

The Trends of Export and Its Consequences to the GDP of Bangladesh

Mohammad Rafiqul Islam¹, Mohaiminul Haque²

Department of Mathematics and Natural Sciences (MNS), BRAC University, Dhaka, Bangladesh

Email address

mrafiq@bracu.ac.bd (M. R. Islam), mohaiminulhaque1996@gmail.com (M. Haque)

Citation

Mohammad Rafiqul Islam, Mohaiminul Haque. The Trends of Export and Its Consequences to the GDP of Bangladesh. *Journal of Social Sciences and Humanities*. Vol. 1, No. 1, 2018, pp. 63-67.

Received: February 5, 2018; Accepted: March 5, 2018; Published: April 10, 2018

Abstract: The average growth of GDP of Bangladesh is over 6.5% since 2004 which is largely driven by its exports of ready-made garments (RMG), remittances and the domestic agricultural sector. It is also found that the export grew at the rate 16.31% of over the last 26 years from the fiscal year 1990 to 2016, which play an important role to expand the GDP of Bangladesh and thus contributes to reduce the poverty level. The total export has increased to 47 times in fiscal 2016 compare to 1990. The export was 4.99% of the GDP in 1990 (at current market price) whereas in 2016 it stood to 13.67% of GDP. Over the last 26 years, the ratio of export to GDP has increased to 4.07% per year on an average. This boost expand of export is mainly driven by the rich and constant growth of the readymade Garments, RMG (including Knit Wear & Hosiery) sector which grew at the rate of 18% per year. RMG contributes almost 69% (excluding EPZ) of the total export in the year 2016 whereas it was 38.95% of the total export in 1990. The Tea grew negatively at the rate of -8.49%. Although the growths of Jute; Fish & Shrimp; and Leather were positive which were 7.61%, 7.92%, and 8.56% respectively but the shares of all the products along with Tea to the total export have fallen drastically over the last 26 years which is not a good sign for the overall export in the coming year. This has to be taken seriously by policy makers.

Keywords: Export, GDP, RMG, Growth Rate

1. Introduction

Export means all transfers of the ownership of goods from residents of a country to non-residents and services provided by resident's producers of the country to non-residents are to be covered. It is not simply to send goods or services across national borders for the purpose of selling and realizing foreign exchange. For many developing countries, exports also serve the purpose of earning foreign currency with which they can buy essential imports- foreign products that they are not able to manufacture, mine or grow at home. Developing countries, in other words, sell exports, in part, so that they can import. Exporting goods and services can also further advance developing nations' domestic economies.

Bangladesh's export performance so far presents signs of strength in its export basket [17]. Export has a huge impact on the economy of a Nation like a developing country, Bangladesh whose huge percent of yearly Budget depends on Export that is, the foreign currencies.

The economy Bangladesh has changed drastically in last 30 years. The economy of Bangladesh is largely driven by its

exports of ready-made garments (RMG), remittances and the domestic agricultural sector. Ready-made garments (RMG) industry that now ranks second in export in the world. Within a very short period of time it has become the largest export earner of the country through a major positive forward thrust in the early 90s [20]. Bangladesh is expected to come out of the least developed country (LDC) bracket and achieve the status of a mid-income country within the next seven years for making significant progress in some key areas. To take this challenge, faster and sustainable growth rate of export can play a vital role in the coming year. Bangladesh earned US \$ 30.3 billion from exports in the fiscal year 2015-2016 which was almost 17.34% of GDP [1]. The readymade garments (Clothing, textiles, Knitwear) comprise about 89% of export whereas the major items are footwear and fish (mainly shrimp). The main destinations of export are USA, UK, Germany and European Union (EU). To make Bangladesh poverty free, it is very important to keep sustainable grown in the economy where export can play a vital role. This is for it necessary to analyze the trend of export over the years from different prospects. It is examined

[21] the relationship between the export and growth and showed that when a country has achieved some level of economic development than the exports have a positive and significant impact on economic growth. In the paper we will analyze the export of Bangladesh from the fiscal 1990 (1 July 1989 to 30 June 1990) to 2016 (1 July 2015 to 30 June 2016)

2. Back Ground

Export of Bangladesh is calculated with the help of FOB basis which is one of the renowned trade terms in the world. Free on board (FOB) is a trade term that indicates whether the seller or the buyer has liability for goods that are damaged or destroyed during shipment between the two parties. Bangladesh is the largest exporter of clothing in the world after China. The garment industry is the backbone of the development of the country. Bangladesh has the lowest labor-cost in the region which contributes to the competitive position of Bangladesh to attract clothing brands. The lucrative performance of export trade has been singlehandedly driven by the RMG sector, which has easily proved by its share in total exports rising from virtually nothing in 1980 to 81.13 percent in 2013 [19].

Main items of export of Bangladesh are Raw jute, Tea, Frozen food (Fish, shrimps, prawns etc.), Agricultural products, Jute products, Leather, Petroleum by products, Woven garments Knit wear, Chemical products (Pharmaceutical products), Footwear, Handicrafts, Engineering products, Ceramic products, and others (Bicycle, Terry towel, home textiles, etc.). The growth of knit garments export was facilitated by the remarkable free market access of EU during the period 1996-2005 resulted in the highest export share of RMG from Bangladesh [18]. The destination of the export products are countries like United States, Germany, United Kingdom, France, Spain, Italy, Canada, Belgium, China, and Japan. But other countries with large population can be a good market for Bangladesh such as Australia, Brazil, Chile, China, India, South Korea, Mexico, Russia, South Africa and Turkey are looking to be the more promising markets, followed by Malaysia, New Zealand, Norway, Saudi Arabia, and Thailand [15]. To increase the inflow of foreign investment and to achieve rapid economic growth of the country, particularly through industrialization, special steps have been taken by the Government of Bangladesh since 1980 by setting up Export processing Zones (EPZ) in the country. EPZ also is playing an important role to uplift the export of Bangladesh.

3. Methodology

In our analysis, mainly we will focus the growth rates. There are many methods to calculate the growth rates. The following two methods will be used to calculate the growth rates. The arithmetic growth rate will be used for the year to year or annual (one year) growth rate and the for the overall or average growth rate over the years the least-squares regression (log-linear) growth rates will be applied.

3.1. Arithmetic Growth Rates

For the growth rate of one year arithmetic method will be used due to the simplistic assumptions (OCED, 1997). The percent change of growth rate from one year to another year is calculated from the formula:

$$r_t = \frac{(Y_t - Y_{t-1})}{Y_{t-1}} \times 100$$

Where:

r_t = The growth rate in year t

Y_t = Represent the value in year t

Y_{t-1} = Previous year value

3.2. Least-Squares Regression (Log-Linear) Growth Rates

The regression method takes into consideration to all data points in the series; thus, it is the least likely to be biased by a randomly high or low beginning or ending year (The Treasury, 2002). It is also known as log-linear least squares regression method as the time trend equation is obtained through a logarithmic transformation of the compound growth equation:

$$Y_t = Y_0(1 + r)^t$$

Where Y_0 is the value of the variable Y at time 0 (beginning year); Y_t is the value of the variable at time t and t is the time taking values 0.1, 2, ..., n; and r is average growth rate over the n-period time series.

Taking natural logs on the both sides. Letting $\alpha = \ln Y_0$ and $\beta = \ln(1 + r)$, and adding a disturbance term ε , the equation becomes

$$\ln Y_t = \alpha + \beta t + \varepsilon$$

Then by the Ordinary Least Squares (OLS) method, we obtain an estimate of the slope coefficient $\hat{\beta}$ and thus the compound rate of growth by regression method is obtained as follows:

$$r = e^{\hat{\beta}} - 1$$

$$\text{Or, } r = \exp(\hat{\beta}) - 1$$

To get the percentage growth rate then it will be multiplied by 100.

The least-squares growth rate can be used for any type of indicators as it does not assume any pattern of growth [4], [5] and [7].

4. Results

Analysis the Export of Bangladesh

In the article, the export of Bangladesh (at current market price) has been analyzed from the year 1989-90 (1 July 1989 to 30 June 1990) to 2015-16 (1 July 2015 to 30 June 2016) that is, from the fiscal year 1990 to 2016 at the current market price. Growth rates have been calculated based by

using the method of least square regression model for the changes of overall export as well as for the different major components of export such as Readymade Garments (including Knit Wear & Hosiery); Raw Jute and Jute goods; Fish & Shrimp; Leather (Hides, Skins & Leather products); tea; and export from the export processing zone (EPZ). First of all, the contribution of export in the gross domestic products (GDP) is analyzed in the following.

4.1. Overall Export and GDP

The growth rate of export over the last 26 years from the fiscal year 1990 to 2016 (at current market price) was 16.31% which play an important role to expand the GDP of Bangladesh and thus contributes to reduce the poverty level. In the year 1990, the amount of total export was 5004 crore taka whereas in the year 2016, total amount of export has reached to 236802 crore taka which 47 times compare to year 1990. It is also noticed that the yearly growth (year to year) of export over the last 26 years was not steady which is shown in figure 1.

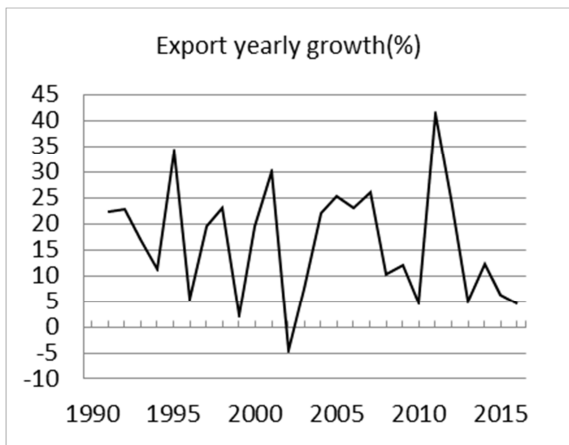


Figure 1. Year to year growth of the export of Bangladesh.

From the Figure 1 it is observed that the export has grown positively year to year except the year 2002 when it has experienced a decline of 4.58% from the year 2001.

Due to the sharp grow of export over the last 27 years; the ratio of export over the GDP of Bangladesh has also been changed significantly, which is depicted in Figure 2.

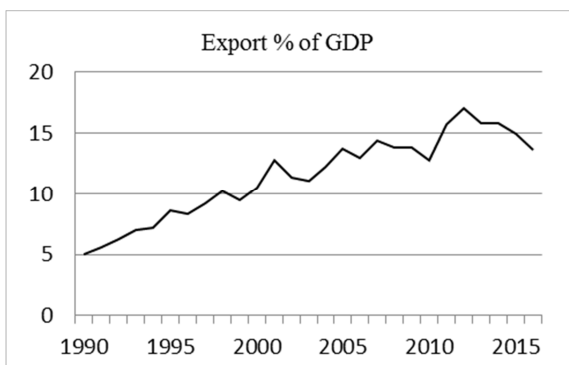


Figure 2. The ratio of export (in %) to GDP of Bangladesh .

In 1990, export was 4.99% of the GDP (at current market price) whereas in 2016 it stood to 13.67% of GDP. On an average, the ration of export to GDP has increased to 4.07% over the last 26 year.

4.2. Trend of Share in Export

RMG:

Over the last 26 years, (from 1990-2016) Readymade Garments (including Knit Wear & Hosiery), RMG grows on an average 18% per year. This tremendous growth of RMG plays a significant role to pick up the export of Bangladesh which is visible in Figure 3.

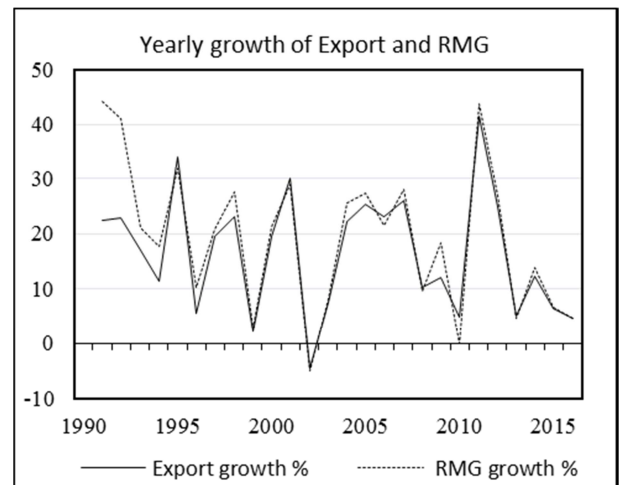


Figure 3. Year to year growth rates of RMG and export (in %) of Bangladesh.

From the Figure 3 it is clear that the pace of growth of export per year almost same as the RMG. So it can be said that the growth rate of RMG leading the growth of export over the years 1990 to 2016. On the other hand, RMG contributes almost 69% (excluding EPZ) of the total export in the year 2016 which was only 39% in 1990. From the years 1990 to 2016, the share of RMG to the export has increased constantly, which is shown in Figure 4.

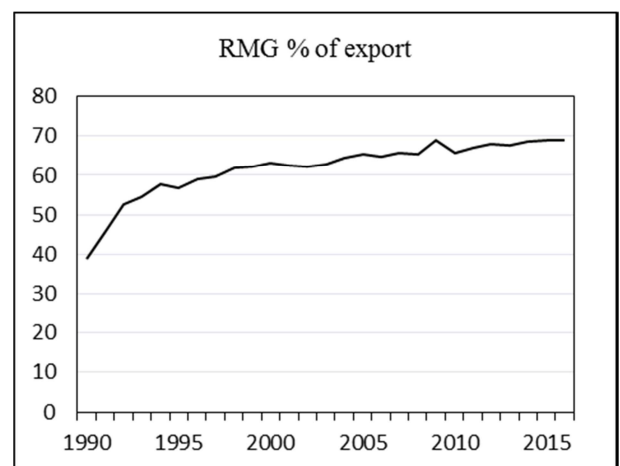


Figure 4. The share of RMG to the export (in %) of Bangladesh for the year 1990 to 2016.

Average share of RMG to the export was 62% over the year 1990 to 2016. The share of RMG to the export has increased 1.4% per year over the period of last 26 years which was possible due to the tremendous growth of export during the same period of time.

Share of Other Items in Export

Table 1. Rates of growth and share to Export over the year 1990 to 2016.

Export Items (1990-2016)	Average yearly growth (%)	Share in Export (%) in 1990	Share in Export (%) in 2016	Average growth of Share in Export (%)
RMG	17.92	38.95	68.88	14.38
Jute	7.61	27.66	2.94	-7.48
Fish & Shrimp	7.92	10.83	1.27	-7.21
Leather	8.56	10.97	0.90	-6.66
Tea	-8.49	2.32	0.006	-21.32
Export from EPZ	23.80	2.22	17.98	6.5

It has to be mentioned that to calculate the average growth rates over the year 1990 to 2016 all the values for each year have been considered as the growth rates are calculated by using the method of least square regression. From Table 1, it is noticed that the average yearly growths of Jute; Fish & Shrimp; Leather; and Tea are far below from the yearly growth of overall export which is 16.31% whereas the growth rates of RMG and EPZ are above the overall growth rate of export. Over the years 1990 to 2016, export from the EPZ has grown on an average 23.8% per year and thus, the share of EPZ in the total export is increased to 17.98% in the fiscal year 2016, whereas it share was only 2.22% in 1990 of the total export.

AS the growths of Jute; Fish & Shrimp; Leather; and Tea are not able to keep pace with the growths of RMG and EPZ, the shares of these products have been fallen drastically over the last 26 years which are more illustrated in Figure 5.

The growth trends and the contributions to export of other major items such as Jute (Raw and Jute goods); Fish & Shrimp; Leather (Hides, Skins & Leather products); Tea; and also the products which are exported from the export processing zone (EPZ) are summarized in Table 1.

From the Figure 5, it is clearly understandable that the contributions of Jute; Fish & Shrimp; Leather; and Tea to the total export (in %) of Bangladesh have been decreasing constantly almost every year which is not a good sign to keep the growth rate of overall export in the coming year.

5. Conclusion

The Export of Bangladesh has been deeply analyzed over the last 26 years from 1989-90 to 2015-16 that is from the fiscal year 1990 to 2016. The growth rate of export over the last 26 years from the fiscal year 1990 to 2016 was 16.31% which play an important role to expand the GDP of Bangladesh and contributes to reduce the poverty level. The total export has increased to 47 times in fiscal 2016 in terms of the fiscal year 1990. In 1990, export was 4.99% of the GDP (at current market price) whereas in 2016 it stood to 13.67% of GDP. Over the last 26 year the ratio on an average has increased to 4.07%.

This boost expand of export is mainly driven by the rich and constant growth of the readymade Garments, RMG (including Knit Wear & Hosiery) sector which grew at the rate of 18% per year. RMG contributes almost 69% (excluding EPZ) of the total export in the year 2016 whereas it was 38.95% of the total export. It has to be mentioned that the export from the export processing zone (EPZ) has also been increased tremendously. Over the years 1990 to 2016, export from the EPZ has grown on an average 23.8% per year and thus the share of EPZ in the total export is increased to 17.98% in the fiscal year 2016, whereas its share was only 2.22% in 1990 of the total export.

The average yearly growths of Jute; Fish & Shrimp; Leather; and Tea are far below from the yearly growth of overall export which is 16.31% whereas the growth rates of RMG and EPZ are above the overall growth rate of export. The average growths of export of Jute; Fish & Shrimp; Leather and Tea were 7.61%, 7.92%, 8.56% and -8.49% respectively over the last 26 years from 1990 to 2016. Although the growths of Jute; Fish & Shrimp; and Leather were positive but the shares of all the products to the total export have fallen considerably over the last 26 years which

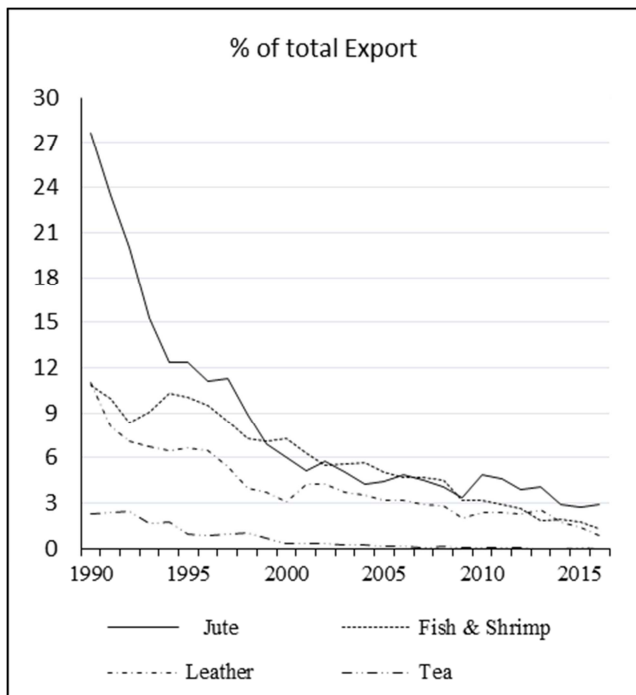


Figure 5. Share of Jute; Fish & Shrimp; Leather; and Tea to the export (in %) of Bangladesh for the year 1990 to 2016.

is not a good alarm to keep the growth rate of overall export in the coming year. This has to be taken seriously by policy makers. It is also important to notify that the share of RMG to the export has increased to only 1.4% over the last 26 years although RMG itself contributes almost 69% (excluding EPZ) of total export which indicates that the share of RMG to export has reached to the ceiling.

References

- [1] Bangladesh Bank. Annual Review of Export Receipt, 2015-16.
- [2] Rati Ram, "Exports and Economic Growth: Some Additional Evidence", *Economic Development and Cultural Change*, Vol. 33, No. 2 (Jan., 1985), pp. 415-425, Published by: The University of Chicago Press.
- [3] International Monetary Fund (IMF), 2015. *World Economic Outlook 2015*. IMF, Washington, DC.
- [4] N. Kakwani, "Growth rates of per-capita income and aggregate welfare", *An international comparison. The Review of Economics and Statistics*, 79 (2): 201-211. 1997.
- [5] P. Mawson, "Measuring economic Growth in New Zealand" *New Zealand Treasury, Working Paper 02/14*, 2002.
- [6] Organization for Economic Co-Operation and Development (OECD), 1997. *Data and Metadata Reporting and Presentation Handbook*.
- [7] The World Bank, 2015a. [<http://data.worldbank.org/about/dataoverview/methodologies>], accessed 22 April 2015.
- [8] United Nations Statistics Division (UNSD), 2015. *National Accounts Statistics: Analysis of Main Aggregates*, 2013.
- [9] The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), 2015. *STATS BRIEF, STATISTICS DIVISION*, April 2015, Issue No. 07.
- [10] *Measuring Economic Growth in New Zealand (WP 02/14). Working Paper, 2002*, Research and Policy, The Treasury, New Zealand.
- [11] Bangladesh Bank "Annual Report (July 2015-June 2016)", Published by Bangladesh Bank, 2017.
- [12] Bangladesh Bank, *EXPORT RECEIPTS BY COMMODITIES/COUNTRIES*, 2017.
- [13] Bangladesh Bank, *Annual Review of Export Receipt (2015-2016)*.
- [14] K. A. Al Mamun, and H. K. Nath, "Export-led growth in Bangladesh: a time series analysis", *Applied Economics Letters*, Vol. 12, Issues 6, pp. 361 –364. 2005.
- [15] R. Kabir, "Estimating import and export demand function: The case of Bangladesh", *The Bangladesh Development Studies*, 15 (4), 115-127, 1988.
- [16] J. Love and R. Chandra, "Testing export-led growth in Bangladesh in a multivariate VAR framework", *Journal of Asian Economics*, Vol. 15, Issue 6, pp. 1155-1168, 2005.
- [17] Z. Sattar, "Strategy for Export Diversification 2015-2020: Breaking into new markets with new Policy", *Research Institute of Bangladesh*, 2015.
- [18] M. Z. Haider, "Competitiveness of the Bangladesh Ready-made Garment Industry in Major International Markets", *Asia Pacific Trade and Investment Review*, 3 (1), 3-26, 2007, June.
- [19] A. Razzaue & A. Eusuf, "Trade, Development and Poverty Linkage: Case Study of Ready Made Garment Industry in Bangladesh", *Unnayan Shamannay*, 2007, April.
- [20] M. F Shahriar, B. P Banik & M. M. Habib, "A research framework of supply chain management in readymade garments industry of Bangladesh" *International Journal of Business and Economics Research*, 2014, 3 (6-1): 38-44. doi: 10.11648/j.ijber.s.2014030601.16.
- [21] R. Vohra, "Export and economic growth: Further time series evidence from less-developed countries", *International Advances in Economic Research*, 2001, Volume 7, Issue 3, pp 345–350.