

Growth and Significance of RMG Export in Total Export of Bangladesh

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ABSTRACT

The Ready-made garments (RMG) are the major source of export income for Bangladesh. This study is an attempt to measure the change, instability, significance of RMG export to total export and relationship between RMG export and total export of Bangladesh based on secondary data during the period FY1997-98 to FY2016-17 collected from Export Promotion Bureau. Different statistical tools have been used to perform the analysis. The analysis reveals that the RMG export and total export of Bangladesh has increased and total export fully depends on RMG export. The analysis also reveals that the RMG export and total export of Bangladesh are not stable during the study period but its increasing trend is good sign for Bangladesh. Therefore, researcher, policy makers and government should give proper attention to develop technology to increase production of ready-made garments and develop new market to increase ready-made garments export that raises the total export of Bangladesh.

KEYWORDS: Progress; RMG export; Total export; Instability; Growth rate

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1. INTRODUCTION

Export is the largest foreign exchange earnings source of Bangladesh. In FY 2016-17 total export of Bangladesh is 34655.92(in million US dollar) and contribution of RMG export in total export is 81.23% (BGMEA Website).

The RMG industry is the only multi-billion dollar manufacturing and export industry in Bangladesh. Whereas the industry contributed only 0.001 per cent to the country's total export earnings in 1976, its share increased to about 76 percent of those earnings in 2005 & still now. Bangladesh exported garments worth the equivalent of \$6.9 billion in 2005, which was about 2.5 percent of the global total value (\$276 billion) of garment exports. The foreign exchange earnings and employment generation of the RMG sector have been increasing at double –digit rates from year to year (Haider, M. A, 2007).

Currently, there are more than 4,000 RMG firms in Bangladesh. More than 95 percent of those firms are locally owned with the exception of a few foreign firms located in export processing zones(Gonzales,2014).Shirts, T- shirts and trousers are the main woven products and undergarments, socks, stockings, T-shirts, sweaters and other casual and soft garments are the main knit products. Woven Garment products still dominate The share of knit garment products

has been increasing since the early 1990s; such products currently account for more than 40 percent of the country's total RMG export earnings (Hasan, Miah, Rahman &Ullah,2016)). Although various types of garments are manufactured in the country, only a few categories, such as shirts, T shirts, trousers, jackets and sweaters, constitute the major production share (BGMEA website).

1.1. Objectives of the Study

The main objective is to analyze the statistical data related to the Ready-made garments export and total export of Bangladesh.

2. Materials and Methods

Secondary sample data on ready-made garments export and total export for 20 years from 1997-98 to 2016-17 were collected from BGMEA Trade database. The whole period was divided into two period's viz, period I from 1997-98 to 2006-07 and period II from 2007-08 to 2016-17 to compare in ready-made garments export and total export between two periods. To examine the nature of change, instability and degree of relationship between ready-made garments export and total export of Bangladesh, various descriptive statistical tools, such as mean, correlation and co-efficient of variation were used. The t-test, simple linear regression technique and

as semi log growth model were also used to analyze the data. The statistical data analyses were performed by using SPSS program.

3. Regression Analysis

To estimate the parameters, simple linear regression models were fitted to examine the change of total export by the change of RMG export. The model can be expressed as:

$y = \alpha + \beta x + e$ where, $2e \sim N(0, s)$, y is the Total export (in million US dollars), x is the RMG export (in the garment export earnings of the country. million US dollars), α is the intercept and β is the regression coefficient of the model.

4. Measurement of Growth Rate

The growth rates of RMG export and total export were worked out by fitting a semi-log function of the type: $\log y = \alpha + \beta t$, where, y is the RMG export (in million US dollars) or total export (in million us dollars) and t is the time period (in year).

5. Measurement of Instability

An index of inconsistency was computed for examining the nature and degree of trend in RMG export and total export of Bangladesh. The co-efficient of variation (CV) was worked out for RMG export and total export to measure of variability. However, simple CV does not explain properly the trend component inherent in the time series data. Alternatively, the Coefficient of variation around the trend (CVt) rather than co-efficient of variation around the mean (CV) was suggested by Cuddy and Della (1978) as a better measure of variability.

A linear trend $y = \alpha + \beta t + e$ was fitted to the indices of RMG export and total export for the study period and trend coefficient ' β ' was tested for significance. Whenever the trend co-efficient was found significant, the index of instability was constructed as follows:

$$CV_t = (CV) \times \sqrt{1 - R^2}$$

where, $cv = \frac{s}{\bar{x}} \times 100$, \bar{x} and s are the mean and standard deviation of the sample period.

In words, co-efficient of variation (CVt) around the mean was multiplied by the square root of the proportion of the variation, which was unexplained by the trend equation, $y = \alpha + \beta t + e$

6. Results and Discussion

6.1. Change in RMG export and total export of Bangladesh

Export earnings from the Readymade Garments (RMG) increased by 3.59 times during study period and the total export has increased significantly. For taking different initiatives from the government and other authorities concerned the production of RMG products are increasing and thus export earnings from the sector is also increasing gradually (MM Uddin 2017). However From the analysis, it is

evident that there is a significant change in RMG export and Total export of Bangladesh (Table1)

6.2. Relationship between RMG export and total export of Bangladesh

From Table2 it is observed that the total export is strongly positively correlated ($r=1.00$) with RMG export for the whole period and also for the period I and II. For the whole study period the value of r is 1.000 where for period I is 0.999 and for period II is 0.999 and these are highly significant which implies that the increment of RMG export strongly affects the total export to increase.

6.3. Regression Analysis

To see the response of total export of Bangladesh the simple linear regression models we have used. The simple linear regression models were fitted for estimating the response of Total export due to the change of RMG export. Results show that the estimated coefficients of total export are significant during the all periods (whole period, period I and period II). It implies that the total export of Bangladesh has increased by 1.209, 1.324 and 1.172 times during the whole period, period I and period II respectively. Therefore, the total export of Bangladesh has not been increased from the period I to period II (Table 3).

6.4. Growth Rate

For the time series data growth rate is used to see the change in past and allowable hint of change in future. It is found from the analysis that the RMG export for the whole period has increase significantly, and the growth rate of period II is greater than period I and it is significant. Also the growth rate of total export has increase significantly and growth rate of period II is greater than period I and it is significant.

The growth rate of total export of Bangladesh has not increased satisfactorily because Bangladesh has trade deficit (A.K.M. Fazlul Haque Mia, 2018).(Table4)

6.5. Instability

Due to the globalization the RMG export and total export is increasing rapidly. From the analysis we can see that the RMG export and total export of Bangladesh showed the significant variation during study period. The trend is increasing which is good sign for Bangladesh.(Table5)

7. Conclusions

RMG is the highest contributor in terms of both gross and net export earnings. Comparing with other items in Bangladesh, the contribution of RMG in national export earnings is more than 81.23%. From the whole analysis we have seen that the growth rate of RMG export and total export is significant and the total export is positively correlated. So this study may be helpful for policy makers, researcher and government to know the actual condition of RMG export and total export of Bangladesh and it will help them for making the future policy.

Appendix

Table1. Change in RMG export and total export of Bangladesh

Field of Measurement	Mean Value		t-Value	Sig. (two tailed)
	Period-I (1997-98 to 2005-6)	Period-II (2006-7 to 2016-17)		
RMG export (In million US dollar)	5572.2790	20029.1490	-6.696	0.000
Total export (In million US dollar)	7418.9620	25044.2940	-6.895	0.000

Table2. Relationship between RMG export and total export of Bangladesh

Criteria	Value of Correlation(r)	Sig.(two tailed)
RMG export VS Total export	Whole period	1.000
	Period-I	0.999
	Period-II	0.999

Table3. Testing dependency of total export on RMG export of Bangladesh

Period	Constant Value	Reg. Coefficient	t-Value	Sig. (two tailed)
Whole period	759.226	1.209	149.066	0.000
Period-I	40.209298	1.324	87.794291	0.000
Period-II	1562.285	1.172	79.974662	0.000

Table4. Growth rate of RGM export and total export of Bangladesh

Field of Measurement	Measurement Statistics	Growth Rate (%)	Sig.(two tailed)
RMG export	Whole period	12.1	0.000
	Period-I	9.2	0.000
	Period-II	11.6	0.000
Total export	Whole period	11.6	0.000
	Period-I	9.2	0.000
	Period-II	10.8	0.000

Table5. Instability in RMG export and total export of Bangladesh

Field of Measurement	Measurement Statistics	Whole period	Period-I	Period-II
RMG export	CV	68.58	31.89	32.91
	R-square	0.916	.848	.973
	Sig.(two tailed)	0.000	0.000	0.000
	D-W	.269	.560	2.155
	CV around trend line	19.87	12.43	5.40
Total export	CV	65.60	31.73	30.87
	R-square	0.925	.848	.971
	Sig.(two tailed)	0.000	0.000	0.000
	D-W	0.286	.564	1.991
	CV around trend line	17.96	12.37	5.25

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