Journal of Economics, Finance and Management Studies

ISSN (print): 2644-0490, ISSN (online): 2644-0504

Volume 07 Issue 08 August 2024

Article DOI: 10.47191/jefms/v7-i8-06, Impact Factor: 8.044

Page No: 4834-4847

The Relationship between Growth and Quota Restrictions Concerning the Textile and Clothing Industry: A Study on RMG Sector of Bangladesh



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ABSTRACT: The textile and clothing industry plays a significant role in the economy of Bangladesh. At present, the export performance of the readymade garment sector is more than 80% of total exports and hence made about 12% of GDP in Bangladesh. Thus, the development of our country largely depends on this sector, and it is considered as the backbone of our country. As the quota system under the Multi-Fiber Agreement phase had a great impact on the development process of the readymade garment sector in Bangladesh, the aim of this study is to find out the relationship between quota restriction and the growth of the readymade garment sector. For this purpose, the research has covered a period of twenty-four years as sample size, where 12 years has been considered as pre-MFA periods and 12 years as post-MFA period. Though this study is quantitative in nature, Descriptive statistics and Multiple Regression Analysis Techniques have been used to find out the relationship between quota restriction and the growth performance of Bangladesh's textile and clothing industry throughout this study period. At this point, the Multiple Regression Analysis Technique has been used for testing the dependency of Bangladesh RMG export amount on the Annual GDP, Exchange Rate, Employment in Million Workers and No. of garment factories throughout these periods. This regression analysis technique was tested with SPSS software and results showed the most significant factors affecting the export of Bangladesh RMG sector during the Pre and Post MFA periods. The evidence also showed no statistically significant relationship between the quota restriction and the growth of the Readymade Garments sector in Bangladesh. Therefore, by considering the significance of this sector in our economy and for the long run sustainability in this competitive world the textile and clothing industry in Bangladesh must meet the challenges appearing throughout this period.

KEYWORDS: Textile and Clothing industry, RMG Sector, MFA phase, Export, Pre-MFA period, Post-MFA period, Quota Restriction, Annual GDP, Employment in Million Workers, Exchange Rate, Number of Garments Factories.

INTRODUCTION

The Textile and Clothing Industry is the rapidest emerging industrial area of Bangladesh. To make a more market economy the government has attained a huge advancement in equalizing and changing the economy and allowed foreign organizations to invest in Bangladesh. Eventually, Bangladesh is endeavoring to expand the two, its exports and markets. Readymade garments generally is a heterogeneous item market where yarn, fabric, style, material quality, color, brands and so forth make regards. Appropriately, consistent innovation and improvement is a fundamental factor for expanding competitiveness of this industry to survive in the worldwide market.

In Bangladesh, the RMG area holds more than 5000 garments factories at the current time and utilizing more than 12 lack workers according to private statistics, where 85% of the labor force is women. Eventually, according to BGMEA the quantity of garments factories were 4621 in the year 2018-19 in Bangladesh. However, various types of garments or pieces of clothing are made in Bangladesh, still all the readymade garments are arranged into two general classes' where one is woven items and another is knit item. A woven item consolidates Shirts, Jeans and Pants. Then again, knit items integrates Shirt, Polo Shirts, Underpants, Stocks, Stockings and Sweaters. Woven garments actually rule the export income of the country. From BGMEA site, it has seen that bit-

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by-bit knit items production is expanding in significant rate and as of now around 47% of the total clothing export, earning has achieved from knit items.

From the world trade statistical review 2021, it tracks down that persistent with the developing pattern in recent years; China is exporting not so much clothing but rather more textile to the world. It is vital to perceive that China is expecting an unavoidably fundamental part as a textile provider for some, clothing-trading nations in Asia. Assessed through esteem, 47% of Bangladesh's textile imports came from China in 2017, up from 39% in 2005. We noticed comparable patterns in Cambodia, Vietnam, Pakistan, Malaysia, Indonesia, Philippines and Srilanka over a similar period.

Bangladesh is the best spot for textile and clothing industry in view of cheap work force and favorable trade status. Bangladesh has procured nearly \$ 34133.27 million by trading garments items, principally to Europe and the US in the year 2018-19. This is around 82% of total export income of the country and 12% of the Gross domestic product, higher than another industry. After gradually transitioning away from MFA/ATC, challenge in the worldwide textile and clothing business has extended complex circumstance. Thusly, to survive in this extreme competitive market, expanding competitiveness has become significant.

Bangladesh participated in the benefit of quotas until 2005 under the Multi-Fiber Agreement (MFA), a course of action under which advanced nations; particularly the U.S. what's more, EU secure their business sectors by forcing quotas of garments import to safeguard their homegrown business sectors. Developing nations were similarly in danger to import duties. Regardless, several least developed nations for instance Bangladesh, Cambodia, and so on earned a little degree of import tax execution under the Generalized System of Preference (GSP) in the U.S. market and in the EU market where the least develop, nations (LDCs) got duty free access. The execution of quotas, thusly, made a couple of gifts to the LDCs as it to some degree restricted the export of the most competitive manufacturers, for example, China and India as necessary to pay taxes. Consequently, arrangement of MFA has seen as a pivotal time for garments area of Bangladesh. Nearby GSP and duty free access, cheap work advantage has made Bangladesh maybe of the most competitive players on the worldwide garments region. During the MFA time span, Bangladesh has been beating in this industry and developed quickly meeting a large number of worldwide and local demand (Rahman et al., 2004).

Subsequently, toward the elimination of MFA in 2005, the world trade has essentially changed and prompts a change in world employment. Thus, the withdrawal of quota has offered the purchaser an alternative source, for the most efficient and cost-effective suppliers and countries. It has opened the entryway of rigorous worldwide competitions driven by low expenses and new regulation. In this manner, numerous countries dread that another rush of cheap textile and clothing products will flood their markets, compromising their domestic industries, as they are not sufficiently arranged to confront the new difficulties. Accordingly, the stage out of quotas has given clear development to supplier regions. However, it has not shattered the unprotected nations. There are likewise a few nations that expect new product potential opens doors because of a free quota trade environment. Just as, a third arrangement of countries will lose their preferential admittance to the US or EU markets, subsequently confronting higher competitions for their exports to them. A few countries might have the option to keep up with their industry, effectively acclimating to the new circumstance, while other countries might need to forsake theirs and specialize in other sectors.

Thusly, it was expected that after the withdrawal of the quota restriction, the garments area of Bangladesh would be at serious risk. Various specialists battled that after the cancelation of Multi-Fiber Agreement; Bangladesh would lose its competitiveness and appropriately lose the share in the worldwide market. Rashia (2009) experimentally showed that Bangladesh, close by other least developed nations wouldn't have the choice to sustain its garments export growth in the Unified State as well as European Association due to the shortfall of fundamental framework, high-tech in fractures and settlement in the worldwide trade and value chain. In addition, it was in like manner battled that Bangladesh could lose its competitiveness similarly as market share in the worldwide garment value chain in the event that appropriate legitimate activities and courses of action are not taken out right.

Prior Studies and Findings

For conducting, the study many bits of writing had gone through and consequently, the review of relevant bits of writing have fundamentally contended.

Eusuf et al. (2007) made an evaluation concerning RMG industry in both the MRA and post-MFA system and accordingly assisted with figuring out the results toward the finish of the quota system on the Bangladesh economy. In their study both positive and negative improvements in the readymade garments of clothing (RMG) area during the most recent few years of post-MRA system and finds that the solid development pace of Bangladesh's products is reliant to a great extent on the defend measures forced on

China both be EU and USA. Nevertheless, the genuine circumstance will be apparent from the very outset of 2009, when a wide range of limitations will be eliminate from China.

Ahmed (2009), in his assessment of Bangladesh Readymade garment industry showed that Bangladesh's Ready-made Garment industry has developed quickly under the umbrella of multi fiber agreement quotas, with an abundant quantity of low sought after laborers yet without strong local backwards linkages. However, in the US market the prospect of top Bangladesh RMG items is suspicious as China is going toward a defend boycott for a tremendous part of these items. Precisely when those boycotts will cleared out Bangladesh's RMG items export to the USA could decay.

Joarder et al. (2010) exposed that the termination of MFA provoked an adjustment of the country example of trade, which delivered the two champions and disappointments among huge exporters. Albeit the low work cost countries have emerged as gainers, the anticipated significant changes in progress have not occurred. The investigation additionally contradicts the expectation that in the short run, geographic cause and purchaser likings will stay significant in finding choices.

Chaudhary (2011) meant, India has benefited from the MFA progressively transition away from; risks to the open market situation have likewise become dynamic. In addition, the expulsion of the quota system has gotten the strong players moving hard and fast. China and Korea are the most serious threats to India. Absence of capital and innovation has forever been a major obstacle in India. Furthermore, this paper likewise assess the job of FDI in the business and the job of the public authority for advancing the business in India.

Shameek and Shahana (2012) identified India has followed an advancement model not at all like that of the East Asian Economics. While the service area has enrolled exceptional development and contributed fundamentally to India's GDP, the manufacturing area has developed at a relatively more slow speed, yet the general execution of the Indian manufacturing area has inescapable ramifications for different aspect of the economy; employment being one of the central areas of effect. Since this area generated enormous scope work for low and medium skilled laborers, it is basic to foster elements, which will establish a conducive environment for industries to become advance.

Abbas et al. (2013) endeavored to discover various variables, which are essentially influencing company's presentation of textile area in Pakistan for the time 2005-2010, with the objective that the financial exhibition can be ready in commonly talking onfinancial area of Pakistan. In addition, the review discover that the performance of Textile industry is essentially impacted by temporary advantage, size, danger, charge and no-debt tax safeguard.

Rahman et al. (2015) discovered the elimination of quotas in 2005 has brought economic ascent for a couple of arising countries and setback for specific economic aspects. Among the south Asian countries, the post MFA execution of India and Pakistan has been reasonably amazing. Besides, Bangladesh has accomplished an amazing development, especially in low cost work incentive classifications of the RMG sector. In addition, their review showed that the clothing firms simply not work in safeguarded environment rather made dominant movement across products clients and regional market to extend their market position and support their productivity.

Deshpande (2015) made an assessment to secure recollecting what's going on winning in India. Regardless, recollecting that equivalent circumstances get in various countries particularly the emerging countries, it felt, the review can offer enormous course to these countries. Moreover, it additionally uncovered that the worldwide trade circumstances concerning readymade garments send out since have modified over the period post MFA, with Bangladesh developing as the principal exporter of readymade garments.

Hasan et al. (2016) exposed, RMG is the most elevated patron as far as both gross and net export incomes. Opposing the diverse things in Bangladesh, the commitment of readymade garments in local export procuring is over 76%. This has come about in view of the backward linkage business which has developed during the long run assisted the area with having the higher worth expansion and thusly a lot higher net retention for dependability. Notwithstanding, unwinding of Rules of Origin has sped up the export development.

Gupta and Khan (2016) in their review depicted Imports have expanded with similar speed of exports; this is one more truth to comprehend that imports invalidate the impact of export benefits. Along these lines, India and other developed nation's hall should drive the created nations to carry out the rigidly multilateral trading method and the primary of most favored country.

Consequently, the "Export-Quota System" in trading readymade garments (RMG) items assumed a critical part in the achievement of the industry in Bangladesh. In this way, the stage out of export quota agreement plan from the start of 2005 has raised the issue of competitiveness seeing Bangladesh textile and clothing industry as a main concern point. Thus, the competitiveness issue should tended to with unique consideration as the drawn out sustainability of the industry relies on its achievement (Haider, 2007).

Objectives of the Studies

The overall objectives of this research work is to expose the relationship between growth performance and quota restrictions of the textile and clothing industry in Bangladesh and thereby make a comparison between Pre and Post MFA- periods. In so doing, it attempts to analyze the export performance of readymade garment sector and the factors affecting the growth concerning this sector and consequently, reveal the prevailing real status of textile and clothing industry in Bangladesh.

Hypothesis of the Study

- **H0** –There is no significant relationship between the Growth and Quota Restrictions concerning The Textile and Clothing industry in Bangladesh.
- **H1** There is a significant relationship between the Growth and Quota Restrictions concerning The Textile and Clothing industry in Bangladesh.

RESEARCH METHODOLOGY

This study is quantitative in nature and based on secondary data. The analysis has covered a period of 24 years.12 years before MFA period and 12 years after MFA period, since the quota abolition in 2005. In this research study, the multiple regression model has been used to analysis the relationship among the Bangladesh's RMG export and the factors affecting its export such as No of garments factories, Annual GDP, Exchange Rates, Employment. At this point, dependent variable is the export of RMG and conversely, No. of Garment Factories, Annual GDP, Exchange Rates, Employment in Million Workers have considered as predictors or independent variables.

Relationship among the Bangladesh RMG Export amounts with Annual GDP, Exchange Rate, Employments in Million Workers and No. of Garments Factories

Bangladesh is a rapidly developing economy driven by the readymade garments (RMG) industry that has advanced the country in the world through the motto 'Made in Bangladesh'. The RMG business has become one of the survival lines of Bangladesh economy through sharing a significant part of the country's export income. This region has a more noteworthy perspective than some other area as far as development and foreign trade enhancement. It industriously commits to the domestic economy by setting out liberal work entryways open and decreasing poverty through monetary development. Since its beginning, unequivocally during the most recent years, the RMG business contributed generally through formation of real framework that is revealed by 4222, RMG units close by the improvement of human resources as around 4 million personnel are clearly connected with this industry. Other than, it has contributed enormously over empowering women as practically 90% of its labor force is female which positioned the most significant in South-East Asia. To the extent that monetary idea, RMG holds around 14.07 percent of the Gross domestic product of Bangladesh nearby 81% of the overall export income (Islam et al., 2016). Besides, at present Bangladesh is the fourth biggest exporter to USA and in 2016 Bangladesh held the second spot in manufacturing garments recently after China. These days the general impact of the readymade garments industry is beyond any doubt, one of the fundamental social and economic advances in contemporary Bangladesh.

In this assessment, the descriptive statistics has performed to portray or sum up the attributes and consequently can depict and comprehend the features of this data index by giving the short listings about the sample and measures of the data. Right now, descriptive statistics are separated into measure of central tendency and measure of variability. In this way, measure of central tendency has incorporated the main, median and mode while measure of variability included standard deviation, variance, minimum and maximum variables, kurtosis and skewness:

Table 1: Descriptive Statistics of Bangladesh RMG Export, Annual GDP, Exchange Rates, Employments and Garments Factories

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	statistic	Statistic	Statistic	Statistic	statistic				
						statistic	Std.	statistic	Std.
							Error		Error
RMG	24	2547.13	25491.40	10265.933	7496.28122	.938	.512	462	.992
				0					
GDP	24	45921.00	184013.00	86368.250	41535.89178	1.073	.512	.098	.992
				0					
ER	24	.01	.02	.0173	.00396	.633	.512	795	.992

GF	24	2353.00	5876.00	4052.6000	986.45748	074	.512	718	.992
EW	24	1.29	4.00	2.5445	1.02635	.389	.512	-1.572	.992
Valid N	24								
(listwise)									

Data Source: Export Promotion Bureau, Compiled by BGMEA

The descriptive statistics concerning the variables of this study, which denoted through the Table.1, identified that the RMG export amount of Bangladesh, which is dependent variable here, represents the maximum and minimum values of 25491.40 and 2547.13 respectfully. At this time, mean value is 10265.93 and standard deviation is 7496.28. Therefore, it signifies that the data points about the RMG export amount are tend to be close to the mean value. Furthermore, for Skewness and kurtosis statistics as the rule to remember is that if either of these values for skewness and kurtosis are less than \pm 1, then the distribution of the data set is not outside the range of the normality. In these statistics, both the values of skewness and kurtosis regarding the RMG exports amount are less than \pm 1. Therefore, It is concluded that data set of RMG export amounts is normally distributed.

As well, it has also observed, the mean values and standard values of Annual GDP, Exchange Rate, Garments Factories and Employment in Million Workers, which are independent variables for this analysis, detected that the data points are spread out over an acceptable range. Likewise, the normal value range of skewness fall between - 3 and + 3 and Kurtosis is appropriate from a range of -10 to +10. Therefore, the skewness and kurtosis values of these four independent variables represent that the data sets about Annual GDP, Exchange Rate, Garments Factories and Employment in Million Workers, are also normally distributed, as the distributions of these data sets are not outside the range of normality.

Testing dependency of Bangladesh RMG Export Amount on the Annual GDP, Exchange Rates, Employments in Million Workers and No. of Garments Factories

In this study, the multiple regression analysis technique has performed by considering the Readymade Garments Export amount of Bangladesh as dependent variable and Annual GDP, Exchange Rate, Number of Garments Factories and Employment in Million Workers as independent variables. The regression analysis has conducted through the SPSS software based on 24 years annual data. Besides, in this study 12 years before the year 2005, when the Multi-Fiber Agreement (MFA) was withdrawn has considered as Pre MFA periods and 12 years after the year 2005 has considered as Post MFA period.

(a) Pre MFA-Analysis

For Pre –MFA period, the financial years 1993-94 to 2004-05 has considered for this analysis. As well as, put the data of these twelve years RMG Export amount and so the relevant Annual GDP, Exchange Rate, No. of Garments Factories and Employment in Million Workers in the SPSS software for the regression analysis and found the following results:

Model Summary

					Change Statistics					
Model	R	R Square	Adjusted	Std. error of	R Square	F	df1	df2	Sig.	F
			R Square	the Estimate	change	Change			Change	e
1	.995ª	.991	.986	173.79844	.991	188.536	4	7	.000	

a. Predictors: (Constant), No. of Garment Factories, Annual GDP, Employment in Million Workers, Exchange Rates

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22779573.957	4	5694893.489	188.536	0.000 ^b
	Residual	211441.281	7	30205.897		
	Total	22991015.238	11			

a. Predictors: (Constant), No. of Garment Factories, Annual GDP, Employment in Million Workers, Exchange Rates

b. Dependent variable: Export of RMG

Coefficients ^a

		Unstandardize	ed	Standardized			95% Confider	
		Coefficients	T	Coefficients			interval for B	
							Lower	Upper
Model		В	Std. Error	Beta	t	Sig.	Bound	Bound
1	(Constant)	-11357.864	4468.686		-2.542	.039	-21924.627	-791.102
	Annual GDP	.039	.021	.293	1.823	.111	011	.089
	Exchange Rates	271339.380	134630.03 8	.605	2.015	.084	-47010.072	589688.833
	Employment in Million Workers	-896.474	971.930	230	922	.039	-3194.724	1401.776
	No. of Garments Factories	2.958	1.169	1.522	2.530	.387	.194	5.722

a. Dependent Variable: Export of RMG

When the regression results have been assessed it observed that R-Square, which is the proportion of variance in the reliant variable (RMG export), can be anticipated from the independent variables (Yearly Gross domestic product, Exchange Rate, Employment in Million Workers and the Number of Garments Factories). The esteem shows that 99% of the variance in RMG export can be anticipated from the factors; Yearly Gross domestic product, Exchange Rate, Employment in Million Workers and Number of Garments Factories. As R-Square is known as the coefficient of assurance thus, this is a general proportion of the strength of affiliation and doesn't reflect the degree to which a specific independent variable is related with the dependent variable.

As of now, the F - values that is the Mean Square Regression (5694893.489) divided by the Mean Square Residual (30205.897), yielding F= 188.536. The P-values related with this F values is very small (0.000). These values were utilized to find out, whether the independent variables dependably can predict the dependent variable. Here, the P-values is contrasted with the alpha level (typically 0.05) and in the event that little then it can reasoned that the independent variables dependably can predict the dependent variable. In this manner, it has seen that the gathering of variables; Yearly Gross domestic product, Exchange Rate, Employment in Million Workers and Number of Garments Factories can be utilized to dependably anticipate RMG export amount (the dependent variable). If the P-values were more noticeable than 0.05, it might be say that the group of independent variable doesn't show a really basic relationship with the dependent elements or that the gathering of free factor doesn't reliably predict the dependent variable. What's more, it should be seen that this is a for the most part basic test assessing whether the group of factors used together constantly predict the dependent variable.

Generally, the t- values and two-tailed p- value utilized in testing the null hypothesis that the coefficient/parameter is zero. Here, as we have utilized a 2-followed test, in this way, we ought to contrast every p-value with our preselected value of alpha. Coefficients having p-values less than alpha are statistically significant. In this investigation, the coefficient table addresses that; The coefficient for Yearly Gross domestic product (.039), isn't statistically significant at the 0.05 level since its p-value is 0.111, which is greater than 0.05. Likewise, the coefficient for Exchange Rate (271339.380) and the coefficient for Employment in Million Workers (- 896.474) are not also statistically significant as different from zero utilizing alpha of 0.05 on the grounds that its p-values are bigger than 0.05. Then again, the coefficient for Garment Factories (2.958) is measurably significant on the grounds that its p-value of 0.039 certainly less than 0.05.

(b) Post MFA Period

For the Post –MFA period, the financial years 2005-06 to 2016-17 has considered for this analysis. Thereby, considered the data of these twelve years RMG Export amount with the relevant Annual GDP, Exchange Rate, Number of Garments Factories and Employment in Million Workers to realize the relationship among the dependent variable with the independent variables and the accompanying outcomes were derived:

Model Summary

					Change Statistics				
Model	R	R	Adjusted R	Std. error of	R Square	F	df1	df2	Sig. F
		Square	Square	the Estimate	change	Change			Change
1	.984ª	.969	.951	1645.99495	.969	54.660	4	7	.000

a. Predictors: (Constant). No. of Garment Factories. Annual GDP. Exchange Rates. Employment in Million Workers

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	592365866.304	4	148091466.576	54.660	0.000 ^b
	Residual	18965095.544	7	2709299.363		
	Total	611330961.848	11			

a. Predictors: (Constant), No. of Garment Factories, Annual GDP, Exchange Rates, Employment in Million Workers.

Coefficients^a

		Unstandardized	d	Standardized			95% Confidence	e
		Coefficients		Coefficients			Interval for B	
Model		В	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	27400.890	21822.234		1.256	.250	-24200.494	79002.275
	Annual GDP	.077	.027	.547	2.896	.023	.014	.140
	Exchange	-1550775.739	1033427.249	266	-1.501	.177	-3994442.874	892891.396
	Rates							
	Employment	2467.991	1797.338	.221	1.373	.212	-1782.038	6718.019
	in Million							
	Workers							
	No. of	-1.452	1.474	103	985	.357	-4.938	2.033
	Garments							
	Factories							

a. Dependent Variable: Export of RMG

While, we evaluate the regression results for the post MFA period it is detected that the value of R-Square is 96%, which represents the extent of variances in the reliant variable, which can be anticipated from the independent variables. This value specifies that 96% of the variance in RMG Export amount (dependent variable) can be projected from the Annual GDP, Exchange Rate, Employment in Million Workers and No. of Garments Factories (independent variables). However, as R-Square is known as the coefficient of assurance, hence this is a general proportion of the strength of affiliation yet doesn't reveal the degree to which a specific independent variable is related with the reliant variable.

At this time, the F–values which is the Mean Square Regression (148091466.576) divided by the Mean Square Residual (2709299.363), yielding F=54.660. Here, as the P-value associated with this F values is very small (0.000), therefore, it is observed that the group of variables; Annual GDP, Exchange Rate, Employments in million workers and Number of Garments Factories could be used to reliably predict RMG Exports amount (the dependent variables).

In this study, as we had used a two tailed test and therefore, we have compared each p-values to the preselected value of alpha and coefficient having p-values less than alpha are statistically significant. Hence, as alpha to be 0.05 has chosen, coefficient having p-value of 0.05 or less would be statistically significant that is, it can reject the null hypothesis and say that the coefficient is significantly different from zero. At this point, the coefficient table represents that; the coefficient for Annual Gross Domestic Product (.077) is statistically significantly unique in relation to 0 utilizing alpha of 0.05 since its p- values is 0.023, which is smaller than 0.05. Conversely, the coefficient for Exchange Rate, Employment in Million workers and the coefficient for Garment Factories are not measurably significant at the 0.05 level since it's p values are certainly more than 0.05.

b. Dependent variable: Export of RMG

(c) Overall analysis (Pre and Post periods)

As well, the Pre and Post-MFA periods have considered together which has made a general analysis for these twenty four (24) financial years 1993-94 to 2016-17. Consequently, put the related information of these 24 years RMG export figure as the dependent variable and as needs be the connected Yearly Gross domestic product, Exchange Rate, Number of Garments Factories and Employment in Million Workers as independent variables. Hence, the associated tables were found as output results:

Model Summary

					Change Statistics				
		R	Adjusted R	Std. error of	R Square	F			Sig. F
Model	R	Square	Square	the Estimate	change	Change	df1	df2	Change
1	.993ª	.985	.982	1194.07745	.985	316.268	4	19	.000

a. Predictors: (Constant), No. of Garment Factories, Annual GDP, Exchange Rates. Employment in Million Workers

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1803763584.553	4	45094896.138	316.268	0.000 ^b
	Residual	27090598.402	19	1425820.969		
	Total	1830854182.955	23			

a. Predictors: (Constant), No. of Garment Factories, Annual GDP, Exchange Rates, Employment in Million Workers.

Coefficients^a

		Unstandardiz	ed	Standardized			95% Confiden	ce
		Coefficients		Coefficients			Interval for B	
Model		В	Std. Error	Beta	t	Sig.	Lower	Upper
							Bound	Bound
1	(Constant)	-1495.071	7769.535		192	.849	-22311.746	4179.443
	Annual GDP	.096	.016	.614	5.992	.000	.122	.222
	Exchange	-73516.263	240626.34	037	306	.763	-325141.742	479091.57
	Rates		8					5
	Employment	3811.360	1055.538	.480	3.611	.002	-2647.962	2656.618
	in Million							
	Workers							
	No. of	-1.210	.992	146	-1.220	.237	-1.135	2.671
	Garments							
	Factories							

a. Dependent Variable: Export of RMG

As the regression results have evaluated for both periods specifically, for twenty-four years, the R-Square value indicates that 98% of the variance in RMG Export could be predicted from the variables; Annual GDP, Exchange Rate, Employment in Million Workers and No. of Garments Factories.

Presently, the F –values that is the Mean Square Regression (45094896.138) divided by the Mean Square Residual (1425820.969), yielding F=316.268 and the P-values associated with this F values is very small (0.000). Therefore, it resolved that the group of independent variables; Annual GDP, Exchange Rate, Employments in million workers and Number of Garments Factories could be used to dependably predict RMG Exports amount (the dependent variable).

At this time, a two-tailed test has used so; we could compare each p-value to our preselected value of alpha. It should be mentioned here that if alpha to be 0.05 has chosen, coefficient having p-value of 0.05 or less would be statistically significant. In this study, the coefficient table aimed at whole period that means for twenty-four years together revealed that; The coefficient

b. Dependent variable: Export of RMG.

for Annual GDP (.096) and the coefficient for Employment in Million Workers (3811.360) are statistically significant at the 0.05 level since, its p-values are 0.000 and 0.002 respectively which are absolutely less than 0.05. Conversely, as the coefficient for Exchange Rate and Garment Factories are not statistically significant because its p-values are definitely more than 0.05.

(d) Pre and Post Periods as a Dummy Variable

Additionally, this study considered the Pre-Post MFA periods as a dummy variable, where Pre Period is the financial year 1993-94 to 2004-05 as well as, Post Period is the financial year 2005-06 to 2016-17. Accordingly, the relevant data of these periods concerning the RMG export have put as the dependent variable, along with Annual GDP, Exchange Rate, No. of Garments Factories and Employment in Million Workers as independent variables for the regression analysis considering the Pre Periods as 0 and Post Periods as 1 and consequently get the following results:

Model Summary

						Change Statistics				
		R	Adjusted R	Std. error of	R Square	F			Sig. F	
Model	R	Square	Square	the Estimate	change	Change	df1	df2	Change	
1	.993ª	.986	.982	1210.90938	.986	246.124	5	18	.000	

a. Predictors: (Constant), Dummy, Annual GDP, No. of Garments Factories, Exchange Rates Employment in Million Workers.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1804460755.339	5	360892151.068	246.124	0.000 ^b
	Residual	26393427.616	18	1466301.534		
	Total	1830854182.955	23			

a. Dependent Variable: Export of RMG

Coefficients^a

		Unstandardized		Standardized	zed		95% Confidence	
		Coefficients		Coefficients			Interval for B	
Model		В	Std. Error	Beta	t	Sig.	Lower	Upper
							Bound	Bound
1	(Constant)	-1449.154	7879.337		184	.856	-18003.028	15104.720
	Annual GDP	.097	.016	.622	5.948	.000	.063	.131
	Exchange	-59647.641	244845.749	030	244	.810	-574049.472	454754.191
	Rates							
	Employment	3507.815	1157.403	.441	3.031	.077	1076.202	5939.429
	in Million							
	Workers							
	No. of	1.212	1.006	146	-1.205	.244	-3.326	.902
	Garments	1.212	1.000	140	-1.203	.244	3.320	.502
	Factories							
	Dummy	745.926	1081.777	.043	.690	.499	-1526.80	3018.655

a. Dependent Variable: Export of RMG

b. Predictors: (Constant), Dummy, Annual GDP, No. of Garments Factories, Exchange Rates, Employment in Million Workers.

Whereas, the regression outcomes have evaluated considering Pre-Post periods as a dummy variable, it observed that the R-square is 0.986. This value indicates that 98% of the variance in RMG Export could be projected from the variables; Annual GDP, Exchange Rate, Employment in Million Workers and No. of Garments Factories of Bangladesh. Generally, the R- Square is termed as the coefficient of determination; therefore, this is an overall measure of the strength of association however, it does not reflect the extent to which any particular independent variable is associated with the dependent variable.

Currently, the F –values is the Mean Square Regression (360892151.068) divided by the Mean Square Residual (1466301.534) and thus yielding the value of F= 246.124. Here, the P-value associated with this F value is very small (0.000). In this analysis, it also observed that the group of independent variables Annual GDP, Exchange Rate, Employments in million workers and Number of Garments Factories could use to reliably predict RMG Exports amount (the dependent variable).

As the two-tailed test has also used here, so it could compare each p-value with the preselected value of alpha and accordingly it ought to be notice that Coefficients having p-values less than alpha are statistically significant. Like this, if alpha to be 0.05 has selected, coefficient having p-value of 0.05 or less would be statistically significant. That is, it can reject the null hypothesis and say that the coefficient is essentially not reasonably the same as zero.

As a result, the coefficient table aimed at the Pre and Post time periods as a dummy variable indicated that; the coefficient for Annual GDP (.097) and the coefficient for Employment in Million Workers (3507.815) are statistically significant at the 0.05 level since its p-value are absolutely less than 0.05. However, the coefficient for Exchange Rate (-59647.641) and the coefficient for Garment factories (-1.212) are not statistically significant because its p-values are greater than 0.05. Finally, the coefficient for Dummy variable (745.926) is not statistically significant different from 0 level as its p-value of 0.499 is obviously larger than 0.05.

Findings of the study

In this research work, we have noticed the development of RMG area, which has a vital commitment to the Bangladesh economy and for this, 24 years has considered as the review period. In this analysis, the dependency of Bangladesh Readymade Garments (RMG) Export on the Annual GDP, Exchange Rates, Employment in Million Workers and No. of Garments Factories have been reflected over this period; where, Financial year 1993-1994 to 2004-2005 has measured as Pre MFA period and financial year 2005-2006 to 2016-2017 as Post MFA period. Accordingly, the important findings/contributions of this study can be pointed out in the following ways:

- I. The dependency of Bangladesh RMG Export on the Annual GDP, Exchange Rates, Employment in Million Workers and No. of Garments Factories, which has tested through regression analysis, represents that there is no measurably significant connection between Bangladesh RMG Export amount with Annual GDP, Exchange Rate and Employment in Million Workers during the Pre MFA period. In contrast, we observed a statistically significant Relationship between Bangladesh RMG Export amounts with No. of Garment Factories for the duration of Pre MFA period (1993-1994 to 2004-2005).
- II. For the Post MFA period, that means from 2005-2006 to 2016-2017 it observed that though there is a statistically significant connection between Bangladesh RMG exports amount with Annual GDP but there is no measurably significant connection between Bangladesh RMG Export amount with Exchange Rate, Employment in Million Workers and No. of Garments Factories.
- III. Additionally, when the Pre and Post MFA periods be measured together that has made an overall analysis for these twenty four years it has detected that there is a statistically significant connection between Bangladesh RMG exports amount with Annual GDP and Employment in Million Workers. Conversely, there is no measurably significant connection between Bangladesh RMG Export amount with Exchange Rate and No. of Garments Factories.
- IV. Finally, considering the Pre and Post MFA periods as a dummy variable in this research work, it also detected, there is correspondingly a statistically significant association among Bangladesh RMG Export amounts with Annual GDP and Employment in Million Workers. Contrariwise, there is no statistically significant connection among Bangladesh RMG Export amount with Exchange Rate and No. of Garments Factories. Thus, dummy variable reveals that it has no significance on the Bangladesh RMG Export amount in this analysis.

RESULTS OF THE HYPOTHESES

This study intended to notice the impact of quota withdrawn under the Multi-Fiber Arrangement (MFA) stage has on the export performance of Bangladesh Textile and Clothing Industry during Pre and Post MFA periods and accordingly, find out whether there was any significant relationship between the growth and quota restrictions concerning this industry in Bangladesh. The results of the Hypotheses signified that:

Table 2: Results of Hypotheses

H	There is no significant relationship between the growth and quota restrictions	Accepted
	concerning the textile and clothing industry in Bangladesh over this study period.	
H	There is significant relationship between the growth and quota restrictions concerning the textile and clothing industry in Bangladesh over this study period.	Rejected

RECOMMENDATIONS

The Readymade garments sector, which is a 40 years old industry, has started its journey without a proper plan in Bangladesh since 1980's. However, within a short span of time the export of this sector became prominent for the development of Bangladesh. At this point, the MFA phase, which worked with the development of RMG sector in many developing countries like Bangladesh, was lifted in January 2005. As a result, there have been a great deal of concern for the adverse impact of MFA quotas withdrawal on Bangladesh's economic growth, as Bangladesh's export earnings are predominantly overwhelmed by the performance of the RMG industry. However, this study revealed that there is no statistically significant relationship between the quota restriction and growth of Readymade Garments sector in Bangladesh. Therefore, for the long run sustainability in this competitive world the textile and clothing industry of Bangladesh must meet the following challenges facing in the post MFA periods:

- (i) Bangladesh has to expand the market share through product quality, product innovations, product diversifications and various marketing strategies should adopted as an obligatory strategy.
- (ii) Bangladesh has to be skilled in information technology and other technologies to meet the challenges in post MFA periods and thereby, her digital infrastructure should be more stable and adequate.
- (iii) Bangladesh should also emphasis on her infrastructure development, specifically the port facilities which is considered as a prerequisite for the investors to invest.
- (iv) Bangladesh needs to ensure steady supply of power and energy, which are pre-requisitions for sustainable and profitable industry. Aside from establishing new plant, government can support environmentally friendly power energy or solar panels in a subsidized rate.
- (v) Bangladesh needs to expand productivity through Research and Training. Just Cheap labor will not be competitive advantage in future. Alongside cheap labor, efficiency and productivity should increase. Therefore, it is essential for Bangladesh to take the initiatives for developing skills and proficiency of workers through investment in education and training.
- (vi) Bangladesh should try to ensure good governance through authentic monitoring system. Simultaneously, the wages of the workers must increase in Bangladesh, as a loyal worker can be more productive and make the industry more sustainable.
- (vii) As the textile and clothing, industry of Bangladesh has endured a lot because of political unsteadiness, and so political crisis has forced a significant test to this sector. Therefore, all political activities should kept beside the business activities. For this, mainstream political involvement other than trade union of factory workers ought to be controlled.
- (viii) The textile and clothing industry of Bangladesh should enjoy the tax benefit as it is individually holding over 80% of the export earnings for the country. Therefore, the government ought to proceed with the tax benefit on RMG export income essentially for the following years.
- (ix) Bangladesh has to establish a reliable business network between the Western and European belts and accordingly have to build strategically good relations with their neighbors.
- (x) The Textile and Clothing industry of Bangladesh needs more experts that are talented. Most importantly, it should hired international academics as advocates and negotiators with international buyers for sustainable business.
- (xi) As Bangladesh is moving on to speed up economic development and is getting more coordinated with the worldwide market, it is additionally need to comply with global work regulations and guaranteeing safety standards in working circumstances and conditions, especially in manufacturing and should be ecologically compliant. In reality, Green economic transformation is pivotal for a sustainable growth.

Thus, Bangladesh may possibly be achieving the core competencies in the global dimensions to make a positive response for strengthen foreign exchange reserve and hence be able to achieve a favorable balance of trade.

CONCLUSION

The Readymade garments sector, which is a 40 years old industry, has started its journey without a proper plan in Bangladesh since 1980's. However, within a short span of time the export of this sector became prominent for the development of Bangladesh. At this point, the MFA phase, which worked with the development of RMG sector in many developing countries like Bangladesh, was lifted in January 2005. As a result, there have been a great deal of concern for the adverse impact of MFA quotas withdrawal on Bangladesh's economic growth, as Bangladesh's export earnings are predominantly overwhelmed by the performance of the RMG business. Consequently, the vital information and discoveries of this study uncovered that the commitment of RMG export to our economy keep on working on even after the withdrawal of multi fiber agreement. In addition, in this research work, it has detected that there is correspondingly a statistically significant relationship among Bangladesh RMG Export amounts with Annual GDP and Employment in Million Workers. Conversely, there is no statistically significant relationship among Bangladesh RMG Export amount with Exchange Rate and Number of Garments Factories during this study period. Moreover, considering the pre and post MFA periods, as a dummy variable it observed that quota withdrawn has no statistically significant influence on the Readymade Garments export amount of Bangladesh. Thusly, for the long run sustainability in this competitive world the RMG area of Bangladesh ought to address the approaching troubles thoroughly searching in the post MFA periods. Hence, the commitment of this area to our economy could be development consistently.

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