

Development Outcomes from Openness to International Trade on Bangladesh's Ready Made Garments Sector: Comparative Advantage, Need for Dynamic Gains and Role of the Government

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Abstract:

Openness to international trade has brought about different development outcomes in different countries. Once it was thought that openness to trade is the panacea for development and it will always lead to positive development outcomes. However, Bangladesh's experience of opening up to international trade suggests that it is a necessary but not sufficient condition for economic development. The country has experienced consistent economic growth throughout last two decades and a major contributor to her economic development has been export oriented Ready Made Garments (RMG) sector. Bangladesh could make RMG sector a success story owing to factor endowment of abundant labour. This comparative advantage in the factor of production allowed static gains like specialization to occur. However, only openness to trade did not make RMG sector a success story. The growth of RMG industries was supported by government as it introduced necessary institutional reforms related to RMG sector. But the country failed to apply underlying comparative advantage in sectors other than RMG to be able to compete in global market. Under the mentioned backdrop, the purpose of this study is to analyze whether static gain has been transformed into dynamic one. To do so both qualitative and quantitative methods have been applied. Findings suggest that the country has been unable to achieve dynamic gains. In order to achieve dynamic gains openness to international trade must be supported by structural and institutional changes initiated by the government. The country should also focus on enhancing its comparative advantage by supporting existing sectors as well as promoting new sectors. In doing so trade policies should be directed towards signing free trade agreement (FTA) and export oriented labour intensive industrialization which in turn will lead to economic development and employment creation for the country.



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1. Introduction:

Bangladesh is one of the fastest growing economies in the world averaging consistently over 6% GDP growth over last decade. Given its smaller land area with larger population, the country is heavily dependent on international trade for economic growth. It has been successful in devising trade policies based on careful utilization its comparative advantage of labour endowment. The country's growth has been fuelled by its booming ready-made garments (RMG) sector where comparative advantage in abundance labour has been utilized by the policymakers and entrepreneurs. However, as more than 80% of total export comes from RMG sector only, the export basket remains small for the country. So, Bangladesh's international trade pattern is suggestive of the fact that it has not been successful in transforming static gain to a dynamic one. The country's comparative advantage in labour endowment is utilized in RMG sector only. Existing theoretical framework indicates the need for achieving dynamic gain and enhancing comparative advantage. This paper attempts to analyze Bangladesh's position in term of static and dynamic gains as well as its utilization of comparative advantage and provides policy suggestion for way forward. This paper aims to find the answers of two research questions: (i) Has Bangladesh achieved dynamic gains in international trade? If not, what are the reasons? and (ii) What is/are the policy option/s to better utilize Bangladesh's comparative advantage?

2. Literature review:

Wacziarg (2001) finds that there is positive correlation between the openness to international trade and economic growth. Perla et. al. (2015) develops a trade model that shows that the firms learn from one another thereby paves the way for dynamic gains for the countries. Atkeson and Burstein (2010) show that the welfare gains from trade are typically small within the static framework. Sen (2010) argues that comparative advantage is both necessary and sufficient condition for mutually gainful international trade among nations. Hur (2012) finds that free trade agreement have insignificant impact on overall growth in first ten years after FTA comes into effect. However, there is significant upper trend on per capita GDP afterwards.

2.1. Bangladesh's Comparative Advantage:

Bangladesh is 8th largest populated country in the world but ranks 92nd when it comes to total area. It is also the most densely populated country. Bangladesh enjoys demographic dividend as 34% of the population aged 15 and younger and only 5% aged 65 and older (UN, 2015). As a result, the country enjoys a large labour pool while suffers from the shortage of lands. Therefore, it can be expected that Bangladesh's comparative advantage lies in producing labour intensive goods and services. This statement can be validated by the fact that, Bangladesh stood at second position in terms of labour intensive RMG export in the world after China and it's share of world clothing export was 6.5% in 2017 (WTO, 2018).

2.1.1 Heckscher-Ohlin Model:

Using the law of comparative advantage, Heckscher-Ohlin model attributes 'differences in labour productivity and relative costs of production specifically to differences in relative factor endowments- that is to differences in the amount of capital per unit of labour' (Thirlwall, 2011). This theory suggests that comparative advantage derives from factor endowment. If a country has relatively large pool of labour relative to capital as factor endowment this theory advocates that the country should focus on producing labour intensive goods. Following the same logic, a country with abundant capital relative to labour should concentrate more on producing capital intensive goods. When both these countries trade then labour intensive items embody labour implicitly and capital intensive items embody capital implicitly. In effect both countries trade factors of production, not explicitly

but embodied. Therefore the continuation of trade will lead to equalization of factor prices. Although the changes in patterns of trade have made the theory less relevant but when the pattern of trade is based on different factors of production between countries, this theory still plays an important role in explaining international trade.

2.1.2 Linking H-O model with Bangladesh's Comparative Advantage:

As Bangladesh is a labour abundant country, therefore H-O model suggests that Bangladesh has comparative advantage in producing labour intensive goods. Bangladesh should target to export labour intensive goods and import capital intensive goods from the countries that have large capital endowment.

2.1.3 Empirical Justification of Applicability of H-O Model in Case of Bangladesh:

H-O theory can empirically explain Bangladesh's export performance as top three export products are labour intensive goods which comprises 89.3% of total exports (Workman, 2020):

Table 1: Export of Labour Intensive Goods

Item	Value	Percentage of total export
Knit or crochet clothing	20.3 billion USD	44.5%
Clothing, accessories	19.4 billion USD	42.4%
Footwear	1.1 billion USD	2.4%

Table 2: Import of Capital/Land Intensive Goods:

Similarly top 5 imports (50% of total imports) are either capital or land intensive goods (Bangladesh Bank 2020):

Item	Value	Percentage of total Import
Mineral fuels	US\$7.05 billion	13.5%
Cotton, cotton yarn and cotton fabrics	US\$6.94 billion	13.2%
Nuclear reactors, boilers, machinery and mechanical appliances	US\$6.19 billion	11.9%
Electrical machinery and equipment	US\$3.01 billion	5.8%
Iron and Steel	US\$2.87 billion	5.5%

2.1.4 Static Gains from Trade:

Most important static gain from international trade is specialization. Utilizing comparative advantage will lead to reaching maximum efficiency on the part of factor endowments. Theoretically, that is the most productive use of resources. However, there are downsides too. The gains from trade are once for all, they do not recur and once the process of resource relocation has taken place, there are no further gain (Thirlwall, 2011). Therefore, focusing only on comparative advantage based factor endowments and specialization can be a dead end. As a result, the country may not be able to graduate to middle income level and go further for a long time.

2.1.5. Dynamic Gains from Trade:

The dynamic benefit of trade is that the exporters have larger market to deal with which leads to greater specialization, capital accumulation and the process what can be described as learning by doing. It also includes other beneficial impacts like direct investment externalities, training, education, pass of knowledge, technological and managerial know-how etc. In this case government needs to play an important role because structural and institutional changes are necessary to achieve dynamic gains and to go beyond underlying comparative advantage. Even if a country does not have a particular comparative advantage it might need to create one and organize the resources to reap the benefit of trade.

2.1.6 From Static to Dynamic Gains:

It is important to start with static gains first and follow comparative advantage because that gives the optimal outcome in terms of efficiency. In the process of utilizing factor endowments based on comparative advantage it will produce specialization which will create necessary conditions to carry out structural changes and institutional reforms. In this way beneficial effects become larger and larger, gains becomes accumulating all the time which leads to the emergence of dynamic gains. In essence, it is not possible to look one way or another, rather the process is evolutionary.

3. Case Study: Rise of Export Oriented Ready Made Garments (RMG) Industry in Bangladesh:

Export oriented RMG industry began to emerge in Bangladesh from 1973- primarily by local entrepreneurs and later supported by the government. Starting from scratch, in little over four decades the country has become the 2nd largest clothing exporter in the world after China and it's share of world clothing export was 6.5% in 2017 (WTO, 2018). RMG now accounts for 84.4% of Bangladesh's export basket (Bangladesh Bank, 2019). This is the most important manufacturing sector in terms of job creation as total employment in this sector is around 4 million (The Daily Star, 2019). This tremendous journey started with the factor endowment Bangladesh have that is the abundance of labour. As RMG is a labour intensive sector, initially the efforts were taken up by local entrepreneurs. The historical and cultural phenomenon of the country played a major role in the initiation and advancement of the industry. For hundreds of years this part of the world have been reputed for being the producers of quality apparel. The cultural tradition of the country dictates that women should have basic knitting and stitching skills. This phenomenon and given the fact that often large percentage of the workforce employed in RMG industry are females therefore this pool of labour were easily trainable. As the wage rate was low and the workforce were easy to train, it created the basis for comparative advantage as well as competitive edge.

The major share of the country's RMG export is destined towards capital intensive European Countries and United States from the beginning to present time (Bangladesh Bank, 2019). Data Shows that in 2017-18 fiscal year 16% of total export went to Germany, 14.8% to USA, 10.5% to UK, 6.8% to Spain, 6.1% to France, 5% to Italy, 3.2% to Netherlands, 2.9% to Canada, 2.7% to Japan- all capital intensive countries (Bangladesh Bank, 2019). Therefore the factor endowments have always been different between Bangladesh and the other trading partners when it comes to RMG export. This is exactly why the H-O model is still relevant in explaining Bangladesh's RMG sector. The static gain achieved in the early phases of RMG sector development was mainly specialization. The factor endowment of cheap labour as well as efficiency gained during initial 6/7 years attracted Foreign Direct Investment (FDI) in this sector. In 1979 Korean Conglomerate Dawoo Corporation started a joint venture project with local company Desh Garments (Rahman, 2014). This venture was 100% export oriented. The employees of the joint organization were trained in Korea. Koreans came not only with investment but with superior technology, managerial know-how and already established links with global apparel value chain for sourcing as well as marketing the products. Most importantly, the mid-level employees of the joint corporation later established their own industries and led Bangladesh's RMG sector.

4. Role of the Government:

Government played very strong role during the growth phase of RMG sector. It took a while for the Government to identify and recognize the prospect of RMG sector for the economy of Bangladesh. In 1970s the development of this sector were led by private entrepreneurs and market forces were the predominant determinants. However, from the beginning of early 1980s, Bangladesh government started to intervene to create necessary conditions for RMG

sector development. Although broader trade liberalization in whole economy was absent in 1980s and early 1990s, government initiated a number of structural changes and institutional reforms related to RMG to help flourish the sector. It included updating banking and financial regulations in order to ensure easy access to financing with very low interest rate for investing in the sector. Export oriented cash incentives were also initiated. The import of raw materials and capital goods for the RMG industry were made free from any import tax. For attracting FDI inflow and overcoming infrastructure deficiency, government set up Export Processing Zones (EPZ) in different parts of the country especially in the areas near to the sea ports. The foreign companies were allowed to take back all the value added in the business cycle. The bureaucratic process were made hassle free and fast track for investing in the Zones. Government ensured uninterrupted supply of gas, electricity and other necessary raw materials. An Export Promotion Bureau (EPB) was also established to provide institutional support to the industry. In short, preferential treatment were given to the companies for investing through institutional and structural reforms aimed at the sector.

5. The Drawbacks of Static Gain and Way Forward towards Dynamic Gains:

The success story of Bangladesh's export oriented international trade is limited to RMG sector only. The second highest export earning sector is Jute and Jute Manufactures with only 3.4% share and the third highest is Fish, Shrimps and Prawns which accounts for 1.9% of the total export as against to the 84.4% of RMG (Bangladesh Bank, 2019). This is because Bangladesh has been confined with a particular production which is based on comparative advantage. In short, overall gains are static only. East Asian growth model suggests that the structural changes are very necessary to go beyond the underlying comparative advantages and reap the benefit of dynamic gains. South Korean model demonstrates the importance of state driven development approach. Korean push for industrialization were against their comparative advantage of agriculture. It is therefore important for developing countries to break the trap or the low level of equilibrium to carry out institutional and structural changes. Following the path shown in East Asian and Korean growth models, Bangladesh should focus on ways to achieve dynamic gains even if it is against her comparative advantage. Government's role is going to be crucial here as the government is capable of introducing institutional reforms, trade liberalization, flexible market system, good governance and other necessary structural changes. Government should focus on making the industrial policy more effective, building human capital, providing quality education, establishing necessary infrastructure, updating financial regulations and building a well-functioning capital market. Capital intensive as well as tech intensive sectors that have shown promise should get government support with proper structural and institutional changes. Example include shipbuilding and information technology. Bangladesh has started to export ships from 2008 and has experienced steady growth since then. In fiscal year 2017/18 the sector enjoyed a staggering year-on-year growth of 456.88% (Dhaka Tribune, 2018). However, total volume remains trivial at \$30.35 million (Dhaka Tribune, 2018). Tech intensive also experienced a 40% growth in past few years (Medium, 2019). Just like the beginning of RMG in Bangladesh, local entrepreneurs are driving the growth of these sectors. It is time for the government to play more inclusive role to help flourish these sectors and identify other prospective sectors that might go beyond existing comparative advantage to get the benefit of dynamic gains from international trade. Finally, Chinese experience suggests that 'the most important channel through which trade openness enhances Chinese firm-level R&D and innovation is the absorption of R&D of advanced economies embodied in the imports of China from these advanced economies' (Zhou and Song, 2016). In line with Chinese experience Bangladeshi firms and Government should allocate more resources in R&D and innovation in order to fully achieve the dynamic gains.

6. Quantitative Analysis of Labor Intensive RMG Sector of Bangladesh:

6.1. Model Specification:

$$\ln EX_{ijt} = \alpha_0 + \alpha_1 \ln GDP_{jt} + \alpha_2 \ln POP_{jt} + \alpha_3 \ln DIS_{ij} + \alpha_4 \ln TRADE-GDP_{it} + \alpha_5 \ln TRADE-GDP_{jt} + \alpha_6 \ln ER_{it} + TRAD + \varepsilon_{it}$$

GDP_{jt} = GDP of the trading partners.

POP_{jt} = Population of the trading partners

DIS_{ij} = Distance between the capital of Bangladesh and trading partners.

TRADE-GDP_{it} = Trade-GDP ratio of Bangladesh.

TRADE-GDP_{jt} = Trade=GDP ratio of trading partners.

ER_{it} = Bangladeshi currency's nominal exchange rate (USD in 2010 US\$)

TRAD= a dummy variable for traditional export destination of Bangladeshi RMG products.

6.2. Data:

This is a panel data set with 308 observations ranging from 2000 to 2013. A list of 22 major export destinations (11 traditional and 11 non-traditional) has been included. This traditional/non-traditional selection is based on Bangladesh Garment Manufacturers and Exporters Association's list. The traditional export destinations are USA, UK, France, Germany, Spain, Canada, Belgium, Netherlands, Denmark, Portugal and Italy. The non-traditional export destinations are Australia, Brazil, Chile, China, India, Japan, South Korea, Mexico, Russia, South Africa and Turkey.

Other sources of data are as follows:

Total export volume of RMG	United Nations Comtrade Database in current US\$
Population, Trade-GDP ratio	World Development Indicators
Exchange rate of Bangladeshi taka against USD in 2010 US\$	IMF database
Distance data between two countries' capital	CPEII

6.3. Results:

Variable	Coefficient Estimates
Costant	13.36938 * (8.148809)
GDP _{jt}	-.0069047 (.2628408)
POP _{jt}	.5720089*** (.2281545)
DIS _{ij}	-.520187* (.2960824)
TRADE-GDP _{it}	1.663026*** (.3777608)
TRADE-GDP _{jt}	1.663026 (.2827486)
ER _{it}	-2.072805* (1.194392)
TRAD	1.314261*** (.376699)
Log Likelihood Function	-282.5017

Source: Author's calculation

*Refers to 10% significance level ** Refers to 5% significance level *** Refers to 1% significance level

The results shows that when the GDP of the countries grow by 1% then total export declines by .007%. This result is statistically insignificant. Expectedly when the population increases in the destination countries the sale of RMG increases. In case of Distance and Exchange rates of the exporting country, both have negative coefficient on total export meaning if the distance increases then exports goes down and in case currency devaluation similar outcome is expected. When trading activity increases in the exporting country by 1% export increases by 1.66% which is statistically significant at 1% level. The main area of focus is the variable TRAD that is whether the export destination is a traditional one. The result is positive and statistically significant at 1% level. Therefore if the export destination is a traditional one then export increases by 1.31%. The reasoning behind this quantitative analysis is that Bangladesh should focus on identifying areas to devise trade policies to increase comparative advantage. In this case exporting more to traditional export destinations have been proved to be important to boost its comparative advantage.

7. Trade Policy to Enhance Comparative Advantage:

Bangladesh is a small country in global economy. Therefore the instruments of trade policy is based on the small country assumption. So introducing tariff, export subsidy and import quota will lead to less overall national welfare. One might argue that as Bangladesh imports capital intensive goods then the country should go for import-substituting industrialization by imposing trade instruments like tariff or import quota. However, this argument is flawed because Bangladesh does not have comparative advantage in producing capital-intensive goods at the moment and developing an industry based on future assumed comparative advantage in capital is not a good option from empirical evidence of many countries. The development of Korean car industry is a good example in this case. Furthermore, import substitution industrialization by protecting infant industries leads to less competitiveness and does not lead to catch up growth with developed countries. .

I propose that Bangladesh should introduce two trade policies to reap the benefit of its comparative advantage. First, to increase export of already established industries like RMG, focus should be on signing Free Trade Agreement with traditional export destination countries. Bangladesh enjoys duty free quota free (DFQF) market access to EU countries as an LDC. However, major export destinations like USA has not granted such facility. Moreover, Bangladesh is set to graduate from LDC in 2024. After that DFQF access will no longer be available. So signing FTA means Bangladesh will enjoy better market access at present and after 2024 but at the same time will be able to set import tariff by itself which would not be possible in case of custom union. It is important because Bangladesh imports most of the raw materials for RMG from outside world. Second, Bangladesh should promote export oriented labour intensive industries and service industries in promising sectors such as footwear and call centers which are in line with existing comparative advantage. At present footwear exports ranks 2nd in Bangladesh's export basket. Trade policies should be directed towards promoting this sector by increasing supply chain, importing necessary technology and building human capital. Other labour oriented service driven industries like Call centers can also be promoted. This industry is growing at an average rate of 20% already (The Daily Star, 2017). Government should promote this sector by emphasizing on technology based public education.

8. Limitation of the Study:

The main limitation of the study is that trade policy such as FTA have been suggested by analyzing the performance of RMG sector only. If other sectors could be included then it would be possible to suggest more evidence based and comprehensive trade policies. Another

limitation is that it could not be analyzed whether signing FTA would lead to trade creation or trade diversion.

9. Conclusion:

Bangladesh have successfully utilized her comparative advantage to build a thriving export oriented RMG sector. During the growth phase, government played supportive roles by initiating RMG specific structural and institutional changes. Overall the rise of the sector has resulted in positive development outcomes by creating jobs and contributing to export earnings. But positive development achievements are limited to one sector and gains are static only. It is because the country is stuck with the factor endowment of abundant labour. Now, the country should focus on achieving dynamic gains. Bangladesh needs to push for positive changes in trade regime, institutional reform, trade liberalization and structural changes to overcome or minimize the downsides as well as to get the benefit of open trade. Resource should be allocated in a way that would lead to efficient outcome. In order to implement these institutional and structural changes Government must play very crucial role again. Bangladesh should also attempt to enhance its comparative advantage by signing FTA and promoting export oriented industrialization. If these measures are implemented and dynamic gains are achieved then the country will be able to fully enjoy positive development outcomes from openness to international trade.

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