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Ahad, Muhammad

COMSATS Institute of Information Technology, Lahore Campus

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Muhammad Ahad
Primary and Corresponding Author
Department of Management Sciences,
COMSATS Institute of Information Technology,
Lahore Campus, 54000-Lahore, Punjab, Pakistan.
Email: m.ahad68@yahoo.com Tel: +92-332-690-5574

Adeel Ahmad Dar
Department of Economics,
Forman Christian College (A chartered university)
54000-Lahore, Punjab, Pakistan.
Email: adeel_dar211@outlook.com Tel: +92-321-4551036

Abstract: This paper has estimated the impact of financial development on import demand over the period of 1986: Q_1-2014: Q_4 in case of Bangladesh. The long run relationship between financial development, import demand and economic growth are investigated by combine cointegration. Error Correction Method (*ECM*) is applied to examine short run phenomena. The unit root properties of variables are tested by ADF and P-P unit root test. Perron, (1997) single structural break unit root test is also applied. The results of Bayer and Hanck, (2013) combine cointegration test reveal the existence of long run relationship between import demand, financial development and economic growth. Financial development and economic growth have a positive and significant impact on import demand in long run as well as in short run. The Lagged value of error correction mechanism (ECM_{t-1}) is -0.08 that is negative and significant. This indicates that change from equilibrium level of import demand is corrected by 8 percent per quarter in a year. The results of VECM Granger causality explain that bidirectional causality exists between import demand and financial development in long run as well as short run. Similarly, bidirectional causality exists between import demand and economic growth in short run. Policy makers should focus on financial sector development for import of technology through adopting the import substitution policy.

Key words: Financial Development, Import Demand, Combine Cointegration, VECM Granger causality, Bangladesh.

I. Introduction

Trade liberalization has become an essential part of every economy. Due to trade liberalization, both physical and human capital are moving across the borders (Jaimovich and Kamuganga, 2010). Additionally, free market information, building trade zones and continuous trade agreements have developed the production process around the world. The impact of trade liberalization on imports is indirectly linked to price changes that effect consumption decisions. In developing economies, the unavailability of sufficient funds leads to a reduction in domestic demand along with an inflationary pressure in the domestic market. Therefore, especially for developing economies, a sustainable import demand function is needed until the development of domestic production does not increase. There are two schools of thought for import restrictions, "*Trade Pessimists*" and "*Trade Optimists*". *Trade Pessimists* are in favour of import restriction via import tariff and quota whereas *Trade Optimists* are in favour of free trade.

The classical trade demand theory was linked with consumer's objective of utility maximization. This objective was primarily linked to income level and/or price level. Similarly, the aggregate demand for all individuals constitute a national demand for imports (Harrod and Hague, 1963). The imports take place because of excess domestic demand as compared to domestic supply. Therefore, income elasticity of imports can be negative if domestic demand is inelastic. Moreover, import prices are also a pivot determinant of demand for imports. An increase in price of import changes purchasing capacity and supply of imports (Cave and Jones, 1985). Similarly, the exchange rate volatility has a negative effect on trade. When a change in exchange rate accrues uncertainly, the confidence of investor declines that leads to decrease in trade. The theoretical literature explains that exchange rate volatility has less effect on trade volume in developing countries. Relatively, it focuses upon the income level of the consumer as more important factor for changes in import demand as compared to price effect (De-Grauwe, 1988).

The financial sector development of any economy helps to support import demand function. More financial support benefits to overcome the balance of payment problem. A developed financial sector also helps to import finish or final goods and services in the domestic market. Import of technological equipment and knowledge push upward new innovations at home that enhance economic growth by upgrading the existing level of production. The financial development changes the spectrum of production in developing economies. Bangladesh adopted trade liberalization policy for the concern of international trade in 1985. Following the Structural Adjustment Program (SAP) initiated by the International Monetary Fund (IMF), the restricted items were minimized to 4 in 2006 which were 478 in 1986. Similarly, the custom duty rate was dropped from 350% in 1992 to 25% in 2006. The average import weighted tariff on final consumer goods was 47.3% in 1992 that reduced to 13.4% in 2006. On intermediate inputs, the average import weighted tariff was 24.1% in 1991 that reduced to 9.33% in 2006 [Bangladesh Bureau of Statistics (BBS) and National Board of Revenue (NBR), Bangladesh].

Bangladesh also supported the IMF obligations of article 8 and subsidies were taken out from many items of import and export. International trade played a pivot role in import of merchandise, export of intermediate inputs and technology transfer that increased economic growth through enhancing domestic exports (Hoque and Yusop, 2010). All Imports as a percentage of GDP were 11.3% in 1973 that increased to 21.82% in 2006. Similarly, the import of consumer goods as a percentage of GDP were 20.58% in 1981 which decreased to 9.25% in 2005. For capital items, the imports were 17.19% in 1981 but decreased to 1.67% in 2005. While, the nominal GDP in local

currency was 67,813 in 1973 but increased to 3,707,370 in 2006 [Bangladesh Bureau of Statistics (BBS) and National Board of Revenue (NBR), Bangladesh].

The contribution of this study in applied economics is to check the impact of financial development on import demand for Bangladesh over the period of 1986: Q_1-2014: Q_4. The long run relationship between variables is predicted by applying the new cointegration approach called "Bayer-Hanck combine cointegration". The Direction of causality is examined by applying VECM Granger causality approach. The rest of the paper is organized as follows: review of literature is described in section II. Section III explains data collection, model development and estimation technique. Empirical estimations and their results are described in section IV. Section V is for conclusion and recommendations.

II. Literature Review

Existing literature focuses on the direct relationship between financial development and economic growth of developing economies (Robinson, 1952; Ahmed and Ansari, 1988; Fase and Abma, 2003; Aslan and Korap, 2007; Altunc, 2008; and Shahbaz and Lean, 2012). While financial development led import demand function can be regarded as an indirect way to economic growth. Burgess, (1974) explained imports by classical trade theories and argued that mostly finish goods have substitutes in the home market. The demand for imports of finished goods are dependent upon the factor endowed in an economy. Therefore, empirical evidence of demand for imports holds significance in modern literature.

Mah, (2000) empirically evaluated the import demand of information technology products over the period of 1980-1997 in Korea. Auto Regressive Distributed Lagged (ARDL) approach predicted that cointegration exist between import duty, import price index, producer price index and real gross domestic product (GDP). Similarly, Dutta and Ahmed, (2004) probed the import demand function of India for time span of 1971-1995. The results of Johansen cointegration approach showed a long run cointegration between real quantity of import merchandize, real GDP and relative import price. The Vector Error Correction Model (VECM) indicated that Indian import demand function is more related to the growth of real GDP as compared to relative import prices. Narayan and Narayan, (2005) investigated disaggregate import demand function by using an ARDL approach for Fiji. They used relative prices, investment expenditures, export expenditure and total consumption. Their results displayed a long run cointegration among variables. It also showed that investment expenditure, total consumption and export expenditure have a positive, inelastic and significant impact on import demand of Fijian economy.

Chen, (2008) used ARDL approach to estimate the import demand function of Taiwan by using the time period $1976Q_1$ to $2004Q_1$. The results revealed a long run relationship between price ratio, real GDP and aggregate imports. Moreover, income elasticity was elastic in both long run and short run. Further. Ziramba, (2010) analyzed the import demand of crude oil for South African economy over the period of 1980-2006. The results of Johansen cointegration approach exposed a long run relationship between quantity of imported crude oil, real price of crude oil and real GDP. The results also showed a negative relationship of real GDP, but a positive relationship of real crude oil price with quantity of imported crude oil. Similarly, the short run results showed positive but insignificant impact of explanatory variables on quantity of crude oil import by South African economy. Yue, (2010) targeted disaggregated import demand function of Cote d'Ivoire for the time span of 1970-2007. Using ARDL approach, the results confirmed a cointegration relationship

between import demand, final consumption expenditure, investment expenditure, relative prices and export expenditure. The results revealed that exports and investment expenditures are the most potential determinants of import demand in long run.

Yin and Hamori, (2011) analyzed import demand function for Chinese economy over the period of 1978-2009. They used an ARDL approach to check cointegration between volume of import, real income, relative price, final consumption expenditure, real public consumption expenditures, real private consumption expenditures, real investment expenditures and real export expenditures. The results displayed that cointegration exist between selected variables. Moreover, real public expenditure has a negative relationship with import demand of China. Similarly, Wang and Lee, (2012) reinvestigated import demand function of Chinese economy using monthly data from $1992m_1$-$2011m_{12}$. The results showed a long run relationship exist between import volume, domestic income, real effective exchange rate and volatility of United States market. Their results revealed that domestic income has a positive and significant impact on import volume while, real effective exchange rate has a negative impact on import volume. Alam, (2012) investigated import demand function for Pakistan over the time span $1979Q_1$-$2005Q_4$. The results of ARDL approach confirmed the presence of cointegration between real imports, real effective exchange rate, real income and exchange rate volatility. It also concluded that merchandize import demand is income inelastic. Moreover, real effective exchange rate has a negative impact on import demand for Pakistan.

There are very few studies that investigated the import demand function for Bangladesh such as Kabir, (1988) has used price index of domestic substitutes, price index of imports and income to evaluate the import demand function for Bangladesh for a time span $1973Q_1$-$1983Q_4$. Cochrane-Orcutt (CORC) estimation procedure has followed to investigate the import demand function of Bangladesh. The results showed that income and relative price have a positive and negative relationship with import demand respectively. Dutta and Ahmed, (1999) examined import demand function for Bangladesh over the period of 1974-1994. Engle-Granger and Johansen cointegration approaches have used to analysis the relationship between real quantities of imports, real foreign exchange reserves, real import prices and real GDP. Their results revealed the existence of cointegration vector between variables. Moreover, Hassan and Islam, (2005) estimated the import demand function for Bangladesh over the period of $1974Q_1$-$1998Q_4$. The Johansen-Juselius cointegration approach indicated that long run relationship import price, income, industrial production and domestic prices.

Hye and Siddiqui, (2010) probed an import demand function for Bangladesh over the period of 1980-2008. Auto Regressive Distributed Lagged (ARDL) model has used to analysis the long run relationship between variables. Their results showed the existence of cointegration between import prices, domestic price and gross national product (income). The results also exposed that income has a positive impact on import demand, but relative prices have a negative impact on import demand of Bangladesh. Similarly, Hoque and Yousop, (2010) analyzed the impact of trade liberalization on import demand function of Bangladesh using Auto Regressive Distributed Lagged approach for time span 1973-2005. Their results confirm a long run relationship between real quantity of merchandise imports, relative prices of imports, real income, real foreign exchange reserves and dummy variables for import liberalization. Further, Aziz, (2013) used both Engle-granger and Johansen cointegration approach to find the import demand function over the period 1978-2008 for Bangladesh. The results predicted a long-run cointegration between volume of

imports, relative prices, real income and foreign exchange reserves. Moreover, relative prices have a negative relationship with import demand while, income and foreign exchange have a positive relationship with import demand of Bangladesh.

By analyzing existing literature, we predict that there are many factors that are affecting import demand such as income, imports prices, domestic prices, relative prices expenditures, national cash flow, investment, exports, domestic prices and foreign remittances etc. Existing literature has ignored the role of financial development in investigating import demand function for Bangladesh. This study extends the previous literature by adding financial development as a potential determinant of import demand for Bangladesh. Financial development plays a significant part in explaining import demand. Financial sectors provide finance to firms for investment purposes that increase capitalization. Further, it helps to import inputs and technologies to enhance domestic production. Similarly, Beck, 2002 argued that more availability of finance helps domestic merchandize importers to produce goods at home with cheaper rates.

III. Data Collection, Model Construction and Methodology

The aim of this study is to investigate the relationship between financial development, import demand and economic growth by using quarterly-time series data from 1986: Q_1-2014: Q_4 for Bangladesh. For this purpose, we use log-linear specification because log linear specification has superior properties to simple linear specification. It provides efficient and consistent empirical findings as compare to later one. The functional form and log linear form of models are following:

$$I_t = f(Fd_t, Y_t) \tag{1}$$

$$\ln I_t = \beta_0 + \beta_1 \ln Fd_t + \beta_2 \ln Y_t + \mu_t \tag{2}$$

Here, $\ln I_t$ is natural log of import of goods and services proxy for import demand, $\ln Fd_t$ is natural log of domestic credit to private sector as a percentage of GDP proxy for financial development, $\ln Y_t$ is natural log of real GDP per capita proxy for economic growth and μ_t is error term. The data of all series are collected from world development indicator (WDI) and international financial statistics (IFS). We have used quadratic match-sum method to transform annual data series into quarter frequency data.

Standard cointegration approaches are concerned with level of integration. For this purpose, we have applied Philips-Perron unit root test to check whether series are integrated at level *I(0)* or 1st difference *I(1)*. There are several techniques in time series literature to address the issue of cointegration such as Engle and Granger, (1987) cointegration approach, Johansen (1991) Johansen maximum Eigen value test, Phillips and Ouliaris (1990) Phillips-Ouliaris cointegration test and Error Correction Model (ECM) based F-test of Peter Boswijk (1994), and the ECM based t-test of Banerjee et al. (1998). All these approaches provide different results due to some deficiencies.

III.I. Bayer and Hanck Combine Cointegration

Bayer and Hanck, (2013) invented combine cointegration based on several cointegration techniques to enhance the power of cointegration. This approach called *Bayer and Hanck, (2013) combine cointegration.* The null hypothesis states that there is no cointegration between series. Following Bayer and Hank (2013), the combination of the computed significance level (*p*-value) of individual cointegration test in this paper is in Fisher's formulas as follows:

$$EG - JOH = -2\ [\ln(P_{EG}) + (P_{JOH})] \quad (3)$$

$$EG - JOH - BO - BDM = -2[\ln(P_{EG}) + (P_{JOH}) + (P_{BO}) + (P_{BDM})] \quad (4)$$

Where P_{EG}, P_{JOH}, P_{BO} and P_{BDM} are the p-values of various individual cointegration tests respectively. It is assumed that if the estimated Fisher statistics exceed the critical values provided by Bayer and Hanck (2013), the null hypothesis of no cointegration is rejected.

III.II. VECM Granger Causality Approach

When cointegration exist between variables, we move towards VECM Granger causality to test the direction of causality. The Granger causality test with VECM frame work is as follows:

$$\Delta LI_t = \vartheta_1 + \sum_{i=1}^{p} \vartheta_i \Delta LI_{t=i} + \sum_{j=1}^{q} \vartheta_j \Delta LFd_{t=j} + \sum_{k=1}^{n} \vartheta_k \Delta LY_{t=k} + \eta_1 ECM_{t-1} + \mu_i \quad (5)$$

$$\Delta LFd_t = \lambda_1 + \sum_{i=1}^{p} \lambda_i \Delta LFd_{t=i} + \sum_{j=1}^{q} \lambda_j \Delta LI_{t=j} + \sum_{k=1}^{n} \lambda_k \Delta LY_{t=k} + \eta_2 ECM_{t-1} + \mu_i \quad (6)$$

$$\Delta LY_t = \delta_1 + \sum_{i=1}^{p} \delta_i \Delta LY_{t=i} + \sum_{j=1}^{q} \delta_j \Delta LI_{t=j} + \sum_{k=1}^{n} \delta_k \Delta LFd_{t=k} + \eta_3 ECM_{t-1} + \mu_i \quad (7)$$

Where, Δ is a difference, ECM represents the error correction term which is derived from long run cointegration. $\vartheta_1, \lambda_1, \delta_1$ are constant and η (i=1,2,3) are uncorrelated error term with zero mean. The optimal lag *p* is determined by Akaike Information Criterion (AIC) because of its superior properties for small data sets. The long run causality is expressed by the significance of lagged *ECM* terms using t test. For short run causality is determined by F-statistics or Wald test.

IV. Empirical Estimation and Results Interpretation

There are many traditional unit root tests such as ADF by Dicky and Fuller (1981), P-P by Philip and Perron (1988), DF-GLS by Elliot et al. (1996) and NG-Perron (2001) that help to test the unit root properties of data set. This study has applied ADF and P-P unit root tests to test the stationarity of data. The results of unit root tests are reported in table-1. The results of ADF predict that all series have unit root problem at level *I(0)* but found to be stationary after taking 1st difference *I(1).* The robustness of ADF unit root test is tested by applying PP unit root test. The results of PP unit root test confirm the results of ADF unit root test, series are stationary. It shows that the results of ADF unit root test are reliable and consistent. Further, we apply Perron, (1997) single structural break unit root test and the results are pasted into table-2. The empirical evidence explains that import demand, financial development and economic growth have unit root problem at level with structural breaks. But, unit root problem does not seem when we take 1st difference. So, we may write that our series are integrated at 1st difference, i.e. *I(1).* The structural break years such as 2001Q1, 1994Q1 and 2001Q1 belong to import demand, financial development and economic growth respectively. These breaks can also explain by figure 1 for import demand, figure 2 for financial development and figure 3 for economic growth. Before we proceed to cointegration analysis, we find optimal lags through optimal lag selection criteria. Table-3 shows the results of optimal lag selection criteria. We follow the Akaike information criterion for optimal lags due to its superior properties. The results indicate that 6 lags are suitable for our sample period. The

results of other criteria's such as sequential modified LR test statistic, Final prediction error, Schwarz information criterion and Hannan-Quinn information criterion are also reported in this table.

Table-1: Unit root Analysis

Variables	PP unit root test (with intercept and trend)			ADF unit root test (with intercept and trend)		
	T-stat.	Prob.	Decision	T-stat.	Prob.	Decision
ln I_t	-2.9880(3)	0.1401	Not stationary	-2.2526(4)	0.4557	Not stationary
ln Fd_t	-2.3147(3)	0.3546	Not stationary	-2.0265(4)	0.5802	Not stationary
ln Y_t	-1.1177(3)	0.9209	Not stationary	-1.4364(4)	0.8448	Not stationary
Δ ln I_t	-6.2479(3) *	0.0000	Stationary	-4.1307(4) *	0.0077	Stationary
Δ ln Fd_t	-5.5747(3) *	0.0000	Stationary	-6.5284(3) *	0.0000	Stationary
Δ ln Y_t	-5.4333(3) *	0.0001	Stationary	-5.9569(3) *	0.0000	Stationary
Note: significance at 1% is shown by *. Lag values are shown in parentheses. **Source:** Author's calculations						

Table-2, Perron (1997) Structural break unit root

Variables	At level		At 1st difference	
	T-Stat.	Break Year	T-Stat.	Break Year
ln I_t	-2.7919	2001Q1	-5.3122***	2010Q1
ln Fd_t	-3.7245	1994Q1	-5.4389***	1992Q1
ln Y_t	-5.0114	2001Q1	-5.8113**	2004Q1
Note: ** and *** identify the significant at 5% and 10% level of significance respectively. **Source:** Author's calculations				

Table-3: Lag Length Criteria

VAR Lag Order Selection Criteria						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	679.3512	NA	7.30e-10	-12.52502	-12.45052	-12.49481
1	1447.070	1478.569	5.77e-16	-26.57536	-26.27735	-26.45453
2	1517.792	132.2772	1.84e-16	-27.71837	-27.19684	-27.50691
3	1523.089	9.612761	1.97e-16	-27.64979	-26.90476	-27.34771
4	1524.490	2.464496	2.28e-16	-27.50907	-26.54052	-27.11636
5	1564.930	68.89784	1.28e-16	-28.09129	-26.89923	-27.60795
6	1613.220	79.59004*	6.19e-17*	-28.81889*	-27.40333*	-28.24493*
7	1616.630	5.430718	6.91e-17	-28.71538	-27.07630	-28.05079
8	1617.668	1.595413	8.07e-17	-28.56793	-26.70534	-27.81272
* indicates lag order selected by the criterion.						
LR: sequential modified LR test statistic (each test at 5% level) FPE: Final prediction error AIC: Akaike information criterion SC: Schwarz information criterion HQ: Hannan-Quinn information criterion						

Source: Author's calculations

Our data series are integrated at a unique level that leads us to apply Bayer and Hanck, (2013) combined cointegration to test the cointegration among variables. The results of combined cointegration are described in table-4. The results explain that calculated F-statistics of EG-JOH and EG-JOH-BO-BDM for $I_t = f(Fd_t, Y_t)$ are greater than critical values at 5 percent level of significance. Similarly, The F-statistics of EG-JOH and EG-JOH-BO-BDM for $Fd_t = f(I_t, Y_t)$ are larger than critical values at 5 percent and 10 percent level of significance respectively. So we may reject the null hypothesis of no cointegration. These statistics confirm the existence of long run relationship between financial development, import demand and economic growth. The existence of cointegration relationship explain co movement between underlying variables. Once, we check the cointegration, it helps to predict movements between variables.

Table-4: Bayer and Hanck Combine Cointegration

Estimated models	EG-JOH	EG-JOH-BO-BDM	Lags	Cointegration
$I_t = f(Fd_t, Y_t)$	14.5801**	29.3265**	6	Yes
$Fd_t = f(I_t, Y_t)$	12.8540**	19.3097***	6	Yes
$Y_t = f(Fd_t, I_t)$	8.6740	11.6813	6	No
Significance level				
1%	16.679	32.077		
5%	10.895	21.106		
10%	8.479	16.444		
Note: ** and *** represent significant at 5 percent and 10 percent level of significance. Lag length is based on minimum value of AIC. **Source:** Author's calculations				

Table-5 displays the long run estimations of import demand. The results reveal that financial development and economic growth have a positive and significant impact on import demand at 1 percent significance level for Bangladesh. The coefficient of financial development is 0.38 which explains that 1 per cent increase in financial development leads to increase in import demand by 0.38 percent. Similarly, a 1 per cent increase in economic growth leads to increase in import demand by 0.44 per cent. These results justify that the access of finance through financial sector development helps to import more goods that cause to increase in import demand. R-squared explains the portion of dependent variable that is explained by independent variables. So the results of R-squared explains that 93 percent of import demand is explained by independent variables in long run. F-statistics shows significance of overall model. The value of F-statistics is significant at 1 per cent level of significance.

Table-5: Long Run Analysis

Dependent Variable: ln I_t			
	Coefficient	Std. error	T-statistics
Constant	-0.2662*	0.0992	-2.681
ln Fd_t	0.3899*	0.0738	5.2807
ln Y_t	0.4405*	0.1021	4.3123

R-squared	0.9303
F-statistic	754.12
Prob.	0.0000
Note: significance at 1% is shown by *. **Source:** Author's calculations	

Similarly, the results of short run analysis are explained by table-6. According to results, financial development and economic growth also have a positive and significant impact on financial development at 1 per cent level of significance in short run. The coefficients of financial development and economic growth are 0.49 and 2.47 which explain that 1 percent increase in financial development and economic growth will rise in import demand by 0.49 per cent and 2.47 per cent respectively. so, we can also control import demand by controlling financial demand and economic growth. The lagged value of ECM is -0.0839 that is negative as expected and significant at 5 per cent level of significance. The value of $ECM_{(t-1)}$ shows deviation from disequilibrium to equilibrium. This denotes that movement from short run towards long run are corrected by 8% in each quarter and will take almost 12 years and 5 months to reach equilibrium path, if we use this model. The value of R-squared is 0.19 which shows that 19 per cent of import demand is explained by financial development and economic growth in short run. The overall model is good or/and fit due to significant of F-statistics at 1 per cent level of significance.

Table-6: Short Run Analysis

Dependent Variable: $\Delta \ln I_t$			
	Coefficient	Std. error	T-statistics
Constant	-0.0045*	0.0015	-2.9178
$\Delta \ln Fd_t$	0.4955*	0.1414	3.5030
$\Delta \ln Y_t$	2.4720*	0.6638	3.7235
ECM_{t-1}	-0.0839**	0.0380	-2.2069
R-squared	0.1967		
F-statistics	9.0637		
Prob.	0.0000		
Note: significance at 1% and 5% is shown by * and ** respectively. **Source:** Author's calculations			

Once the cointegration has confirmed between financial development, import demand and economic growth, we may proceed to detect the direction of causality to understand the clear picture of causal relationship. The Granger causality approach can be explained that X Causes Y when the past value of X helps to predict changes of Y. Similarly, Y causes X when the changes of Y is predicted by the past value of X. Engle-Granger (1987) illustrated that if variables are cointegrating, there will be short run and long run information between them regarding to causal relationship. The Vector Autoregressive model is likely to be used for this purpose. Table-7 describes the results of VECM Granger causality approach. The results reveal that bidirectional causality exists between financial development and import demand in short run as well as in long run. Economic growth causes import demand in both short and long run. Similarly, a unidirectional causality is running form import demand to economic growth only in short run. These findings are consistent with the finding of shahbaz and Rahman, (2012).

Table-7: VECM Granger Causality Analysis

Variables	Short Run			Long run
	ln I_t	ln Fd_t	ln Y_t	ECM_{t-1}
ln I_t	---	4.0796** (0.0196)	10.070* (0.0001)	-0.1186* (0.0005)
ln Fd_t	4.4494** (0.0139)	---	1.4027 (0.2504)	-0.3914** (0.0323)
ln Y_t	14.508* (0.0000)	1.9207 (0.1515)	---	---
Note: Significance at 1%, 5% and 10% is shown by *, ** and *** respectively. **Source:** Author's calculations				

V. Conclusion and Recommendations:

The present study investigates the relationship between import demand, financial development and economic growth over the period of 1986: Q_1-2014: Q_4 for Bangladesh. The stationarity of data is tested by ADF and PP unit root tests. After confirming the stationarity of data at 1st difference *I(1)*, we have applied Bayer and Hanck combine cointegration approach to examine the long run relationship between financial development, import demand and economic growth. The results have confirmed the presence of cointegration between variables for these models [$I_t = f(Fd_t, Y_t)$ and $Fd_t = f(I_t, Y_t)$] .

Further, financial development and economic growth both have positive and significant impact on import demand at 1 per cent level of significance. The Lagged value of ECM explains the speed of adjustment from short run to long run. It will take approximately 12 years and 5 months to reach an equilibrium level. The results of VECM Granger causality explain the direction of causality. It has predicted that unidirectional causality exists between financial development import demand for both short and long run. Import demand and economic growth cause financial development only in long run but only import demand causes financial development in short run.

Policy makers should focus on financial development to control imports by adopting import substitution policy only for importing advance technology. An increase in financial reforms will help to develop new businesses through importing new technologies and machinery only. It will enhance domestic production and reduce dependence on import. It will help to reduce imports that further will increase the foreign reserves for Bangladesh. Financial sector development can be used as a tool control import demand.

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Appendix:

Figure: 1, Perron Breakpoint for Import Demand.

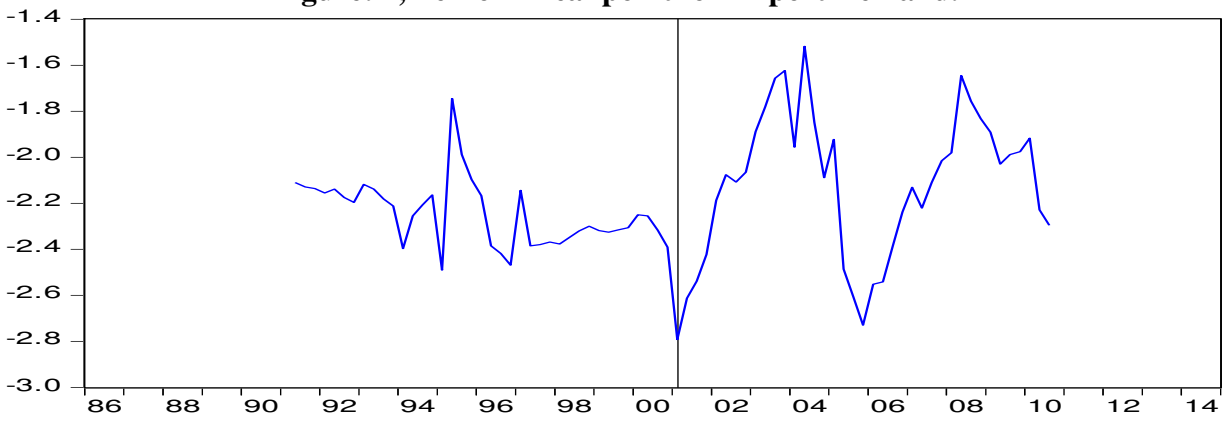

Figure: 2, Perron Breakpoint for Financial Development

Figure: 3, Perron Breakpoint for Economic Growth