh: A Field Guide' (2014) *Dhaka, Bangladesh: Arannayk Foundation* 191.19. M Monirul H Khan, *Protected areas of Bangladesh: A guide to wildlife* (Nishorgo Program, Wildlife Management and Nature Conservation Circle, Bangladesh Forest Department, 2008).

³⁴ Practices controlling biotic factors include physical (mechanical weeding or cultivation..), biological (crop rotations, cultivar choice, predators. . .) and chemical measures. They allow a reduction of losses, but do not totally avoid them. In the case of wheat, they reduce potential losses of 50% to average actual losses of about 29% (from 14% in Northwest Europe up to 35% and more in Central Africa and Southeast Asia). Actual losses for soybean average around 26%. The order of magnitude of losses for maize and rice is greater, with actual losses of respectively 40% and 37%. Talukder, above n 20.

³⁵ UNEP, *Stockholm Convention on Persistent Organic Pollutants (POPs)*, UN Doc XXVII.15.

either they contain the externality on consumers and tolerate a high level of negative production externality, which diminishes the competitiveness of their agricultural sector, or they are more permissive in the utilization of pesticides to enhance the productivity of their agricultural sector to the detriment of their consumers. We found that when governments use these regulations strategically to enhance the comparative advantages of their agriculture, trade results in an environmental “dumping” situation where regulations are more lenient than they otherwise would be. Nevertheless, restrictions on pesticides under free trade are more stringent than under autarky.³⁶

7.4 Agriculture and the Environment in the WTO

Environmental concerns became an issue in the GATT negotiations during the Uruguay Round following the tuna finding by a GATT dispute resolution panel. They had not been a major issue in the several rounds of GATT negotiations that preceded the Uruguay Round, although GATT had established the Group on Environmental Measures and International Trade in 1971 to focus on issues of industrial pollution.³⁷ That group, however, had not met until called together by the GATT director general in response to the crisis provoked by the tuna decision and the threat it posed to an already contentious and tardy process for concluding the Uruguay Round.³⁸

³⁶ E-C Oerke, 'Crop losses to pests' (2006) 144(01) *The Journal of Agricultural Science* 31.

³⁷ David Pimentel et al, 'Environmental, energetic, and economic comparisons of organic and conventional farming systems' (2005) 55(7) *BioScience* 573.

³⁸ Cecilia Bellora and Jean-Marc Bourgeon, 'Agricultural trade, biodiversity effects and food price volatility' (2015) *Cahier de recherche* 47.

The conclusion of the Uruguay Round resulted in the formation of the WTO in 1995, and environmental issues became an established part of the multilateral trading system. According to the WTO Secretariat: “At the end of the Uruguay Round, Trade Ministers adopted the Decision on Trade and the Environment which anchored environment and sustainable development in WTO work”.³⁹ Implementation of the WTO agreement included establishing the Committee on Trade and Environment, which was given jurisdiction over most aspects of the trade-environmental interface. In evaluating this process, Nordström and Vaughan⁴⁰ found that environmental degradation is a problem, but that trade could enhance economic welfare when proper environmental policies are in place (emphasis added). They also concluded that trade barriers generally make poor environmental policy and that it is not necessary to harmonize all environmental standards. Additionally, they found that public accountability and good governance are essential to good environmental policy and that international cooperation is required to protect the environment.⁴¹

The WTO agreement mentions environmental issues in a number of places, including the preamble to the Marrakech Agreement, which established the WTO, GATT’s Article XX, the Technical Barriers to Trade Agreement, the

³⁹ Håkan Nordström and Scott Vaughan, *Trade and environment* (WTO Geneva, 1999) 68.38.

⁴⁰ Daniel C Esty, *Greening the GATT: Trade, environment, and the future* (Peterson Institute, 1994) 307; Richard Eglin, 'Trade and the Environment' (2002) *The Uruguay Round and Beyond: Essays in Honor of Arthur Dunkel* 251.

⁴¹ Nordström and Vaughan, above n 39.

Agriculture Agreement, the Intellectual Property Agreement, and under services, the General Exceptions of GATS Article XIV.⁴² These references to the environment tend to contain a provision that domestic laws on the environment or those that protect human, animal and plant life or health can be exceptions to prohibitions to trade barriers, a situation that can lead to the erection of barriers to trade.⁴³

Within agricultural agreement environment is the not the predominant focus. The URAA generally covers border measures, export subsidies, market access, domestic support measures, and product attributes including sanitary/phytosanitary provisions.⁴⁴ The agricultural agreement should result in increased trade in agricultural products, which can have environmental impacts in the trading countries due to scale, structure or technological impacts, although the net effects cannot be determined a priori.⁴⁵

The URAA has implications for the environment through its provision on domestic subsidies and product characteristics. The agreement limits and requires reductions in those agricultural subsidies that are defined as trade distorting. For

⁴² Ibid 2-7.

⁴³ Colyer, 24th West Indies Agricultural Economics Conference, Grenada.above n 9.

⁴⁴ WTO, *Extracts relevant to the environment, of WTO legal texts*, Issues 3.<https://www.wto.org/english/tratop_e/envir_e/issu4_e.htm>(Accessed on 05 April 2015). Colyer, 24th West Indies Agricultural Economics Conference, Grenada.above n 9.

⁴⁵ P Dixit, T Josling and D Blandford, 'The Current WTO Agricultural Negotiations: Options for Progress' (2001)(18) *International Agricultural Trade Research Consortium Commissioned Paper*. Colyer, 24th West Indies Agricultural Economics Conference, Grenada.above n 9.

these purposes, subsidies are classified into three groups or boxes: amber, blue and green. Payments in the amber box are considered the most trade distorting and are those that encourage production or raise consumer prices. Such subsidies are called the Total Aggregate Measurement of Support (AMS) payments and are limited by the URAA. However, the limits have not been a problem for most countries, which revised their policies when needed to shift payments into the exempt categories.⁴⁶

The new Round of negotiations launched in Doha is notable for its environmental dimension. It offers several opportunities and entails a number of risks. Matters of concern from the perspective of environment and sustainable development are to be found in all parts of the Declaration. According to IISD (International Institute of Sustainable Development)⁴⁷ the environmental aspects can be divided into three categories:

- *Environmental issues slated for negotiation.* This covers the relationship of WTO rules to certain Multilateral Environmental Agreements; information exchange between MEA Secretariats and relevant WTO Committees; and tariff and non-tariff barriers to environmental goods and services.

⁴⁶ David G Abler and James S Shortle, 'Decomposing the Effects of Trade on the Environment' in J.N. Lekakis and G.P. Zanaïs J.M. Antle (eds), *Trade and the Environment: The Impact of Liberalization on Sustainable Development* (Edward Elgar, 1998) 163.

⁴⁷ Barry Krissoff et al, *Exploring Linkages among Agriculture, Trade, and the Environment: issues for the next century*, United States Department of Agriculture, Economic Research Service No (1996). (Accessed on 05 April 2015).

- *Environmental issues to be considered for negotiation or other action.* This covers the effect of environmental measures on market access; relevant provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS); and labelling requirements for environmental purposes.
- *Environmental issues likely to arise while negotiating other issues.* This covers agriculture, services, investment, government procurement and TRIPS.

The environment will be central to the agriculture negotiations. As tariff barriers are reduced and subsidies fall, the importance of “non-trade concerns” in agriculture increases. The environment is a key non-trade concern, arguably the most important of all since it permits the most expansive interpretation. However, the stability of rural communities, an issue of transcendent importance to China, is also likely to emerge as one of the critical “nontrade” issues in the agriculture negotiations. These will revolve around definitions of the “Green Box,” which includes subsidies that are acceptable and the proposed “Development Box,” which would include policy measures of specific concern to developing countries. The Green Box is already part of the Agreement on Agriculture. No agreement has yet been reached on inclusion of a Development Box.⁴⁸

⁴⁸ Colyer, 24th West Indies Agricultural Economics Conference, Grenada. above n 9.

The relationship of the WTO to sustainable development remains ambiguous. Achieving a proper balance between environment, development and the economic policies that will be negotiated in the new Round is a task that remains to be tackled.

7.5 Environmental Effects of Agricultural Trade Policies

Environmental effects of different agricultural policy instruments are not always apparent, which makes their assessment complex. However, agricultural production subsidies have an impact on environment via altering incentives for farmers. By creating economic and market distortions, these subsidies may produce adverse environmental impacts. Short-run effects of agricultural support policies on the environment are often connected to their influence on levels of variable input use like fertilizer and pesticide use. Market price support and deficiency payments as well as other policies that increase unit revenues to producers stimulate production, and hence the use of variable inputs, creating more pressure on the environment than would otherwise have arisen.⁴⁹

The same agricultural trade policies that have distorted production decisions and trade have also reinforced environmental damages in agriculture. Following Just and Antle⁵⁰, agricultural policies are composed of a complex set of measures that interact with one another in determining farmers' decisions on the extensive and intensive margins simultaneously.

It can be argued that agricultural production subsidies have increased incentives

⁴⁹ Konrad Von Moltke, *After Doha-Assessing the outcomes of the WTO Fourth Ministerial* International Institute for Sustainable Development
<http://www.iisd.org/pdf/2002/trade_qatar_viewpoint5.pdf>. (Accessed on 05 April 2015).

⁵⁰ Ibid.

that have lead, for instance, to water and soil pollution. Market price support has an effect on the price-ratio between a product and a production input like fertilizer or pesticide. Market price support increases the producer prices, which in turn increases the economically optimal rate of input use. Farmers try to apply fertilizers at the economically optimal rate in order to maximize profits. This economically optimal level of fertilization, however, may exceed the rate that is optimal for crop growth (depending, for example, on weather conditions), thus exceeding also the environmentally optimal rate. Excessive use of fertilizers has led to eutrophication in surface waters and nitrate accumulation in ground waters; agriculture has indeed been the main source of both nitrogen and phosphorus leakages into surface waters in many countries. In other words, the growth in fertilizer intensity has resulted in external costs. These external costs can be internalized through appropriate environmental policy instruments. However, monitoring and controlling agricultural pollution encounters enormous problems owing to the characteristics of nonpoint source pollution.⁵¹ According to Runge⁵², the dilemma faced by the agricultural sector is that the policy failures due to government intervention in agricultural markets tend to reinforce rather than mitigate market failures in agriculture.

Subsidies for the purchase of fertilizers and pesticides, as well as supply of natural resources below their marginal cost (e.g. irrigation water) distort the real price of these inputs and encourage their enhanced use due to lower effective prices.

⁵¹ Jussi Lankoski, 'Environmental effects of agricultural trade liberalization and domestic agricultural policy reforms' No UNCTAD/OSG/DP/126, United Nations Conference on Trade and Development, <http://unctad.org/en/Docs/dp_126.en.pdf>. (Accessed on 10 April 2015).

⁵² Richard E Just and John M Antle, 'Interactions between agricultural and environmental policies: a conceptual framework' (1990) 80(2) *The American Economic Review* 197.

Subsidies may contribute to over-application of these inputs, thus increasing pollution. Furthermore, these subsidies also discourage farmers to practice soil conservation and use organic manure more efficiently. Lower production input costs also induce greater overall production on the natural resource base. Correspondingly, interest subsidies provide incentive to invest in farm capital, which encourages a shift to capital- and stock-intensive farming practices.⁵³

In developing countries, as a partial compensation for policies, which usually tax agricultural production, governments have often subsidized the use of fertilizers and pesticides. Sometimes fertilizer subsidies are justified in order to maintain soil fertility and they may play an important role in combating soil erosion and deforestation. However, pesticide subsidies also contribute to the low application efficiency, probably fewer than 50 per cent, in those countries, thus resulting in environmental pollution.⁵⁴

The role of the Government of Bangladesh (GoB) has figured prominently in the discourse over agricultural cultivation in the country. The GoB's favourable disposition to agricultural trade and cultivation played a critical role in stimulating entrepreneurial activities in the agricultural industry. When negative environmental impacts gradually emerged and ecological-environmental concerns precipitated a debate as to the future of the industry, the government initiated a number of measures to contain these negative impacts. These included enactment of laws governing lease of land, designing guidelines for the setting up of farms, provisions for consent of local farmers in the setting up of farms.

⁵³ Lankoski, above n 51.

⁵⁴ C Ford Runge, 'Trade liberalization and environmental quality in agriculture' (1993) 5(2) *International Environmental Affairs* 95.

Major views with respect to the role of the GoB are the following: (a) many of the negative environmental impacts originate because of the government's flawed policies; (b) existing provisions, regulations and laws do not adequately address environmental concerns; (c) weakness of enforcement has led to the violation of rules enacted by the GoB.

On the whole, therefore, agricultural growth in Bangladesh has entailed significant environmental damages. It seems clear that Bangladesh has failed to fully appreciate the value of environment as a factor of production. This may have resulted from both market failure and policy failure.⁵⁵ The dominant discourse has assumed a very high degree of substitutability between environmental capital and man-made capital. While this may be consistent with the conditions of weak sustainability, there is little evidence to support this position. The fragility of the physical environment exposed by the growth process has the potential to limit output to sustain a growing population. Unless corrective measures are taken in the near future the production function may shift inward typifying an outward shift of the production isoquant requiring more inputs to for the same level of output or less output for the same level of inputs.⁵⁶

⁵⁵ OECD, *Sustainable agriculture : concepts, issues and policies in OECD countries* (Organisation for Economic Co-operation and Development(OECD), 1995) 68.

⁵⁶ GM Desai, 'Fertilizer policy issues and sustainable agricultural growth in developing countries' (1990) *Technology Policy for Sustainable Agricultural Growth* 22; Robert Repetto, 'Economic incentives for sustainable production' (1987) 21(3) *The Annals of Regional Science* 44.

7.6 Agricultural Trade Liberalization: Effects of Environment

Multilateral trade liberalization in agriculture is commonly expected to produce environmental benefits in developed countries due to reduced production intensity. By contrast, environmental effects may be negative in developing countries due to increased production intensity and area expansion. It has been assumed that if liberalization lowered the relative prices received by farmers in developed countries, as a result of expanded access to their markets and reduced subsidies, and raised relative prices in developing countries, the pressure on environment would fall in the former, but would rise with prices in the latter.⁵⁷ While the environmental effects of trade liberalization are critical for all countries, they may be particularly important in developing countries, since these countries often have large agricultural sectors, and trade liberalization can lead to relatively large changes in trade, production, and economic growth, and possibly large coincident environmental impacts.⁵⁸

Thus, trade liberalization and optimal environmental policy interventions are both needed to achieve economic efficiency. A gradual liberalization of trade due to adverse environmental impacts would be an inefficient way to alleviate environmental problems, since this kind of intervention is not targeted to the main cause, the environmental externality. The rationale for trade liberalization lies in reasons other than environmental protection, since environmental quality improvements can be achieved with lower costs through specific environmental policy instruments. Neither should trade liberalization be resisted for

⁵⁷ Mohammad Alauddin and Mosharaff Hossain, *Environment and agriculture in a developing economy-problems and prospects for Bangladesh* (Edward Elgar Publishing Ltd, 2001) 274.53.

⁵⁸ Mohammad Alauddin, 'Economic Liberalisation and Environmental Concerns: A South Asian Perspective*' (2003) 26(3) *South Asia: Journal of South Asian Studies* 439. Runge, above n 54.

environmental reasons - provided that appropriate environmental policies are in place to address environmental market failures. This is not to suggest that trade policy goals would be superior to environmental policy goals, but to ensure that specific policy instruments are used to address each policy objective in order to fulfill the cost efficiency criterion.⁵⁹

OECD⁶⁰ has identified five main categories of trade-related environmental effects: scale effects, structural effects, product effects, technology effects, and regulatory effects. For example, agricultural trade liberalization can have positive or negative effects on the environment by changing the product composition of trade (product effect); by increasing economic growth and generating the funds available for environmental protection (scale effect); and by altering the location, product-mix and intensity of production through the removal of trade distortive and environmentally harmful subsidies (structural effect).

Current agricultural policies and production patterns and their environmental impacts form the baseline against which changes in environmental quality due to trade liberalization can be assessed. At the first stage, one would need to observe how world market prices would change after trade liberalization (macro level). In order to find out the environmental effects one would then need to go to the farm level and see how farmers respond to the changes in relative prices (micro level); particularly whether supply responses occur at the extensive or intensive margin

⁵⁹ Margot Anderson, 'NAFTA and environmental quality: Issues for Mexican agriculture' (1994)(252) *Environmental Policies, Implications for Agricultural Trade, USDA Foreign Agricultural Economic Report* 58.50.

⁶⁰ Lankoski, above n 51.

of agricultural production.⁶¹

A consensus view has emerged that the environment in the developed countries would benefit from agricultural policy reforms due to reduced intensification of agriculture. By contrast, developing countries may face negative environmental impacts due to the intensification of agriculture in those countries. It has been argued, however, that some or all of the negative environmental effects in developing countries could be offset via the income effect of higher prices. Higher world market prices for agricultural commodities facilitate environmental cost internalization by permitting farmers to use more environmentally friendly production techniques and to make conservation-type investments that increase long-term productivity.⁶²

7.7 Conclusion

Like producers in other industries, farmers fear that the costs of complying with environmental programs will significantly constrain their ability to compete with foreign firms. For agriculture, such diminished competitiveness has not been a major issue until now, because most conservation and environmental programs have been voluntary and implemented with subsidies, or have been a side requirement of commodity program subsidies. There are currently regulations pertaining to pesticide registration, water runoff from confined animal operations, and land use controls to protect endangered species. Also, potential regulations may be used to improve the water quality of coastal zones. But the prospect of

⁶¹ Ibid.50.

⁶² OECD, 'The Environmental Effects of Trade' (1994).

more, and more extensive, regulations has generated worries about their impacts on competitiveness.

Agriculture, trade and the environment are interrelated, with important implications for and effects within the global economy. Agriculture did not become an important factor in trade agreements until its inclusion in the Uruguay Round of GATT negotiations. Historically trade and the environment were dealt with through separate international treaties and agreements, trade issues under GATT (now the WTO) plus a multitude of regional and bilateral agreements, and the environment under several multilateral environmental agreements. Each of these sets of agreements has implications for the other and each has provisions that affect the other. Although these have tended to be relatively minor, they have frequently led to disputes, particularly in the GATT. When the Doha Round was undertaken in November 2001, environmental issues were specifically recognized and integrated into the negotiation process, albeit to a limited extent. Their inclusion also remains contentious due, in part, to the very different views held by the EU and developing countries with respect to the role of the environment in the international arena; i.e., there is no consensus on what should be included in the process.⁶³

Since the price and production changes induced by the Uruguay Round Agreement on Agriculture seem likely to be quite modest for most countries, this partial trade liberalization may not cause major changes, positive or negative, in the environmental impacts of agricultural production. Instead, the environmental impacts of domestic agricultural policy reforms will probably be more significant

⁶³ Lankoski, above n 51.

than impacts induced by the Uruguay Round Agreement on Agriculture. This is largely due to the fact that agricultural trade liberalization, partial or complete, does alleviate some policy failures, which have adverse environmental impacts, but does not correct environmental market failures.⁶⁴

The findings presented in this chapter suggest that the environmental impacts of agricultural trade liberalization and domestic policy reforms in developing countries including Bangladesh are more ambiguous. The role of income growth due to agricultural trade liberalization may not be sufficient to ensure environmental quality improvements in agriculture. Increased production may also, either at the intensive or extensive margin of production, imply more pressure on the environment. Thus, integrating environmental considerations into domestic agricultural policies is essential when developing countries begin to exploit their comparative advantage in agricultural production.

⁶⁴ Ernst Lutz, 'Agricultural trade liberalization, price changes, and environmental effects' (1992) 2(1) *Environmental and Resource Economics* 79.50.

Chapter Eight

Conclusion, Recommendations and Policy Implications

8.1 Introduction

This doctoral dissertation directed to assess the impact of trade liberalization and related contrasting policies on agricultural trade, growth, poverty and food security in Bangladesh. Although trade liberalization consists of specific trade policies, it should not be taken in isolation from other domestic policies. The truth is, complementary policies are significant for a country to be able to gain full advantage from trade liberalization and accomplish overall growth and reduce poverty. Subsequently, this dissertation prompt that contrasting policies are capable to aid trade by reducing trade expenditures and to improve capacity of domestic producers are important.

This study found that, Bangladesh agriculture has experienced major structural changes and achieved major successes over the last three and a half decades. Despite having numerous problems and constraints, a quiet agricultural revolution has taken place, which has enabled the country to achieve its national food security in the production of food, grain. Agriculture continues to advance in response to various factors including natural calamities, socio-political changes, population growth, urbanization, new technology, opportunities in the rural non-farm sector and commercialization. Besides government macroeconomic, trade and agricultural pricing policies, which have contributed a

major role in shaping price incentives in production and consumption, will continue to be significant determinants of agricultural growth as well.¹

In the context of overall economic activities and patterns of livelihood, the large majority of the population in Bangladesh is dependent, directly or indirectly, on agriculture. In particular, rural livelihoods evolve with agriculture despite expansion of non-farm activities and its contribution to economic growth. Food security, employment for the large section of the populace and reducing poverty and inequality largely depend on creating a vibrant and dynamic agricultural sector. There is no denying the fact that equity is important for growth and sustainable development. The so-called market led economic growth with less or no state patronage under the guise of neo-liberal paradigm has already been proved wrong as it measurably failed to bring about any substantive changes in the lives of the millions throughout the world. Rather it has given rise to the level of poverty, inequality and vulnerability of the poor and marginalized section of the population. Bangladesh agriculture has been one of the worst victims of such policy regime.²

For most developing countries, agricultural trade liberalization holds limited promises and great perils. The promise is limited because the comparative advantages of the global South in export agriculture are quite limited. Perhaps most important, liberalization does not reverse the long-term tendencies toward

¹ Mohammad Monirul Hasan, 'Agricultural Policy Reforms and Structural Adjustments in Bangladesh' (2012) *MPRA Paper* 19.

² Bazlul Haque Khondker and Abdul Hamid Chaudhury, 'Growth with equity: a Bangladesh perspective' (2010) 2(1) *South Asia economic journal* 67.

lower real prices for agricultural commodities. Even in markets where liberalization produces production and price impacts, the gains will be ephemeral as new land is brought into production, yields continue to rise, and global supply catches up with global demand.³ As the small producers bear the burnt of economic adjustment there are alternatives to liberalization. It is found that, liberalization is not always the economically optimal policy, that different levels of import protection are appropriate at different levels of development.⁴

In contrast to many barriers most developing country producers face in highly competitive export markets; domestic food markets tend to show stable growth. Demand grows with population, generally at a fairly predictable rate. Where liberalization opens access to that stable and growing market to international agribusiness, continued protection can reserve an important portion of the domestic market for domestic producers. With appropriate government supported credit and investment, small-scale producers can increase their productivity to meet the rising demand for their goods.⁵

Although all welcomes recent policy and programmatic interventions in agricultural trade liberalization by the Bangladesh government, still there are areas, which require immediate and careful attention for successful realization of

³ Ahmed Sadiq and Zaidi Sattar, *Trade liberalization, growth and poverty reduction: The case of Bangladesh* (World Bank, 2003) 46.

⁴ Jamie Morrison and Alexander Sarris, 'Determining the appropriate level of import protection consistent with agriculture-led development in the advancement of poverty reduction and improved food security' (2007) *WTO rules for agriculture compatible with development* 13.

⁵ Charles Ackah and Oliver Morrissey, 'Trade liberalisation is good for you if you are rich' (2007) 7(01) *CREDIT Research paper*, 49.

programs. It is important to understand that ensuring growth in agriculture do not solely depends on increased amount of subsidy or availability of agri-credit. Several other issues such as development of infrastructure, irrigation facilities, river flow, preservation of biodiversity, careful concerns for environment and ecology etc. should be taken into account. Therefore, the overall objective of the study is to examine the impact of trade liberalization and different Free Trade Agreements (FTAs) on the ability of agriculture to contribute to agricultural economic growth. More specifically, it examines the correlation between trade liberalization, international trade flow in the agricultural industry in light of Bangladesh's effort to integrate its economy with the rest of the worlds.

8.2 Conclusions and Recommendations

The study has investigated the international trade performance of Bangladesh's agriculture. The paper has evaluated, analyzed and classified the significant detriments affecting agricultural exports. It is arguing that, the impact of trade liberalization on the agricultural sector in Bangladesh is debated and presents a mixed picture. A number of points emerged in the preceding sections that deserve attention. It includes:

- a. Impact of trade liberalization on agriculture does not result only from agricultural trade liberalization but also substantially from the liberalization of manufacturing sector.

- b. Agricultural trade liberalization in Bangladesh has engendered major import dependency on a variety of essential consumer products, e.g. sugar. Consequently, the country has much less control over the price of these commodities.
- c. The liberalization of agricultural inputs (including fertilizer and seeds) has contributed in increasing the agricultural production of major crops, particularly paddy. This may have also amplified the vulnerability within the farmers who have been exposed to crises arising from unavailability of fertilizer, lack of dependability on seeds etc.

Therefore, the liberalization plans must be managed very meticulously taking into consideration domestic priorities which sector to protect and how. Enduring the political economic climate of trade liberalization using the lens of agricultural trade it really is distinct that liberalization is really a complicated procedure and entails a very broad canvas.

The study has found and considered various eventualities for economic reforms within the global, regional and domestic levels, which have vital implications into the agricultural field as well as in the overall economy of Bangladesh. The scenarios are related to global agricultural trade liberalization under a potential WTO Doha agreement, a bilateral FTA between Bangladesh and India, unilateral agricultural trade liberalization, an agricultural production subsidy policy, and growth in agricultural productivity. Global agricultural trade liberalization under

a WTO–Doha agreement would lead to a rise in prices of agricultural products in the global market as well as in the domestic market. As a result, there will be some positive effects on the sectorial production and employment in the agricultural sector in Bangladesh. In particular, the cereal crop sub-sector would expand, and also this sector would generate significant new employment of unskilled labour. The Doha agreement is found to have negative implications for the overall macro economy, household welfare and poverty in Bangladesh, as terms of trade deteriorate and consumer prices rise more than nominal incomes. Agricultural and light manufacturings sectors expand in response to rising world export prices and demand, increasing the relative returns to agricultural capital and unskilled labour.

The study reveals that, the greatest beneficiary of the Doha agreement appears to be rural large farmers who capitalize on rising returns to agricultural capital (primarily land). These results hold whether developing countries are provided special and differential treatment or not. Free world trade has an almost identical pattern of effects as the Doha agreement, although these effects are much stronger. In particular, overall poverty increases by nearly one percent in the short term and a half percent in the long term. Once again, large farmers are the big winners and the poorest household categories emerge as the biggest losers.

The study has argued that the Uruguay Round left an implementation hangover for many developing countries, generating a renewed emphasis on SDT (Special and Differential Treatment). At the same time, more advanced and ‘less-preferred’ developing country governments began to put more pressure on high-income countries to abide by the WTO rules, which require that all developing

countries benefit from preferences and that better treatment be limited to the LDCs.

Findings of the study has suggested that, in order to ensure food security through development of agriculture in Bangladesh, the invention, adoption and dissemination of 'new technology' must be ensured with a view to increasing production of diversified crops. Attention must be given at controlling the rice price within the accessible limit of the poor ensuring a fair price to farmers. In addition, agricultural credit disbursement, supply of fertilizer, increased development budget vis-à-vis non-development budget in agriculture, early weather warning system for farmers and 'environment friendly sustainable agriculture' must be emphasized with providing adequate support for agricultural research and training.

The study has found that the policy implication that emerges from the global agricultural trade liberalization scenario is that government would have to facilitate the smooth marketing operations of agricultural products in the market so that the farmers, not the middlemen, receive the maximum benefits of higher prices on their produces. Therefore, enforcing competition policy and laws would be very important. Bangladesh, being a net food-importing country, should negotiate at the WTO for some compensatory measures.

Although most of the import-competing sectors would contract, the expansion of the agricultural and export-oriented sectors would be enough larger enough to produce net employment generation. The government needs to take into consideration sectoral effects when perusing any bilateral FTA deal with any country. Domestic agricultural trade liberalization would increase imports of

agricultural products. This would result in the contraction of the agricultural sectors. Therefore, in the case of domestic agricultural trade liberalization, the government would need to be careful. The agenda of agricultural trade liberalization needs to be consistent with the broad agenda of trade liberalization in other sectors of the economy.

The study also implies that, the mainstream of the farmers use fertilizers and pesticides while producing rice and other agricultural products. It is revealed that, farmers do not have proper training and scientific knowledge about the consequences of using fertilizers and pesticides and it exposes them to serious health hazards and also it causes serious damage to the environment in the form of environmental degradation and loss of biodiversity.

The findings of this study are somewhat encouraging, but there remains a substantial opportunity for refining and intensifying the research regarding the effect of agricultural trade liberalization on economic growth of Bangladesh.

8.3 Policy Implications

Bangladesh has made remarkable progress in agricultural development and structural transformation has taken place over the years. Production of various agricultural commodities (crops, livestock, fisheries and agro-forestry) has increased and diversified. During the Sixth Five Year Plan period, agriculture sector performed well in terms of agricultural production, addressing the

challenges of floods and natural calamities, diversification towards high value crops and non-crop agriculture. Specialization among districts in production of various crops, vegetables, pond fish production, poultry and dairy production was observed.

In spite of the remarkable achievements made over the years and particularly during the Sixth FYP, further increase in agricultural production and ensuring food security (physical availability and economic access to food) would continue to be a major challenge for Bangladesh in the coming years particularly due to shrinking resource base, adverse impact of climate change on agriculture sector and overall economy. Future growth in production of agricultural commodities (such as crop, livestock and fish) will depend on agricultural productivity growth. To achieve this, Bangladesh must have technological breakthrough in agriculture particularly for shifting the yield frontier and development of climate smart (resilient to drought, submergence and salinity tolerant) crops and production technology. In addition, longer-term weather forecasting ahead of the cropping season and agro-advisory services in accordance of the predicted weather will be essential.

Price protection for agriculture (e.g. import restrictions on competing products, output price support, input subsidies) can be justified on efficiency grounds if there is a technology that is profitable at long-run prices but nevertheless may not be adopted by farmers who are risk-averse or do not have sufficient knowledge of the technology. However, Dawe⁶ finds out that the liberalization illustrates a

⁶ David Dawe, 'The Practical Experience with Agricultural Trade Liberalization in Asia' in Niek Koning and Per Pinstrup-Andersen (eds), *Agricultural Trade Liberalization and the Least Developed Countries* (Springer Science & Business Media, 2007) vol 19, 175.

general lesson in that protection of one sector can retard growth of other sectors that use the protected commodity as an input. The case of Bangladesh's agricultural trade liberalization and the technological change it spurred in a downstream industry (rice) at least gives one pause to consider whether trade liberalization for an important wage food such as rice (when it is heavily protected) might spur growth and technological change in downstream labor-intensive industries such as garments. Therefore, the Bangladesh government needs to identify and promote contemporary technologies in relation to agriculture, which would boost up the production and be able to contribute to economic growth and poverty reduction.

The study has found that agriculture is still the important sector in Bangladesh, as the industrial structure has not developed enough for its economy to be relied on manufacturing products and services. Consequently, the agricultural trade reforms through multilateral trade negotiations are presently indispensable for the development of Bangladesh economy. We found that the export revenue in Bangladesh would increase by agricultural trade liberalization in developed countries.

A rise in subsidies to agricultural sectors would increase production in these sectors, while some industrial and services sectors would contract. Overall employment of unskilled labour would increase because of greater employment generation in the agricultural sectors and lesser loss in employment in the industrial and services sectors. A rise in subsidies to agricultural sectors would also provide extra incentives for investing in agriculture. However, it should also be kept in mind that such subsidies put a heavy burden on government's

exchequer. Therefore, phased reduction of such subsidies would be warranted. To be effective, such subsidies need to be used judiciously. Subsidies in Bangladesh are often wrongly targeted, and therefore the actual objective of the subsidies is not achieved. Enhancing agricultural productivity, improving marketing opportunities, and ensuring effective implementation of competition policies and laws also can encourage producers to increase agricultural production, and at less cost to the government.

This study has highlighted the incidence of tariff barriers facing South Asian countries. Even though the level of protection of food products trade has come down through the SAFTA and bilateral arrangements between Bangladesh and India, a large number of products are still contained in their sensitive lists. While identifying the possibilities and path to trade liberalization in agricultural products, the study has further brought out some anomalies in the notifications on their sensitive lists and the corresponding prevalence of preferential tariffs on the same food items thus restricted. While moving under the path of trade liberalization, SAARC Contracting States need to prioritize agricultural products for their removal from each countries sensitive list. This study could help negotiators to identify their request list to include those in which they have high protection.

Bangladesh's policymakers should give higher priority to increase domestic agricultural production and supply side capacities in items, which have already demonstrated their export potential in the international and Indian market. In this regard, closer collaboration between research institutions of Bangladesh and India

will enable Bangladesh to access modern agricultural technology from India and benefit from technology transfer. This would lead to productivity gains and increased competitiveness of her agricultural exports, which is crucial to Bangladesh's ability to take advantage of the duty-free access of agri-items in the Indian market.

A major factor behind the high unit cost of production of the HYV rice in Bangladesh is the cost of irrigation compared to the other countries in the region. Recent price hike of diesel will surely increase the cost of irrigation. Considering these realities, Bangladesh should provide subsidy on diesel to reduce the cost of ground water irrigation and pursue a stable price of diesel. If the international price is up, the price should remain as it is and the government should take back the bucks during a slump in the international market. Bangladesh should also pursue a policy of rapid expansion of rural electrification to facilitate electricity connection to irrigation and thereby reduce the cost of irrigation.

In order to maintain a balance between economic growth and environmental protection a sound environmental policy needs to be formulated. The policies and programmes should address the following issues: training of farmers in relation to the application of fertilizers and pesticides; protection of environment; create awareness about the adverse impact of excessive use of chemical fertilizers and pesticides.

As a result, it is very important that, while addressing the challenges to trade in Bangladesh requires a comprehensive approach that focuses on a range of issues

that supplement preferential access arrangements and facilitate greater competitiveness of South Asian economies. Investment in upgrading infrastructure, developing human capital and transferring technologies and expertise are critical in ensuring diversification of production and greater opportunities for trade.

8.4 Limitations and Area of Further Research

The study generally point toward or argue for favourable effects of agricultural trade liberalization in the context of Bangladesh and South Asia. Nevertheless, much of the skepticism surrounding trade liberalization is concerned with the negative effects on certain subsets of the population. The vast majority of research gives only passing attention to the people who are harmed by agricultural trade liberalization, often in the form of references to the theoretical possibility of lump sum transfers to compensate losers. Therefore, it is important to push the analysis further in order to better understand the effects of agricultural trade liberalization on the losers as well as the winners.

A wide range of research could be conducted to examine the possible negative effects of agricultural trade liberalization. It includes, the ability to adapt to change will be a crucial determinant of just how much damage is suffered by farmers who are hurt by more imports. Also it can be argued that, whether agricultural trade liberalization hurt or help the agro-industrialization process, which is a potential source of jobs.

The study has revealed that agricultural trade liberalization made chemical fertilizers and pesticides cheaper and farmers use them inconsiderately. However, they are costly inputs, and in conventional broadcast scattering many of the nutrients are lost either to the atmosphere or to below the root zone, where crops cannot take advantage of them. The nutrients that go into atmosphere contribute to the accumulation of greenhouse gases; some that travel below the root zone contribute to contaminated drinking water or to high concentrations in rivers and lakes. It was not possible to identify and estimate these impacts leaving a substantial aperture of knowledge. A further study is required in this context.

The study has identified Bangladesh's contribution to international trade. More research on the stability of Bangladesh's international trade is also required, instead of just assuming that more liberal trade will automatically lead to more stable markets. More rigorous research is needed to comprehend the many effects of agricultural trade liberalization and the research needs to moderately ruminate both positive and negative outcomes.

Appendices

Appendix A

Table 4.5: Summary of Transformation Process of Fertilizer Policy/Regulation

Period	Policy, role of public and private sector
Post Green Revolution period (1960-1980s): Heavy subsidization and public sector role	
1960s-1970s	In response to inadequate supply and progress in the use of fertilizer, the public sector was given complete control over fertilizer procurement and distribution, with the responsibility of procuring fertilizer from both domestic and external sources and distributing it right to the level of the small administrative unit (<i>thana</i>) vested solely with the BADC. Under this “old marketing system” (OMS), the distribution of fertilizer was through Thana Sale Centers (TSCs) at subsidized prices. BADC-registered dealers were also allowed to lift fertilizer from TSCs and sell to farmers at regulated prices, for which a commission was paid to them.
1970s-1980s	The OMS was found to have a number of deficiencies, especially with regard to appointment of dealers, erratic supply, inadequate storage, and skewed incentives for dealers and farmers. Beginning in 1978, efforts were made to improve the system under a series of measures referred to as the “new marketing system” (NMS). Although the overall procurement operations remained a public sector monopoly, significant changes were introduced in the distribution chain, with the aim of improving efficiency and bringing in competitiveness and private participation. BADC withdrew from retail sales and instead concentrated only on maintaining wholesale centers at various strategic points in the country. Restrictions on fertilizer movement across the country and the cumbersome registration process for retailers were eased. Starting in 1983, fertilizer price at the retail level was also decontrolled.

1990s	Although the NMS had enjoyed major success in many aspects, various constraints remained and meeting farmer demand during peak season continued to be a problem. Thus, policy started to shift toward an open market system. By 1989, direct lifting of fertilizer from domestic production centers as well as ports was allowed in response to a urea crisis that occurred despite there being large stocks present. In 1992, the government excluded fertilizers from the list of restricted imports, paving the way for the private sector to import fertilizer. By December 1992, the subsidy on fertilizers was completely withdrawn and import and distribution of fertilizer were privatized.
Liberalization –reducing public sector roles (1990s-2000s)	
1990s-2000s	Fertilizer crises at various points in time (initially in 1995, followed by more recent setbacks in 2005, 2007, and 2008) resulted in partial restoration of government control over the fertilizer market. In recent years, following the promulgation of a new dealership policy in 2008 and 2009 in the wake of a fertilizer supply crisis and price spikes, the fertilizer distribution system was revamped and some amount of subsidy was also introduced (though the stated aim of the subsidy was more toward balancing the use of various fertilizers to maintain soil health). The fertilizer distribution network is once again composed of appointed/licensed dealers who are limited to selling in a particular designated area, with the objective of ensuring effective fertilizer distribution across the country. BADC is withdrawn from retail and whole sale markets at Primary Distribution Points (PDP). Licensing process for dealer was simplified and they can buy fertilizers from factory or import. They can sell non- urea fertilizers in their own price.
Post Global Food Price Crisis (Post 2008 to current)	
Post 2008 to current	The prices of non-urea fertilizers were slashed to almost half per kilogram to help farmers during the <i>Boro</i> season. In order to mitigate crisis, the government decided to bring the market under its direct control. The control measures were reintroduced on the marketing and distribution of urea in 2010 which again was

withdrawn in 2011 and non-urea fertilizer prices are now available at a heavily subsidized price.

Source: General Economics Division, Planning Commission, Bangladesh¹

¹ General Economics Division, *Perspective Plan: Agriculture* Planning Commission, Govt. of Bangladesh <<http://www.plancomm.gov.bd/general-economics-division/>>. (Accessed on 11 August 2016).

Appendix B

Existing Agricultural Trade Policies of Bangladesh and Possible Gaps

Agricultural Policies	Major goals and policy thrusts	Implementing Ministry	Gaps
New Agricultural Policy 2013 (NAP)	Sustainable and profitable agricultural production; development and dissemination of new technologies; increase in productivity, employment and income generation; competitive agriculture through commercialization; adaptation to climate change and sustainability of agricultural system; agricultural marketing to ensure better prices to both farmers and consumers; enhance production quality to meet export standards; opportunities for agro-processing industries;	Ministry of Agriculture	<ol style="list-style-type: none"> 1. The policy has addressed cereals and did not address adequately the non-cereals sector like jute, sugarcane, cotton etc. 2. Absence of a framework to develop effective human resources for commercialized agriculture including unemployed rural youth and women. 3. It is necessary to formulate a strategic plan to encourage export of high/value added

	encouraging production of more nutritious crops.		<p>products. Existing land use plan may have to be modified for this purpose to enhance productivity of high value items including fruits, vegetables, medicinal plants /herbs, cutflowers/ foliage etc. and value added processed products.</p> <p>4. Food safety and quality issues are not adequately covered or emphasized including the traceability of the product.</p>
National Agriculture Policy (NAP), 1999	Food security, profitable and sustainable production, land productivity and income gains, IPM, smooth input supplies, fair output prices, improving credit, marketing and agro-based industries, protecting small farmers interest	Ministry of Agriculture	<p>1. Crop diversification, efficiency of irrigation water use, women participation in agriculture were not adequately addressed.</p> <p>2. Contract Farming as a concept to boost production of high value crops and</p>

			improve market linkages of the smallholders briefly.
New Agricultural Extension Policy (NAEP), 1996	Provision of efficient decentralized & demand led extension services to all types of farmers, training extension workers, strengthening research-extension linkage, and helping environmental protection	Ministry of Agriculture	
DAE-Strategic Plan, 1999-2002	Adoption of Revised Extension Approach, assessment of farmers' information needs, supervision, use of low or no cost extension methods, promotion of food and non-food crops, and mainstream gender and social development issues into extension service delivery.	Ministry of Agriculture	
Agricultural Extension Manual, 1999	Annual crop planning, seasonal extension monitoring, participatory technology development	Ministry of Agriculture	

	and rural approval partnership, technical audit, attitude and practice surveys.		
Seed policy, 1993	Breeding of crop varieties suitable for high-input and high output agriculture, multiplication of quality seeds, balanced development of public and private sector seed enterprises, simplification of seed important for research & commercial purposes, provision of training and technical supports in seed production, processing & storage monitor, control and regulate quality and quantity of seeds.	Ministry of Agriculture	The public sector policies on seeds are stated in the National Seed Policy 1993, the Seeds (Amendment) Act 1997, The Seed Rules 1998, The Seeds Ordinance 1977 with amendments made in 1997 and 2005, the National Agricultural Policy 1999, the National Food Policy 2006 and National Food Policy Plan of Action 2007. The objectives and strategies for the seed sector are not narrated in these policy documents exactly in the same manner or language though the main thrust or

			<p>message seems to be similar. And that is that the government would facilitate a balanced development of public and private sector roles in the production and distribution of quality seeds. What it actually means and how it would be achieved is not uniformly stated in the various documents mentioned above. Thus private and public sector interpret the intentions of these policies differently, causing some controversy.</p> <p>Related to the supply of inputs are issues of private and public sector coordination. The differences between private and public sector</p>
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			<p>perspectives on the seed market are prompted by two factors: (a) lack of accurate data on the size and structure of the seed markets for different crops; and (b) lack of sufficient clarity on the objectives and strategies of the national seed policy. These issues can be a hindrance to effective participation by private sector and should be addressed</p>
Fertilizer distribution policy 2009	<p>It governs the key issues of present marketing and distribution system. Under the present system, annual fertilizer demand is assessed by DAE and then MOA fixes the annual target centrally. Urea is imported by BCIC only.</p>	Ministry of Agriculture	<p>1. Existing GOB fertilizer distribution system and regulations often impedes the private dealers from effective operations and does not serve farmers in remote areas.</p> <p>2. The GoB fertilizer</p>

			<p>demand assessment is centrally determined and is not based on fertility level of soil</p> <p>3. Monopoly import of urea fertilizer by BCIC. BADC and private importers import the required quantity of TSP, MoP and DAP from different countries and sources. Import of fertilizers fully depends on MOA's allotment and permission.</p>
Plan of Action on National Agriculture Policy (NAP, 2003)	Reviewing NAP and its implementation, setting out strategies and actions, and identifying institution and programme framework	Ministry of Agriculture	
Actionable Policy Brief (APB), 2004	Prioritize immediate medium-term and long-term policy measures with respect to seed, fertilizer, land, irrigation,	Ministry of Agriculture	

	mechanization, marketing, agricultural research and extension with a view to increasing labour & water productivity, investment in agriculture and improve risk management.		
National Jute Policy, 2002	Keeping jute production at a desirable level, stabilizing supply and prices of jute, developing commercially viable jute industries, accelerating privatization of jute industries, and developing multiple uses of jute & jute goods.	Ministry of Jute	
Livestock Policy and Action Plan, 2005	Improvement of small scale poultry and dairy farming replicating CLDDP, reform of DLS, enforcement of law and regulations towards animal feeds, vaccines and privatization of veterinary services adoption of breeding policy, and establishment of livestock insurance development fund and livestock credit food.	Ministry of Fishery and Livestock	There is no broad focus on the safety and quality of meat, poultry and their products. The policy fails to address hygienic slaughtering of cattle for safe meat and meat products.

National Fishery Policy, 1998	Development of fishery resources, increasing fish production and self-employment, meeting demand for animal proteins accelerating fish exports, and improvement of public health.	Ministry of Fishery and Livestock	The policy describes very little on the issue of managing safety and quality of fish for domestic consumption covering Good Aquaculture management. But some activities are in place in respect of export oriented fish and fish products where traceability is established following international requirements.
National Land use policy	Minimizing loss of cropland, stopping indiscriminate use of land, preparing guidelines for land use for different regions, rationalizing land acquisition, and synchronization of land use with natural environment.	Ministry of Land	

<p>National Forest Policy 1994</p>	<p>Bringing 20% area under afforestation, enriching bio-diversity, extending assistance to forestry sector development through development of land and water resources, implementation of national and international efforts and agreements relating to global warming, desertification control of wild bird and animal trade, and prevention of illegal occupation of forest lands, felling of trees, encroachment and haunting of wild animals.</p>	<p>Ministry of Environment and Forest, 1994</p>	
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Appendix C

Table. 7.1: Availability of Agricultural Land since 1976-77 to 2010-11

Year	Total land area of Bangladesh	Net Cultivable land	%Net Cultivable land	Year	Total land area of Bangladesh	Net Cultivable land	%Net Cultivable land
1976-77	14.28	9.39	65.75	1994-95	14.84	8.77	59.10
1977-78	14.28	9.38	65.68	1995-96	14.84	8.72	58.76
1978-79	14.28	9.38	65.68	1996-97	14.85	8.24	55.49
1979-80	14.29	9.39	65.71	1997-98	14.85	8.36	56.30
1980-81	14.29	9.38	65.64	1998-99	14.85	8.43	56.77
1981-82	14.29	9.38	65.64	1999-00	14.85	8.45	56.90
1982-83	14.29	9.36	65.50	2000-01	14.85	8.40	56.57
1983-84	14.45	9.46	65.47	2001-02	14.84	8.48	57.14
1984-85	14.48	9.43	65.12	2002-03	14.84	8.42	56.74
1985-86	14.48	9.44	65.19	2003-04	14.84	8.40	56.60

1986-87	14.70	9.51	64.69	2004-05	14.84	8.44	56.87
1987-88	14.84	9.82	66.17	2005-06	14.84	8.42	56.74
1988-89	14.84	9.84	66.31	2006-07	14.84	8.41	56.67
1989-90	14.84	9.78	65.90	2007-08	14.84	8.65	58.29
1990-91	14.84	9.72	65.50	2008-09	14.84	8.64	58.22
1991-92	14.84	9.09	61.25	2009-10	14.84	8.63	58.15
1992-93	14.84	8.75	58.96	2010-11	14.84	8.52	57.41

Source: Bangladesh Bureau of Statistics (BBS)

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