Volume: 7, Issue: 1
Page: 34-52
2022

International Journal of Science and Business

Journal homepage: ijsab.com/ijsb

Impact of Everything But Arms (EBA) on the Dhaka Stock Exchange

Dr. Md. Rayhanul Islam & Professor Huang Xiaoling

Abstract

This research has contributed to the impact and association of Everything But Arms Scheme, Export to EU market from Bangladesh, Foreign Exchange Reserve of Bangladesh and Dhaka Stock Exchange. Here, data are secondary and collected from the authentic sources such as World Bank, Bangladesh Bank and Dhaka Stock Exchange. Export of Bangladesh of the year 2000 and 2015 of 171 destinations are used as Panel data whereas time series data of from January, 1986 to December, 2017. Difference-in-Difference (DID) and Error Correction Econometrics Methods have been used for analyzing the panel and time series data respectively. Later on, impact of Export via Foreign Exchange Reserve on Market Capitalization of Stock Exchange is checked. Appropriate econometric model has been selected based on Unit Root and Gregory and Hansen Test. Justification the accuracy of result has also been checked using econometric test like Heteroskedasticity, Multicollinearity, Durbin-Watson, Breusch-Godfrey LM, White and Cumulative Summation. Reliability analysis shows that EBA is responsible for enhancement of 97% export to EU market which raised 58% of export as a whole. This enhancement is associated with Foreign Exchange Reserve by 23%; the contribution of EBA on GDP and employment is 7.28% and 2.66 million respectively. This research shows the duration of adjustment factor for return to equilibrium which is 10.30% in a month; Foreign Exchange Reserve has positive impact on the capitalization of DSE in long run. The overall impact of Everything But Arms (EBA) on Market Capitalization of Dhaka Stock Exchange is 72.18% in the same direction.

IJSB
Accepted 03 January2022
Published 14 January 2022
DOI: 10.5281/zenodo.5850286

Keywords: *Everything But Arms, Least Developed Countries, Most Favored Nations, Difference-in-Difference, Error Correction Model, Ready-Made Garments, Multi-Fiber Arrangements.*

About Author (s)

Dr. Md. Rayhanul Islam (Corresponding author); Deputy General Manager, Bangladesh Bank, Dhaka.

Professor Huang Xiaoling, School of International Trade and Economics, University of International Business and Economics (UIBE), Beijing, China.

Introduction

European Union (EU) introduced a special open-ended scheme under which all LDCs, for their all types of commodities but arms and ammunition, have access to their markets as duty free quota free from 2001 naming EBA which is nothing but a type of Generalized System of Preference (GSP) in respect to terms and conditions. First of all, we evaluate the impact of policy intervention (EBA) on export of Bangladesh, using Difference in Difference (DID) model and result obtained to be justified by Propensity Score Matching (PSM) of econometrics. In the second part, impact of Foreign Exchange Reserve on Market Capitalization of Stock Exchange is to be measured. By taking the ratio between Export and Foreign Exchange Reserve, two parts of analyses have been linked with each other. Finally, we find out the impact of EBA on Dhaka Stock Exchange (DSE).

The equation can be written as: $\boldsymbol{X = f(EBA)}$, (1.1)

Where, X=Export and EBA is Policy

This study employs panel data difference-in-differences and propensity score matching estimations techniques to analysis the impact of EBA on export growth as well as the impact of export and foreign exchange reserve on market capitalization of Dhaka Stock Exchange of Bangladesh. No previous study has been conducted using all well accepted econometric estimation tools and linkage of EBA with export and equity market of Bangladesh. Footing on the comparative advantages position Bangladesh achieved a tremendous average export growth in European market since inception of EBA facility. Export value in this market increased to USD 21.33billion (out of 36.67 billion of total export, i.e, 58.17%) in 2017-18 from USD 1.74 billion in 2001 (out of 5.73 billion of total export, i,e.30.36%). In policy perspective, this study will contribute to quantify the impact of a policy to achieve the macroeconomic variables such as current accounts, foreign currency loans, maintaining sufficient foreign exchange reserve, stable and pro-export exchange rate, wide and depth base of stock exchange, etc. which helps to formulate appropriate policy for the upcoming days. This analysis will also help the policymakers to better understand on new and different dimensions of upcoming challenges in the area of trade and finance as the economy is going to attain middle income status. During 2018-19 the economy earned 84% (USD 33.35 billion) out of total export (USD 40.43 billion) of which 66% (USD 26.68 billion) are earned from EU market.

Review of literature

Chad and Meredith (2010) worked to find out impact of raising import duty by United Stated and European Union on the Chinese export but no proof that due to enhancement of tax rate Chinese exports change the destination but little evidence of chilling effect exist. Taslim (2007) checked the impact of duty exemption, quota restriction, subsidy, duty draw back on the Ready Made Garments on Bangladesh and found that this facility can protect or can make competitive the business entity for a transitional period. But these can not a long run strategy rather strong domestic supply chain can protect the firm for LDCs. Anca (2011) sought out the impact of buyer-seller relationship on international trade and her findings is that face to face meeting between buyer and seller build up a warm relationship which offset many hindrance. Rudema and Mayda (2009) opine that multinational mechanism is a design problem for voluntary participation and also found negotiation among producer/suppliers control the price of dealing and greater concentration which is directly related to reduction of tariff. Demidova et al (2012) studied on Ready Made Garments with firm level data of Bangladesh. Considering presence of heterogeneity, market specific demand shocks they found that developed countries are less liberal due to rules of origin; the firms who are dependent on U.S. market will not survive in the competition of WTO era. Seyoum (2007) finds due to WTO lower price is the key for abundance of Chinese products which also increased unemployment in U.S. market and

provoked to shift their plant to Chinese markets to survive. Other producers of Latin America, Africa, Caribbean and Asian except China, experience intense competition and lost their market share to China. On lifting quota facility by U.S.A. from 2002 Chinese goods jump the U.S. market share from 9% to 65% because of 50 percent less price in compare to before. Market share of Caribbean countries dropped from 13% to 3%. Buono and Lalanne (2012) found that reduction of tariff on French export is very small for the firm decision and to enter a new destination mainly depend on imperative. Haque et al. (2017) examine the debate capital gain vs. dividend in the context of Dhaka Stock Exchange and found that qualitative findings as capital gain is more preferable over dividend. Lee (2013) evaluate the impact of real exchange rate of Hong Kong dollar on Hong Kong Stock Exchange and found that REX and HSI are strongly related to each other in long-run; Granger causality test tells that causal relation exits from RMB to HSI but not reverse direction. Patanel et al. (2017) found Euro-USD exchange rate is reference variables like oil and gold prices because prices of these indicates where the economy is going to stagnation or not.

Impact of EBA on export:

3.1 Data Sources:

We use the export data of Bangladesh of 170 countries in the U.S. Dollar in Million for the years of 2000 and 2015 in the econometrics methods of Difference-in-Difference model to find out the treatment effect of EBA. Since March 2001, Everything But Arms (EBA) enacted, for the reason we have chosen the year of 2000, just before the treatment and data of 2015, the source is WITS, IMF, CEIC, Bangladesh Bank. Dichotomous variable '1' and '0' are chosen for the year of 2015 and 2000 respectively. In the case of treatment dummy '1' is putted for the 28 countries of European Union and '0' for all other 143 countries in the world. The parameter of interest is the interaction term of the above mentioned two dichotomous variables. However, there are some control variables are included in the model to make the model more realistic and check their effect on exports from Bangladesh. These variables increased the R-squared (by reducing the standard error). The control variables are Gross Domestic Product (GDP), Savings as a percentage of GDP, Population, Poverty rate, unemployment rate. As per economic theory GDP and population have positive impact on their import because both variables play vital role to enhance consumption level. On the other hand, Savings, Poverty and unemployment are responsible to reduce consumption by influences import negatively. In the second part in our analysis the frequency of the data set is monthly for the period from January, 1986 to December, 2017.

Table 11: Correlation matrix among the control variables

	Inflation	Saving	Poverty	Unemployment	GDP	Population
Inflation	1.0000					
Saving Rate	-0.1025	1.0000				
Poverty	0.1426	-0.3653	1.0000			
Unemployment	0.0198	-0.0163	0.0899	1.0000		
GDP	-0.0327	0.1392	-0.1673	-0.0990	1.0000	
Population	-0.0119	0.1483	-0.0727	-0.0996	0.6794	1.0000

Econometric Model

$$\boldsymbol{Y_{st}} = \boldsymbol{\beta_0} + \boldsymbol{\beta_1 A_S} + \boldsymbol{\delta_0 B_t} + \boldsymbol{\delta_1 (A_S * B_t)} + \boldsymbol{X_{st}} + \boldsymbol{\varepsilon_{st}} \quad (1.2)$$

Where, s=1, -------, 171; t=2000 & 2015

In equation (4.1), Y_{st} is a measure of Export from Bangladesh to country's' in year 't'. β_0 is the average export from Bangladesh to the country which is not under EBA program, $\beta_1$measures the group effects of two group of countries, δ_0 captures the changes of average export amount from the year of 2000 to 2015., $A_S$and $B_t$are importing countries and year dummy variables

respectively that account for country and year fixed effect, X_{st} is a set of time-varying country-level variables and $\varepsilon_{st}$is the error term. The parameter of interest is on the interaction term $A_S * B_t : \delta_1$ measure the change of average export due to EBA program only. So, the difference-in-difference estimator is,

δ_1=(YA2000 - YB2000)- (YA2015 - YB2015) or
(YA2000 - YA2015)- (YB2000 - YB2015) or
$[(\beta_0) - (\beta_0+\beta_1)] - [(\beta_0+\delta_0) - (\beta_0+\delta_0+\beta_1+\delta_1)]$

3.3 Regression Result and Interpretation

The dependent variable in columns (1)-(4) is export earnings by Bangladesh. In all columns, result of the OLS estimation in DID model are presented here. Column (1) estimates the effect of Time Dummy, Policy Dummy and their interaction term only. Column (2) estimates the effect of two control variable in addition to Dummy variables. Column(3) estimates the effect of three control variables named GDP, Population and Savings rate Column (4) estimates the effect of full set of control variables on Export.

Table2: Difference-in-Differences Estimation of Determinants of Export Earnings of Bangladesh

VARIABLES	(1) Export	(2) Export	(3) Export	(4) Export
Tr	66,343**	-2,154	454.0	15,676
	(33,344)	(19,305)	(19,127)	(18,843)
Tm	76,447	-22,142	-21,847	-19,650
	(47,731)	(15,319)	(15,354)	(16,087)
DID	462,420**	476,631***	476,519***	472,127***
	(217,262)	(170,661)	(170,755)	(170,352)
GDP (PPP)		0.000278***	0.000278***	0.000279***
		(6.65e-05)	(6.64e-05)	(6.72e-05)
Population		-1.601***	-1.589***	-1.597***
		(0.572)	(0.568)	(0.574)
Savings rate			-1,144	-825.0
			(728.0)	(809.7)
Inflation				-95.37
				(70.35)
Poverty				770.5
				(634.9)
Unemployment				-1,637
				(2,084)
Constant	21,232	9,784	32,069	16,348
	(15,530)	(18,885)	(25,814)	(48,386)
Observations	340	340	340	337
R-squared	0.097	0.597	0.598	0.599

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

First of all, out of the four columns in table-18, we explain significance level and coefficient of the variables in column-3. Here, the variables GDP (PPP), population and DID interaction terms are statistically significant. δ1 is difference over time in the average difference of export earnings in the two groups of countries, which is 1% level of significant and the coefficient is positive with a value of 476,519 with a standard error of 1,70,755. It means average export from Bangladesh to a European Union country has increased by $476,519,000/- over the last 15 years during from 2000 to 2015 due to policy support of EBA as and when the impact of control variables is considered also. GDP is 1% level of statistically significant with a positive coefficient of 0.000278 means, if GDP increase/decrease 1 unit which associated to

increase/decrease 0.00027 unit of export. Population is 1% level of significant with a negative coefficient of 1.589. That is if populations increase/decrease 1 unit then export decrease/increase 1.589 units. The probable causes behind that rise of population reduce per capita income which leads to decrease of export, here the impact of population growth in higher than per capita income growth on export (expenditure of the importing country). Now, we look at the answer how much export hiked up due to policy and how much for other reason in past days. We need to find out this figure to answer our research question. Here δ_1 (DID)=476519 thousand and average export to EBA county in 2015, $\beta_0 + \delta_0 + \beta_1 + \delta_1$ =32069-21847+454+476519=487195 thousand and average export of EBA country in 2000 was, $\beta_0 + \beta_1$ =32069+454=32523 thousand. So, the enhancement (487195-32523)=454,672 thousand.

Diagnostic Test

1.1.1 Heteroskedasticity Test:

Graphical Presentation of Heteroskedasticity examination reveals that the residual is homoskedastic. But the result of the Breusch-Pagan/Cook-Weisberg test says that residual is not homoskedastic. Since the result of two test is different from each other. We can use robust command for getting some adjustment of 'P' and make the residual free from heteroskedasticity.

1.1.2 Multicollinearity Test

The criteria is that if the Variance Inflation Factor (VIF) become less than 10 which means there is no Multicollinearity, if exist but it is lower level of co-linearity among the regressors. Here, the highest VIF is 2.22 among the all variables. So, we can come in a decision that data set is free from Multicollinearity.

Robustness Checking by Propensity Score Matching (PSM) Estimation

The propensity score can be defined in terms of probability of receiving the effect of policy as a function of those covariates, and is generally estimated using logistic regression. This is one of the sophisticated cutting edge econometric mechanisms to evaluate the impact of introduction of new policy. We will check whether the result obtained in DID model match or not with that of this model with a single sample space.

Table 3: Result of PSM Model

	(1)	(2)	(3)	(4)	(5)
VARIABLES	export	export	export	export	export
Tr	828,349*	675,547***	913,611***	330,398***	726,867**
	(430,811)	(152,001)	(164,055)	(126,988)	(368,256)
Observations	170	170	170	170	170

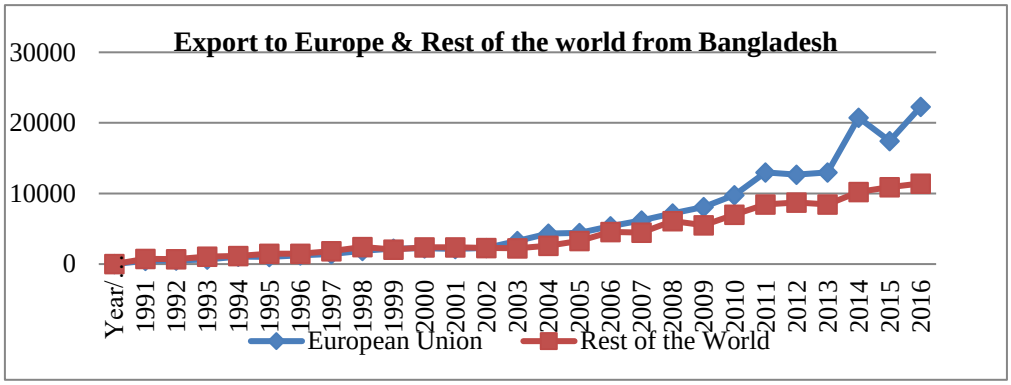
Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Result obtained in the Columns 1 to 5 are based on the controls GDP& Savings, Populations & Savings, Populations & unemployment, GDP& unemployment, GDP& poverty respectively. The result based on every control variable is highly significant. When the regression run with the variable GDP & Savings then the result becomes 10% level of statistically significant and result based on GDP & poverty is 5% level of significant otherwise in every variable the result is 1% level of statistically significant which is very similar to the result obtained in DID model. But in column (4) as the error is minimum ($1, 26,988 thousand), we can accept this result. Here the coefficient is $ 330,398 thousand that means due to introduction of EBA the Average Export from Bangladesh to EU country has raised $ 330,398 thousand. On the other hand DID model estimates that the Average Export from Bangladesh to EU country has raised $ 476,519 thousand. The result in two models is not exactly the same but both results tell us that EBA has huge positive impact to raise the export from Bangladesh to EU market.

3.5 Test of Parallel Trend Assumption

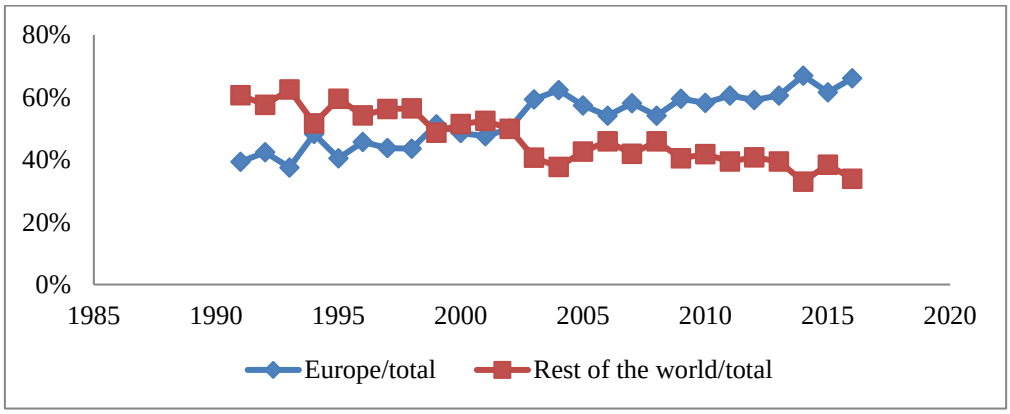
By using the difference-in-difference Method we have got a crystal clear result that Treatment has a great impact on the export of Bangladesh heading to European Union. In other words, it is now proved that EBA affected hugely to the enhancement of export of Bangladesh to EU. But this evidence can also be checked with the help of parallel trend assumption. This assumption tells that the absence of treatment, difference between treatment and control group remain same. To analyze or prove this assumption no econometrics method is available but graphical presentation is the best option.

Figure 2: Export Trend to Europe and Rest of the world during 1991 to 2016



Source: World Bank Website

Figure 3: Share of export to Europe and rest of the world as a percentage of total export from Bangladesh during 1991 to 2016



Source: World Bank Website

In the Figure 5, export from Bangladesh to European Union (Treatment group) and the rest of the world (Control group) was USD 486.22 Million and USD 439.32 million respectively making a difference in between 46.90 million in 1991 where as those were USD 2228.21 million, USD 1978.76 million , and 249.45 in 2001. In the above graph the level value of treatment group and control group are almost same over the period of pre-treatment. It is clear to us how the Export from Bangladesh is changing its destination maintaining a positive trend. In 1991, total export to Europe was USD 486.22 Million whereas that to rest of the world was USD 748.79 Million. That means, share of Europe and rest of the world were 39% and 61% respectively in 1991. But after getting the duty free quota free access to European Market in 2001 the export has been continuously increasing to European market and rest of the world also. However, the amount of total export increased from USD-1,235.01million to USD-33,700.00 million during

1991 to 2016, but the market share has been changed vastly and turned to 58% in European market and 42% in the rest of the world.

Effect of export on dhaka stock exchange:

In this chapter we deal with time series data and pertinent econometrics methodology to explore long-run and short-run relationship among Dhaka Stock Exchange Market Capitalization (mc), Foreign Exchange Reserve (fr), Money supply (m2), Exchange rate(xrate), Export earnings(ex) and Interest Rate(Ir). Here, DSE market capitalization is our dependent variables whereas rests are independent. First of all we find out the impact of Foreign Exchange Reserve on market capitalization of DSE and secondly, we have found the impact of export on market capitalization of DSE. The rest of the variables like Interest rate, Money supply and Exchange rate are the control here.

Table 4: Correlation Table of the Variables (obs=384)

	mc	m2	xrate	fr	ex	lr
mc	1.0000					
m2	0.9470	1.0000				
xrate	0.0132	0.0288	1.0000			
fr	0.9044	0.978	0.0181	1.0000		
ex	0.9466	0.9738	0.0367	0.9176	1.0000	
lr	-0.4743	-0.594	-0.0787	-0.5662	-0.5788	1.0000

4.1: Empirical Model and Strategy

The entire estimation process consists of four steps: first, unit root test; second, Cointegration test; third, selection the appropriate model, then run the model and finally, performing some diagnostics test. To achieve the purposes of the study, a function with stock market development depends on foreign exchange reserve and lending rate; establish in equation below:

$$Y_t' = \gamma_{aj} + \sum_{i=1}^{p} \delta_j Y_{t-i} + \sum_{i=0}^{q} \beta_j X_{t-i} + \in_{jt} \qquad (1.3)$$

The generalized model can be written in the above mentioned form where Y_t' is a vector and the independent variables are $(X_t')'$ are allowed to be purely I(0) or I(1) or cointegrated, β and δ are coefficients and ϒ is constant; j=1,-----,k; p and q are optimal lag orders;$\in_{jt}$ is a vector of the error terms unobservable zero means white noise vector process (serially uncorrelated or independent).The dependent variable is a function of its lagged values, the current and lagged values of other exogenous variables in the model.

4.2: Test of Stationary

Stationary time series must play an important role to have a meaningful conclusion. But there is no certainty that all-time series data are stationary rather majority economic and financial series are non-stationary by nature. Shock in the stationary time series is considered to be transitory while non-stationary time series ends with an inconclusive spurious result. If probability distribution of a time series does not change over time is stationary series. No single tools provide a definite result whether the series is stationary or non-stationary. We, generally, test the series with multiple tools. Augmented Dickey-Fuller test (Dickey and Fuller, 1981), Phillips-Perron test (Phillips and Perron, 1988) and KPSS (Kwiatkowski, Phillips, Schmidt and Shin, 1992) unit root tests were applied to test the Stationarity of the series mentioned.

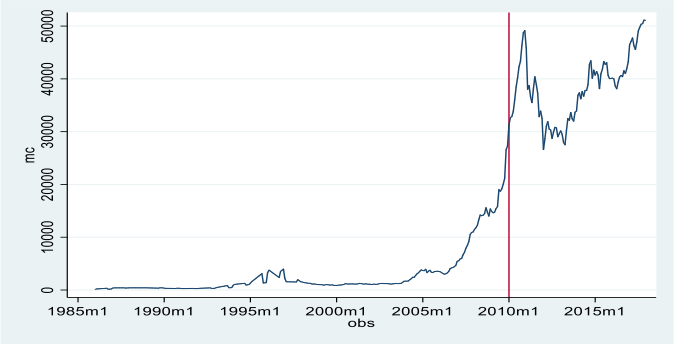
Table 5: Result of stationary checking of the variables

Variables	Augmented Dickey-Fuller test statistic			Phillips–Perron test Statistics			Kwiatkowski-Phillips Schmidt-Shin test statistic		
	Null Hypothesis: Variable is non-stationary			Null Hypothesis: Variable is non-stationary			Null Hypothesis: Variable is non-stationary		
	Level	Log	1st Diff.	Level	Log	1st Diff.	Level	Log	1st Diff.
mc	-1.063	-1.552	-12.376*	-1.027	-1.659	-16.258*	1.48	0.617	0.0515*
fr	4.203	-1.291	-8.481*	2.361	-1.644	-29.441*	1.41	0.874	0.378
lr	-2.141		-17.94*	-2.282		-26.248*	0.609		0.113*
M2	3.749	-1.432	-12.029*	3.333	-1.20	-21.550*	1.63	1.68	0.45
Xr	-13.803*	-12.476	-23.780	-19.546*	-18.39	-52.38	.084*	0.45	.015
ex	-2.492	-8.927*	-23.134	-3.198	-12.126*	-48.531	1.68	.315	.044*
Test critical values (MacKinnon, 1996)									
5% level	-3.42			-3.425			0.146		
10% level	-3.98			-3.130			0.119		

4.3: Determining Structural Break and Model Selection

Changes at a point of time abruptly is called structural break. This is when an event affects the trend or movement of a particular series is distorted or truncated or there is a visible difference between the past and future movements in a particular series. It is not very common but this phenomenon is to be faced sometimes. Such changes are causes of change in mean or a change in other parameters of the process. There are so many options to identify the break point. Chow test is used here to identify whether there is any structural break or not. By using Chow test, we can be sanguine that there is a structural break in our time series. But we do not know the series are cointegrated or not. There are so many models simple Ordinary Least Square Model (OLS), Vector Autoregressive (VAR), Auto Regressive Distributed Lag Model (ARDL), Vector Error Correction Model (VECM), Error Correction Model (ECM) to estimates the effects in short run and long run. To identify an appropriate model, we need to know the nature of time series. Both Stationarity test and Co-integration test helps to find out the appropriate model. ARDL, VECM or ECM model are more appropriate for estimation this series because the series is a combination of I(0) and I(1) process. First of all we can visualized whether there is any structural break or not by graphically.

Figure 4: Determining structural break



In the graph above it is clear that there is structural break in the time series data. Existences of structural break in the time series suggests for Gregory-Hansen (1996) Cointegration test for searching existing of Cointegration.

Cointegration Test

Before selection of model we need to be confirm is there any Cointegration or not. If two or more time series are individually integrated but some linear combination of them has a lower order of integration, then the series are said to be co-integrated. To identify equilibrium or a long-run relationship among the time series we use Cointegration tests. Gregory and Hansen (1996) Cointegration test is appropriate here because there is a single structural break. Besides that it is more preferable because it is free from the limitation of the problems of Engle and Granger approach such as (i) In EG approach we do not have choice of more than one Cointegration, (ii) In case of more than two variables in data sets, there may have more than one co-integrating relationships, and (iii) It depends on two step approach. The Gregory-Hansen approach is nothing but extension of unit root test with a structural break. This test can detect a single underline break in the process. Now we can move for Gregory-Hansen (1996) test and result is below-

Table 6: Gregory-Hansen Test for Cointegration with Regime Shifts

Lag method (bic)

Hypothesis: Ho: No Cointegration at the break point H1: There is Cointegration at break point	Test Statistics (Zt)	Break Point Obs.	Asymptotic Critical Value		
			1% level	5% level	10% level
Model: Change in Level	-4.98	283	-6.05	-5.56	-5.31
Model: Change in Level and Trend	-5.00	283	-6.36	-5.83	-5.59
Model: Change in Regime	-7.59*	290	-6.92	-6.41	-6.17
Decision criteria: Reject Null Hypothesis if absolute value of the Zt statistics is higher than the 5% critical value. '*' Cointegration is detected.					

The above Gregory-Hansen test result confirms about Cointegration in series. So, both structural break and Cointegration are present in the series. This means there is long-run relationship between dependent and independent variables. In this circumstance, we need to choose a long-run model. But out of two long-run models Error Correction Model (ECM) is appropriate here because there is only one Cointegration is present. For regression we have to create the dummy variables in the structural break point. We have created six dummy variables as follows:

Z, z_fr, z_lr, z_m2, z_ex, and z_xr,

Z=1 if obs>=290

Z_fr=Z*fr

Z_lr=Z*lr

Z_m2=Z*m2

Z_ex=Z*ex and Z_xr=Z*xr

Error Correction Model

The lag length for p, q may not necessarily be the same; p lags used for dependent variable; q lags used for the exogenous variable. In the case of presence of Cointegration the specific Error Correction Model to written as follows:

$$mc_t = a_0 + \sum_{i=1}^{p} a_{1i}\, mc_{t-i} + \sum_{i=1}^{q1} a_{2i}\, fr_{t-i} + \sum_{i=1}^{q2} a_{3i}\, lr_{t-i} + \sum_{i=1}^{q3} a_{4i}\, m2_{t-i} + \sum_{i=1}^{q4} a_{5i}\, xr_{t-i} + \lambda ECT_{t-i} + \epsilon_{it} \quad (1.4)$$

$$mc_t = a_0 + \sum_{i=1}^{p} a_{1i}\, mc_{t-i} + \sum_{i=1}^{q1} a_{2i}\, ex_{t-i} + \sum_{i=1}^{q2} a_{3i}\, lr_{t-i} + \sum_{i=1}^{q3} a_{4i}\, m_{2_{t-i}} + \sum_{i=1}^{q4} a_{5i}\, xr_{t-i} + \lambda ECT_{t-i} + \epsilon_{it} \quad (1.5)$$

Here, P=1,2,---,384 ; q=1,2,-----,384
λ=(1- $\sum_{i=1}^{p}\delta i$) represent speed of adjustment parameter with a negative sign.
ECT=($lnmc_{t-i}$-θXt), error correction term the extracted residuals from the regression of the long-run equation.
$\theta=\frac{\sum_{i=0}^{q}\beta i}{\alpha}$, long-run parameter.
a_{1i}, a_{2i}, a_{3i},a_{4i},a_{5i} are the short-run dynamic coefficients of the model's adjustment in long-run equilibrium.
mc=Dhaka Stock Exchange Market Capitalization (million dollar)
fr =Foreign Exchange Reserve of Bangladesh (million dollar)
lr =Lending Rate
ex=Export earnings
m2=Broad Money and
xr=Exchange rate of Bangladesh taka with U.S.D.

In the equation (6.2) we have included the Foreign Exchange Reserve variable as independent variable whereas in the equation (6.3) we have included the export earnings as an independent variable in lieu of forex reserve. Equation (6.2) explains how export impact to market capitalization of Dhaka Stock Exchange directly and equation (6.3) provide the indirect impact of export via forex reserve on market capitalization of DSE.

Relationship between Foreign Exchange Reserve and Market Capitalization: A Case of DSE
Regression result of Ordinary Least Square (OLS), Vector Auto Regressive (VAR) and Error Correction Econometric methods (ECM) are applied here to find out the impact of Foreign Exchange Reserve on Market Capitalization of DSE with all control variables. We excluded here the export earnings variable. Since ECM is applicable for these types of data, that's why results of ECM in long and short run are explained in details.

Table 7: Regression result by using OLS Method

VARIABLES	(1) mc	(2) mc	(3) mc	(4) mc
fr	1.864***	1.864***	-1.105***	-0.750***
	(0.0525)	(0.0526)	(0.138)	(0.202)
lr	517.2**	517.7**	1,379***	1,341***
	(245.6)	(246.8)	(167.1)	(166.8)
xrate		0.0335	-0.580	-0.599
		(1.198)	(0.790)	(0.785)
m2			0.749***	0.563***
			(0.0336)	(0.0849)
ex				4.305**
				(1.807)
Constant	-6,596*	-6,607*	-24,196***	-23,532***
	(3,479)	(3,503)	(2,439)	(2,440)
Observations	384	384	384	384
R-squared	0.820	0.820	0.922	0.923

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Although most appropriate and fitted econometric model is the Error Correction Model nevertheless we have checked the result with the most common OLS method and the result tells us that Foreign Exchange Reserve, Lending rate, Money Supply(M2) are 1% level of statistically significant where as Export is 5% level of significant.

Table 8: Regression result by using VAR Method

VARIABLES	(1) mc	(2) m2	(3) xrate	(4) fr	(5) ex	(6) Lr
L.mc	1.144***	0.0341	-0.00533	0.0316**	-0.00440	-2.20e-05
	(0.0526)	(0.0302)	(0.0152)	(0.0133)	(0.00592)	(1.63e-05)
L2.mc	-0.160***	-0.0433	0.00445	-0.0541***	0.00841	2.83e-05*
	(0.0534)	(0.0307)	(0.0154)	(0.0135)	(0.00601)	(1.66e-05)
L.m2	0.143	0.886***	0.0162	0.0400	0.0310***	1.10e-06
	(0.102)	(0.0585)	(0.0294)	(0.0258)	(0.0115)	(3.16e-05)
L2.m2	-0.132	0.118**	-0.0102	-0.0171	-0.0126	-6.98e-06
	(0.101)	(0.0583)	(0.0292)	(0.0257)	(0.0114)	(3.15e-05)
L.xrate	-0.00774	-0.00961	-0.00304	0.0188	0.00270	1.88e-05
	(0.177)	(0.102)	(0.0510)	(0.0448)	(0.0199)	(5.48e-05)
L2.xrate	-0.00860	0.0511	-0.0104	-0.000829	-0.00420	-2.57e-06
	(0.176)	(0.101)	(0.0507)	(0.0446)	(0.0198)	(5.46e-05)
L.fr	0.0737	-0.188*	0.0621	0.352***	0.000935	1.08e-05
	(0.175)	(0.101)	(0.0505)	(0.0444)	(0.0197)	(5.43e-05)
L2.fr	-0.0646	0.181*	-0.0784	0.611***	-0.0388**	-1.21e-05
	(0.175)	(0.100)	(0.0503)	(0.0443)	(0.0196)	(5.41e-05)
L.ex	0.275	1.062***	0.0871	0.260**	0.227***	0.000306**
	(0.437)	(0.251)	(0.126)	(0.111)	(0.0492)	(0.000136)
L2.ex	-0.513	-0.490*	-0.190	-0.163	0.282***	-0.000233*
	(0.445)	(0.255)	(0.128)	(0.113)	(0.0500)	(0.000138)
L.lr	24.55	8.177	-47.44	-22.12	-21.89	0.703***
	(159.6)	(91.70)	(46.01)	(40.48)	(17.96)	(0.0495)
L2.lr	-27.87	36.96	28.57	94.98**	16.99	0.268***
	(159.4)	(91.59)	(45.95)	(40.44)	(17.93)	(0.0494)
Constant	54.85	-714.3**	316.6*	-1,195***	76.20	0.426**
	(629.6)	(361.7)	(181.5)	(159.7)	(70.84)	(0.195)
Observations	382	382	382	382	382	382

We have already discussed about the fitted model but Vector Auto Regressive (VAR) econometric model is used here to check and compare the results found between all models. But result reveals that none of the independent variables are significant on Market Capitalization of Dhaka Stock Exchange.

Table 9: Long run and short run effect fr,lr,m2,xr on mc. by ECM

VARIABLES	(1) ADJ	(2) LR	(3) SR
fr		3.129***	
		(0.933)	
lr		1,277***	
		(469.5)	
m2		0.255	
		(0.155)	
xrate		-0.430	
		(1.574)	
z		159,373***	
		(34,481)	
z_fr		-2.249	
		(1.732)	
z_lr		-4,508**	

		(1,814)	
z_m2		-0.456	
		(0.546)	
z_xrate		-730.8	
		(539.5)	
L.mc	-0.103***		
	(0.0256)		
D.z_fr			-0.498**
			(0.213)
D.z_m2			0.495***
			(0.0920)
D.z_xrate			-274.9***
			(54.06)
Constant			-2,520***
			(858.1)
Observations	383	383	383
R-squared	0.226	0.226	0.226

Note: R-squared = 0.2060; Period 1986M1-2017M12, Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

In order to capture the long-run dynamics of the model, error correction mechanism was applied. The result of error correction model was reported in table 9. The coefficient of L.mc (-0.103) showed the speed of adjustment of disequilibrium in the period of study. The coefficient of ECT is significant which implies that mc to be adjusted by 10.3 percent in one month towards achieving the long-run equilibrium. The results showed that it takes more than nine months (1/0.103= 9.70) to eliminate the disequilibrium. In long-run, our interested term foreign exchange reserve (fr) is positive and statistically significant at 1% level. The coefficient, 3.129 means one unit change of foreign exchange reserve leads 3.109 unit change of market capitalization in the same direction. The lending rate is also statistically significant at 1% level. The coefficient, 1277 indicates that one percent change of lending rate is associated with 1277 unit change of market capitalization in the same direction. But it is mentionable that when forex reserve is used as independent variable then m2 is not significant at all. The dummy variable z is positive and statistically significant at 1% level but z_lr is negative and 5% level of significant. In the analysis of the short-run, z_m2, z_fr, z_xr and constant are statistically significant at 1% level. The coefficient of z_m2 is positive but all other coefficients are negative.

Relationship between Export Earnings and Market Capitalization: A Case of DSE

Secondly, ECM model is applied here to find out the impact of Export earnings on Market Capitalization of DSE with all control variables. We excluded here the Foreign Exchange Reserve (fr) variable. Results of long run and short run effects are shown in the Table 48. There is no difference between table 47 and table 48 but export is used as an independent variable instead of foreign exchange reserve in table 48. The coefficient of Lmc (–0.0721) showed the speed of adjustment of disequilibrium in the period of study. The coefficient of ECT is still significant like before which implies that mc to be adjusted by 7.21 percent in one month towards achieving the long-run equilibrium. The results showed that it takes more than twelve months (1/0.0721=13.87) to eliminate the disequilibrium. In long-run, our interested term export earnings (ex) is not statistically significant at all but m2, lr and z variables are statistically significant at 1% level with positive coefficients. The probable caused behind these export earnings does not affect other sectors always. Major portion of export of Bangladesh (more than 80%) is spent to import the raw materials of said export. In Bangladesh 84% exports share is for Ready Made Garments and this sector is completely dependent on imported raw materials, machineries and accessories also. But when foreign exchange earned by export turns into domestic currency which leads to affect money supply then it hits to many sectors including equity market also.

Table 10: Long Run and Short Run ex,lr,m2 and xr on mc

VARIABLES	(1) ADJ	(2) LR	(3) SR
ex		-10.44	
		(6.972)	
lr		2,203***	
		(701.5)	
m2		1.232***	
		(0.312)	
xrate		-0.654	
		(2.290)	
z		175,919***	
		(50,372)	
z_fr		1.400	
		(2.476)	
z_lr		-3,763	
		(2,827)	
z_m2		-1.333	
		(0.866)	
z_xrate		-951.2	
		(800.6)	
L.mc	-0.0721***		
	(0.0244)		
D.z_fr			-0.537**
			(0.216)
D.z_m2			0.522***
			(0.0930)
D.z_xrate			-287.8***
			(54.70)
Constant			-2,876***
			(864.1)
Observations	383	383	383
R-squared	0.204	0.204	0.204

Note: R-squared = 0.2038; Period 1986M1-2017M12, Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

The coefficient of lending rate (lr) is 2203 means one percent change of lr leads 2203 unit change of market capitalization in the same direction. The money supply (m2) is also statistically significant at 1% level. The coefficient, 1.232 indicates that one unit/percent change of money supply is associated with 1.232 unit/percent change of market capitalization in the same direction. But it is mentionable that when foreign exchange reserve is used as independent variable then m2 is not significant at all. The dummy variable z is positive statistically significant at 1% level. In the analysis of the short-run, z_lr, z_m2, z_xr and constant are statistically significant at 1% level.

Diagnostic Test

1.1.3 Auto correlation or serial correlation test:

Durbin-Watson d-statistic (9, 382) = 2.017506

Table11: Breusch-Godfrey LM test for autocorrelation

Lags(p)	Chi2	df	Prob>chi2
1	0.394	1	0.5303

H0: no serial correlation or auto correlation

Durbin-Watson d-statistics and Breusch-Godfrey LM test for autocorrelation says there is no serial or auto correlation.

1.1.4 Homoskedasticity Test: White's test

Null Hypothesis is : Ho: homoskedasticity
Alternative Hypothesis: Ha: unrestricted heteroskedasticity

Table 12: Cameron &Trivedi's decomposition of IM-test

Source	Chi2	Df	p
Heteroskedasticity	182.94	24	0.0000
Skewness	31.02	8	0.0001
Kurtosis	2.08	1	0.1496
Total	216.03	33	0.0000

As p value is less than 5% level of significant there exist heteroskedasticity in the series which does not contradict the conditions of BLUE but biased. The reason of this heteroskedasticity is structural break but it is checked that this heteroskedasticity does not break down the bias that means our expected variable is unbiased.

Foreign Exchange Reserve

Foreign Exchange Reserve is defined in the following equation at 1.5.

$$\mathbf{R_t = \beta_0 + \beta_1 R_{t-1} + \beta_2 R_{t-2} +------+ \beta_q R_{t-q} + \alpha_{11} X_{1t-1} + \alpha_{12} X_{1t-2} +------ +\alpha_{1p1} X_{1t-p1}}$$
$$\mathbf{+------+\alpha_{61} X_{6t-1} + \alpha_{62} X_{6t-2} +-----+\alpha_{6k} X_{6kt-pk} + U_t} \qquad \mathbf{(1.5)}$$

Where: R_t is the Foreign Exchange Reserve at time t.
X_1= Export figure of the country at time t
X_2= Import figure of the country at time t
X_3= Net Remittance at time t.
X_4=Net of primary and secondary income at time t
X_5=Net of Capital account at time t
X_6 =Net of financial account at time t
U_t=Error term.

Export-Foreign Exchange Reserve Ratio: We have collected data of Export and Foreign Exchange Reserve of last 33 years during from 1986 to 2018. Data reveals that the ratio of Foreign Exchange Reserve to Export is 0.41.

Impact of EBA on DSE (Ultimate Result)

Total Export of Bangladesh in 2018 was $40.43 billion. Out of these 58% export earnings come from European Union means EBA countries. Difference-in-Difference econometrics methodology provides that export raised 97% due to EBA in European Union. We have already got the ratio that foreign exchange reserve and export ratio is 0.41. The above ECM model says that in long run 1 unit change in foreign exchange reserve leads to 2.99 unit change in Dhaka Stock Exchange market capitalization. So, the overall effect on Equity Market of EBA is (0.58 X 0.97 X0.41 X2.99) 0.6897. The result indicates that there is a positive relationship between EBA and DSE. It means 100% change of Export earnings under EBA program affect to change in Capitalization of DSE is 68.97% in the same direction. The coefficient is economically very significant.

5. Conclusion and recommendation

In this econometric analysis, we get a clear picture that EBA is positively associated with Export and Dhaka Stock Exchange. Effect of EBA is calculated by difference-in-difference (DID)

econometric method and robustness has also been checked by Propensity Score Matching (PSM) Method. With or without any controls effect of EBA on export is positive. Impact on control variables such as GDP, Savings rate, Population is statistically significant but that of unemployment, inflation and poverty are not statistically significant. Only the policy support-EBA is responsible to bump the export up to 86% and EBA along with control boost the export up to 97%. Average Treatment Effect (ATE) on Bangladesh is $80,873,000 which explains average export to an EU country from Bangladesh has risen by $80.87 million. Robustness has also been verified by 'Propensity Score Matching (PSM) model. The results obtained in both DID and PSM model are very similar and close to each other. In the second part of our study, we move to calculate the effect of Foreign Exchange Reserve on the Capitalization of Dhaka Stock Exchange with four more variables namely Time Deposit (m2), Exchange Rate (xrate), Lending Rate (lr) and Export Earnings (ex). But Export and Foreign Exchange Reserve are used as mutually exclusive manner. Existence of structural break and a single cointegration founded in Gregory-Hansen Cointegration Test which refers to Error Correction Model (ECM) is the suited most. Foreign Exchange Reserve is associated in the same direction with Market Capitalization in long-run. Out of five variable Foreign Exchange Reserve and Lending Rate are 1% level of statistically significant which is supported by economic theory.

Foreign Exchange Reserve and Export Earnings: The above two result of panel data and time series analysis is significant in both statistically and economic theory based. But to draw a conclusion two result have been merge by making a bridge between two variables as Foreign Exchange Reserve and Export earnings. Historical data of two variables used to get the ratio of one to another variable. One unit Export is directly associated with 0.41 unit of Foreign Exchange Reserve.

EBA and Market Capitalization: Combining the two results, the ultimate of coefficient of EBA to Market Capitalization of DSE is (0.58X0.97X0.41X3.129) 0.7218. This means 100 percent change in export under EBA is associated with 72.18 percent change of Market Capitalization in the same direction.

5.2 Policy Implication

The above econometrics analytical result is not mere a statistical data. It bears deep significant message. In line with the findings in the study we strongly recommend the following issue for policy implication.

Policy Implication from the macro-economic perspective: In this study, we have tried to find out the impact of EBA on Dhaka Stock Market. But before finding out the final impact of EBA, we need answer of many questions such impact of EBA on the export of Bangladesh is positive or negative, if it has any impact then the question is how much the impact, how it affect economic and social indicators of Bangladesh, how the impact spill over the entire society and finally how it affect Dhaka Stock Exchange. Owing to the facility EBA provided by European Union, Bangladesh earns huge amount of foreign exchange by exporting its goods. If we look the statistics we see that destination of 58% export of Bangladesh is European Union markets. Export in EU market increased 97% for policy impact of EBA. So, we can simply write down that (0.58 X 0.97) 56%, it means out of total exports to world, EBA is responsible for 56% and rest 44% export is happened without any policy impact like EBA or any other support. In 2018-19 FY, total Export of Bangladesh is 40.43 billion. So, the figure is (40.43X.56) about $22.64 billion. Foreign Exchange Reserve is very much important because Balance of Trade is always disfavor of Bangladesh. So, 56% increase of export boost the Foreign Exchange Reserve by (0.56X0.41) 23%. Contribution of Export to GDP 13.37%, so the EBA contributing to GDP is (0.13X0.56) 0.0728. It means 100 percent change of EBA export 7.28% change in GDP in the same direction. 4 million people are engaged in RMG and RMG share in total export is 84%. It

can be assumed that almost 4.76 million people are working in the export sector. So, the impact of EBA on employment is (0.56X4.76) 2.66 million.

Policy Implication from the Socio-Economic perspective: Out of total export of Bangladesh around 84% export earnings comes from a single sector-Ready-Made Garments. In this sector, 4 million people are directly involved here, Out of 4 million 80% is women. So, more than 3.2 million female workers are involved here and they are managing their own family each with this income. It is crystal clear to us that EBA has a huge impact on export which changes economic and social indicators such as the employment of female worker, poverty alleviation, women empowerment and child education Actually, EBA facility is not only one dimensional support but also it played major role for graduation of Bangladesh from LDC to middle income country and better life of a huge number of family.

Policy Implication from the LDCs and Developing Countries perspective: We know Bangladesh is the way of graduation as lower middle income country but still it is a least developed country up to December 2023. To become a lower middle income country as per definition of United Nations Organization, Bangladesh has graduated in three broad head index such as 1) Per capita Income based on three years average, 2) Human Asset Index based nutrition, adult literacy, child mortality and school enrolment and 3) Economic Vulnerability Index, based on natural shocks, trade related shocks, physical and economic exposure to shocks, population size and remoteness. All variables are directly or indirectly related to the improvement of income and Poverty alleviation. It is proved that Bangladesh has changed its fate getting the facility like EBA from Developed countries. Following the strategy of Bangladesh rest of the LDCs can improve their economic and social conditions and finally can become middle or higher income country.

Policy Implication from the USA-Bangladesh Trade perspective: Bangladesh changed its economic and social conditions and improved the position from LDC to lower middle income country. Behind this betterment one of the main pillars is export of Bangladesh and EBA played a great role for this enhancement of export. Bangladesh has been enjoying EBA facility from European Union. But U.S.A. postponed the GSP facility for Bangladesh from 2013. But U.S.A. advised to improve the factory environment and labor law specially ensuring the basic rights of the worker in RMG, Leather, and Fisheries industries. Bangladesh needs to emphasize immediately to work as per advice of the U.S.A. and negotiate continuously so that they withdraw the embargo. As a single country, U.S.A. is still the biggest export destination of Bangladesh. As per statistics of 2018-19 fiscal years, Bangladesh exported 17% of its total export in U.S.A. In 2000, Bangladesh exported 43% of its total export ($ 1.98 billion) to U.S.A. but in the past 18 years its share dropped at 17% and figure is only ($6.87 billion). So, the changed is ($6.87-$1.98=$4.89). So, the annual average growth is $ 13.72%. But in EU market Bangladesh export recorded as $ 2.23 billion and $ 23.45 billion in the year 2000 and 2018 respectively. So, the annual average growth is 52.86% ($23.45-$2.23=$21.22 billion). If we compare the export to U.S.A. with EU it would be $20.81 billion.

Research Limitations

Every research has some limitation. This research is not the free of limitations. Some limitations are discussed here. In this study, we have two types of data set one is panel data set and another is time series data set of only one country -Bangladesh. The panel data is for 171 countries not for all over the world because Bangladesh has no export with the rest of the country. The time series data is from January, 1986 to December, 2017 that is monthly data of 32 years. The number of observation is 384. For time series analysis data set for more time period may be better. Additionally, before starting this study, more than 200 research articles studied and examined but nowhere found similar study though few part match a little bit. None can examine the impact EBA on export or capital market or macro economics variables. So, the

literature is not very close to this study. Somewhere related to one econometrics model or method or some part or variable match a little bit. Moreover, in the first part of this research where we have used the Difference in Difference methodology and in the second part where we have used Error Correction Econometrics Method, here we have taken some control variables but due to unavailability of data we have taken few control variables. Almost all data sources are collected from secondary sources like World Bank, IMF, Bangladesh Bank, BGME, EPB and Dhaka Stock Exchange but very few data are collected from Dhaka Stock Exchange Office under private arrangement. Out of the 47 LDCs, this study talks about ten countries' export and stock exchange of one country. But due to unavailability of data it is not possible to work with rest of the LDCs. Some data are yearly and rests are monthly if all data shall be monthly that may provide better statistics.

Practical Implication of the Research

There is no logic to believe that all business or policy makers are also a researcher. Some of them believe that EBA or such kind of facility has no significant impact on our business or economy. Some of them assume any facility may have impact but that is very marginal, overall impact may be negligible. Lack of right knowledge and information of the impact of EBA in the economy and society broadly, they don't honor rightly as much as it is deemed. This study provides a crystal clear statistical broad head picture on Export, Financing Source- Dhaka Stock Exchange, and Employment and Poverty alleviation and so on. This study definitely makes them more conscious the impact of existence and non-existence of such grant. Awaken of awareness provoke Bangladesh towards lobbing and negotiating for getting GSP from the biggest economy of the world-U.S.A.

Recommendation and Future Research

In this research, we find out the impact of EBA to some macro-economic variables and especially on the equity market. Nevertheless, there are so many macro-economic variables, we do not know what would be the effect on those variables in Bangladesh and other LDCs countries. There are 47 LDCs countries today, though those are all member of LDCs but nature, economic activities, specialization, social structure, economic capacity, socio-economic conditions are not same. That is why effect of the same treatment may not be same. For this reason, we need to find out the exact effect of EBA on those countries if there is not positive impact then we have search causes behind that and finally an appropriate package or facilities to be provided to coup-up the economic shock. It would be better if the study would cover all over the world at least all LDCs. But due to unavailability of data it is not possible to study about all countries even about LDCs. The about of other country in the same topics may give a different result. That means, here we got EBA has great impact on export and Market Capitalization of DSE. But some of the LDCs have no Stock Exchange and some LDCs county has stock exchange but primary stocks are traded there, no secondary trading happened. Moreover, there are many LDCs who do not produce sufficient amount of goods so that they can export the surplus; some country can produce few goods but the quality and price is not up to the mark that's why those products could not export. In this case, EBA or any other opportunity which make them competitive in price is completely ineffective. So, this study does not sanguine that EBA always impact positively on export and finally stock exchange for all countries.

REFERENCES

Abakah, E. J. A. (2012). Foreign Exchange Reserve and Its Impact on Stock Market: Evidence from Ghana. *Research on Humanities and Social Sciences*, *2*(2), 46–60. Retrieved from http://www.iiste.org/Journals/index.php/RHSS/article/view/1279

Adjasi, C., Harvey, S. K., & Agyapong, D. (2008). Effect of exchange rate volatility on the Ghana Stock Exchange. *African Journal of Accounting, Economics, Finance and Banking Research*, *3*(3), 28–47.

Ahn, J. B., Khandelwal, A. K., & Wei, S. J. (2011). The role of intermediaries in facilitating trade. *Journal of International Economics*, *84*(1), 73–85. https://doi.org/10.1016/j.jinteco.2010.12.003

Al-Majali, A. A., & Al-Assaf, G. I. (2014). Long-run and short-run relationship between stock market index and main macroeconomic variables performance in jordan. *European Scientific Journal*, *1010*(1010), 1857–7881.

Aydemir, O., & Demirhan, E. (2009). The relationship between stock prices and exchange rates evidence from turkey. *International Research Journal of Finance and Economics*, *1*(23), 207–215. https://doi.org/10.1007/bf02296425

Brown, C. P. & Crowley, M. A. (2010). China's export growth and the China safeguard: threats to the world trading system, *The Canadian Journal of Economics / Revue Canadienned' Economique*, 43 (4), 1353-1388

Baldwiin, R. E. (2009).Trade negotiations within the GATT/WTO framework: A survey of successes and failures, *Journal of Policy Modeling,* 31, 515–525.

Bhattacharya, B & Mookherjee, J. (2001), Causal relationship between exchange rate, foreign exchange reserves, value of trade balance and stock market: case study of India," Department of Economics, Jadavpur University, Kolkata, India.

Buono, I., & Lalanne, G. (2012). The effect of the Uruguay round on the intensive and extensive margins of trade. *Journal of International Economics*, *86*(2), 269–283. https://doi.org/10.1016/j.jinteco.2011.11.003

Cogneau, D., & Jedwab, R. (2012, April). Commodity price shocks and child outcomes: The 1990 cocoa crisis in Côte d'ivoire. *Economic Development and Cultural Change*. https://doi.org/10.1086/664017

Cristea, A. D. (2011). Buyer-seller relationships in international trade: Evidence from U.S. States' exports and business-class travel. *Journal of International Economics*, *84*(2), 207–220. https://doi.org/10.1016/j.jinteco.2011.02.003

Demidova, S., Kee, H. L., & Krishna, K. (2012). Do trade policy differences induce sorting? Theory and evidence from Bangladeshi apparel exporters. *Journal of International Economics*, *87*(2), 247–261. https://doi.org/10.1016/j.jinteco.2011.12.008

Elite Forex Signal (2013). Impact of Foreign Reserves on Karachi Stock exchange Market of Pakistan. *http://www.eliteforexsignals.com*.

Feng, L., Li, Z., & Swenson, D. L. (2017). Trade policy uncertainty and exports: Evidence from China's WTO accession. *Journal of International Economics*, *106*, 20–36. https://doi.org/10.1016/j.jinteco.2016.12.009

Gay, R. D. (2016). Effect Of Macroeconomic Variables On Stock Market Returns For Four Emerging Economies: Brazil, Russia, India, And China. *International Business & Economics Research Journal (IBER)*, *15*(3), 119–126. https://doi.org/10.19030/iber.v15i3.9676

Haque, Dr. R., Fuad, S., & Mahmud, M. S. (2018). Dividend Versus Capital Gain and Investor Preference: A Case Study on Dhaka Stock Exchange. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3015985

Kallberg, J. G., Liu, C. H., & Pasquariello, P. (2005). An examination of the Asian crisis: Regime shifts in currency and equity markets. *Journal of Business*, *78*(1), 169–211. https://doi.org/10.1086/426523

Kalhan, A. (2008). Local impact of retailer-driven garment supply chains. *Economic and Political Weekly*.

Kan, R., Robotti, C., & Shanken, J. (2013). Pricing Model Performance and the Two-Pass Cross-Sectional Regression Methodology. *Journal of Finance*, *68*(6), 2617–2649. https://doi.org/10.1111/jofi.12035

Khalid, M. (2012). Long-Run Relationship Between Macroeconomic Variables and Stock Return : Evidence from Karachi Stock Exchange (KSE). *School of Doctoral Studies (European Union) Journal*.

Kurihara, Y. (2006). The Relationship between Exchange Rate and Stock Prices during the Quantitative Easing Policy in Japan," *International Journal of Business* 11(4), 375-386.

Lee, C.-C., Liang, C.-M., Wu, W.-H., & You, S.-M. (2013). Interactions between House Prices, Stock Prices and Monetary Policy—Using Recursive VAR. *American Journal of Industrial and Business Management*, *03*(08), 645–654. https://doi.org/10.4236/ajibm.2013.38074

Lee, w.-c. (2012). A Study of the Causal Relationship between Real Exchange Rate of Renminbi and Hong Kong Stock Market Index. *Modern Economy*, *03*(05), 563–566. https://doi.org/10.4236/me.2012.35074

Liu, P., & Mumtaz, H. (2011). Evolving macroeconomic dynamics in a small open economy: An estimated markov switching DSGE model for the UK. *Journal of Money, Credit and Banking*, *43*(7), 1443–1474. https://doi.org/10.1111/j.1538-4616.2011.00431.x

Ludema, D.R. & Mayda, A. M. (2009). Do countries free ride on MFA?" *Journal of International Economics*, 77, 137-150.

Marcus, A. J. (1983). The Bank Capital Decision: A Time Series-Cross Section Analysis. *The Journal of Finance*, *38*(4), 1217–1232. https://doi.org/10.1111/j.1540-6261.1983.tb02292.x

Maroney, N., Naka, A., & Wansi, T. (2004). Changing Risk, Return, and Leverage: The 1997 Asian Financial Crisis. *Journal of Financial and Quantitative Analysis*, *39*(1), 143–166. https://doi.org/10.1017/s0022109000003926

Maysami, R.C., Howe, L.C. and Hamaz, M.A. (2004). Relationship between macroeconomic variables and stock market indices: cointegration evidence from stock exchange of Singapore's All-S Sector Indices, *Journal Penguruson*, 24, 47-77.

Yang, Y. (2021). The End of Textiles Quotas: A Case Study of the Impact on Bangladesh. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.878932

Musawa, N., & Mwaanga, C. (2017). The Impact of Commodity Prices, Interest Rate and Exchange Rate on Stock Market Performance: Evidence from Zambia. *Journal of Financial Risk Management*, *06*(03), 300–313. https://doi.org/10.4236/jfrm.2017.63022

Newbold, P., Leybourne, S., Sollis, R., & Wohar, M. E. (2001). U.S. and U.K. Interest Rates, 1890-1934: New Evidence on Structural Breaks. *Journal of Money, Credit and Banking*, *33*(2), 235. https://doi.org/10.2307/2673883

Nishat, D. M., & Shaheen, R. (2004).Macro-Economic Factors and Pakistani Equity Market," *Pakistani Development Review*, 43, 4.

Oskooe, P. S. A. (2011).The Random Walk Hypothesis in Emerging Stock Market" *International Research Journal of Finance and Economics*, 50, 51-61.

Patanè1, M., Tedesco1,M. & Zedda, S. (2017). Dynamic Relationship of Commodities Prices and EUR/USD Exchange Rate Trends in the Recent Past, *Modern Economy*, 8, 995-1004 http://www.scirp.org/journal/me.

Ray, S. (2012). Foreign Exchange Reserve and its Impact on Stock Market Capitalization: Evidence from India, *Research on Humanities and Social Sciences*, 2(2), 46-60.

Rudema, R. D. & Mayda, A. M. (2009). Do countries free ride on MFN, *Journal of International Economics*, 77, 137-150.

Sabia, J. J., Burkhauser, R. V. & Hansen, B. (2012).Are the effects of minimum wage increases always small? New evidence from a case study of New York state," *ILR Review*, 65, 350-376.

Ali Shah, A., Kouser, R., Aamir, M., & Saba, I. (2012). Empirical Analysis of Long and Short Run Relationship among Macroeconomic Variables and Karachi Stock Market: An Auto Regressive Distributive Lag (ARDL) Approach RehanaKouser (Corresponding Author). *Pakistan Journal of Social Sciences*, *32*(2), 323–338.

Seyoum, B. (2007). Trade Liberalization and Patterns of Strategic Adjustment in the U.S. Textile and Clothing Industry, *International Business Review*, 16, 109-135.

Sohail, N., and Hussain, Z. (2009). Long Run and Short Run Relationship between Macro Economic Variables and Stock Prices in Pakistan –The case of Lahore Stock Exchange, *Pakistan Economic and Social Review*, 47, 183-198.

Subramanian, A., & Wei, S. J. (2007). The WTO promotes trade, strongly but unevenly. *Journal of International Economics*, *71*(3), 151–175. https://doi.org/10.1016/j.jinteco.2006.07.007

Taslim, M.A. (2007). Impact on Exports of Bangladesh, *Economic and Political Weekly*, 42(23), 2219-2222.

Utar, H. (2014). When the Floodgates Open: "Northern" Firms' Response to Removal of Trade Quotas on Chinese Goods, *American Economic Journal: Applied Economics*, 6(4), 226-250.

Zhang, C., Osborn, D. R., & Kim, D. H. (2008). The new Keynesian Phillips curve: From sticky inflation to sticky prices. *Journal of Money, Credit and Banking*, *40*(4), 667–699. https://doi.org/10.1111/j.1538-4616.2008.00131.x

Hasan, M. Z., Kamil, A. A. B. & Baten, A. (2011). Measuring Dhaka stock exchange market efficiency: A stochastic frontier analysis, *African Journal of Business Management* , 5(22), 8891-8901.

Cite this article:

Md. Rayhanul Islam & Huang Xiaoling (2022). Impact of Everything But Arms (EBA) on the Dhaka Stock Exchange. *International Journal of Science and Business, 7*(1), 34-52. doi: https://doi.org/10.5281/zenodo.5850286

Retrieved from http://ijsab.com/wp-content/uploads/874.pdf

Published by

IJSAB International