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Econometric Analysis of the Developing Countries' Trade Indicators

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Abstract: In this paper, the author attempted to study the patterns of the export and import shares of the developing countries and found out the relation of export and import share with its determinants like growth rate, inflation rate, FDI, current account balance, REER, concentration index, and diversification index respectively during 1980-2016 where FDI, REER, and diversification index significantly influenced the export and import shares respectively. Both the export and import shares have upward structural breaks and smooth cyclical trends. Their VAR models are unstable and non-stationary.

Keywords: Export shares; Import shares; Concentration index; Diversification index; Growth rate; foreign direct investment; Inflation rate; real effective exchange rate; Co integration; Vector auto regression

Introduction

The general macroeconomic fundamentals of the developing countries are high inflation, low growth, high unemployment, chronic BOPs deficits, and current account deficit, adverse terms of trade, low shares of export and import, exchange rate instability, poverty and inequality and so on. The banking and financial system of these economies are not identical to the developed countries. Yet in recent years from 21st century, the revival of African economy, emerging Asian economies, especially East Asia, Latin American development prospects have shown great attention to the economists of the present century. Even, terms of trade have gone in favor of the developing economies, current account surplus of East Asia and Euro Area outweigh US current account deficit which provided flow of liquidity out of USA whose liability began to increase by degrees. Even, monetary and trade integration in Asia, Africa, and Latin America have been improved because ASEAN common currency and African regional common currencies have challenged US dollar hegemony. Obviously exchange rate adjustment through floating exchange rate with US dollar and other key currencies have not been gone in favor of developed economies. Regional currencies in regional trading blocs have started trade with their bloc currencies .Therefore, international liquidity problem of the developing countries somehow improved. The trading shares of the developing countries are of very much important in context of the development of the world economy as a whole. The author presently gives importance on the developing countries' international trade share so that the role of international current account balance and terms of trade can be understood easily. Therefore, the author studied the export and import shares of the developing countries and their important indicators during 1980-2016.

Literature Review

There are huge economic literatures on the developing economies. Some of them are being introduced here. Jha [1] described the developing countries' basic indicators, macroeconomic policies, trends of growth, inflation, exchange rate, financial liberalization, international financial architecture and IMF programme for the developing countries in his book. UNCTAD [2] reported African recovery, agricultural development and growth, agricultural exports, and industrial competitiveness in details. SESRTCIC [3] published a report on the development of OIC least developed member countries and examined the trends in their major economic indicators during 2000-2004. On the basis of the report, it highlighted UN programme of action for LDC for 2001-2010 and suggested implementations. Bardhan & Mukherjee [4] described trade off involved in decentralization and de facto implementation is highly endogenous to the historical, political, and economic context of the developing countries. They did not explain a rigorous impact assessment and did not offer generalization. The case studies they explained are India, China, Pakistan, Brazil, Indonesia, Bolivia, Uganda and South Africa.

UNCTAD Trade and Development Board (2010) published LDC's trends of growth, inflation, FDI inflows, BOPs and recommended new development approach emphasizing agriculture and food security, trade diversification, investment promotion, infrastructure development, science technology and innovation and south-south cooperation. Choudhury [5] formulated macroeconomic models in the Klein-Timbergen tradition and have been used to explain demand oriented fluctuations and to deal with short run instability of output and employment using stabilizing policies for the economy of Malawi. Authors used Cobb-Doglous production function and input output model for national accounts. Vegh Gramont & Vegh [6] focused monetary and fiscal policy, exchange rate policy, inflation, trends of growth of the developing countries. They prescribed stabilization policy, process of dollarization, BOPs crisis, and financial crises which induced the developing countries. Nayyar [7] presented a large number of empirical observations regarding the gap between the less developed nations and the more developed countries from 1820 to 2010.He analyzed the trade, growth, inequality, industrialization between less developed and developed

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nations explicitly. Lane [8] dedicated study of capital flows for stability, transmission of monetary, fiscal and exchange rate policies in a model. Bremus & Buch [9] explored the channels through the structure of banking markets impacts, macro-

Lim & Menelis [10] formulated a model for Low income and Middle Income countries and concluded that growth reduces inequality and trade openness can increase or decrease the Gini. FDI have negligibly affected Low Income Countries but reduce inequality in Middle Income Countries. Moreover, Lane [11] explained the behavior of international financial flows during three periods, namely [1] the 2003-2007 global booms, [2] the 2008-2009 crises, and [3] the 2010-2012 recovery phases in the low income countries. He examined

Objectives of the paper

Author studied the trends ,structural breaks and smooth cyclical behavior of export and import shares of developing countries during 1980-2016.How the export and import shares of the developing countries change with growth rate, inflation rate, foreign direct investment, current account balance, concentration index, diversification index and real effective exchange rate is the central area of the study during 1980-2016.Since the co integration tests are insignificant and found no co integration, therefore vector auto regression were tested to check the relationship for the above indicators and the stability and stationary process of the VAR model was also tested. Even growth-inflation trade off and growth –FDI nexus of the developing countries were verified.

low income countries group and motivated macro financial economic volatility. They combined micro and macro data to estimate the link between banking market structure and macro-economic volatility.

aid-adjusted net financial inflows, debt inflows, foreign direct investment inflows and official reserve inflows in explaining the cross-country variation in international financial flows during these different phases. Philip [12] focuses local legislations and in relevant cases of laws in context of the conventions of ILO 158 on terminations of employment especially in developing Africa where employees' rights are unfairly dismissed.

Methodology and Data

The simple semi-log linear regression and multiple regression models were used to relate variables like export share, import share, growth rate, inflation rate, FDI, concentration index, diversification index and REER of the developing countries during 1980-2016. Johansen [13, 14] model of co integration and vector auto regression were taken to find out relation among them. Granger model of causality was also tested. For structural breaks Bai-Perron model [15] was used here. Hodrick-Prescott Filter model [16] was applied in order to get smooth nonlinear trends of export and import shares. Data on the above variables of developing countries (128 as listed by UNCTAD) have been taken from UNCTAD 2017, UNO from 1980 to 2016 [17].

Observations from the models

The export share of the developing countries during 1980-2016 has been stipulating at the rate of 1.8% per year significantly.

$$\text{Log } (y_1) = 3.104615 + 0.018006t \ (88.39)^* \ (11.17)^*$$

$R^2 = 0.78$, F = 124.85, DW = 0.199, y = export share of the developing countries, t = time, * = significant at 5% level.

Table 1: Structural breaks of export share

Variable	Coefficients	Standard error	T statistic	probabilities
		1980-1999…..20obs		
C	3.2748	0.0371	88.157	0.00
		2000-2009….10obs		
C	3.5565	0.0479	74.1515	0.00
		2010-2016……7obs		
C	3.7809	0.0095	397.1972	0.00

Source-Calculated by author, $R^2 = 0.85$, F = 98.57, DW = 0.52*

In Figure 1, the structural breaks of export share of developing countries in 2000 and 2010 have been plotted clearly.

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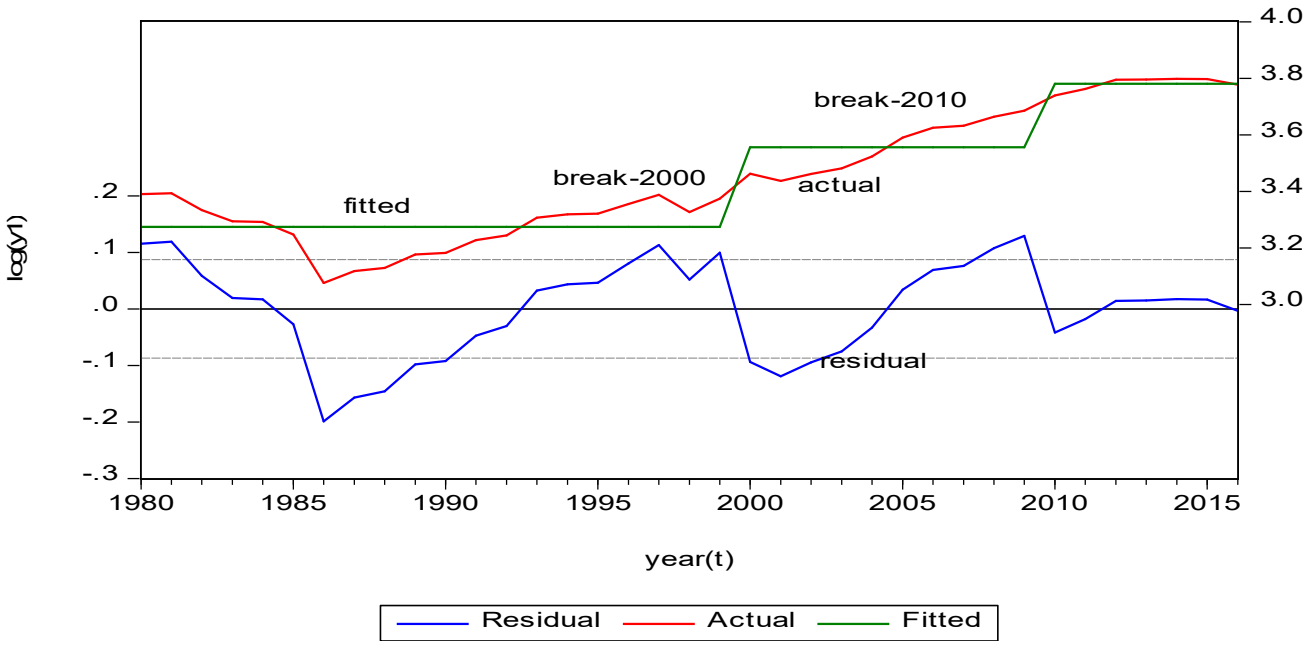

Source-Plotted by author

Figure 1: Structural breaks

The export share of the developing countries during 1980-2016 has been converted with H.P. Filter model [16] which showed the bottom and the upward movement of the smooth cyclical pattern of the series which is plotted in Figure 2.

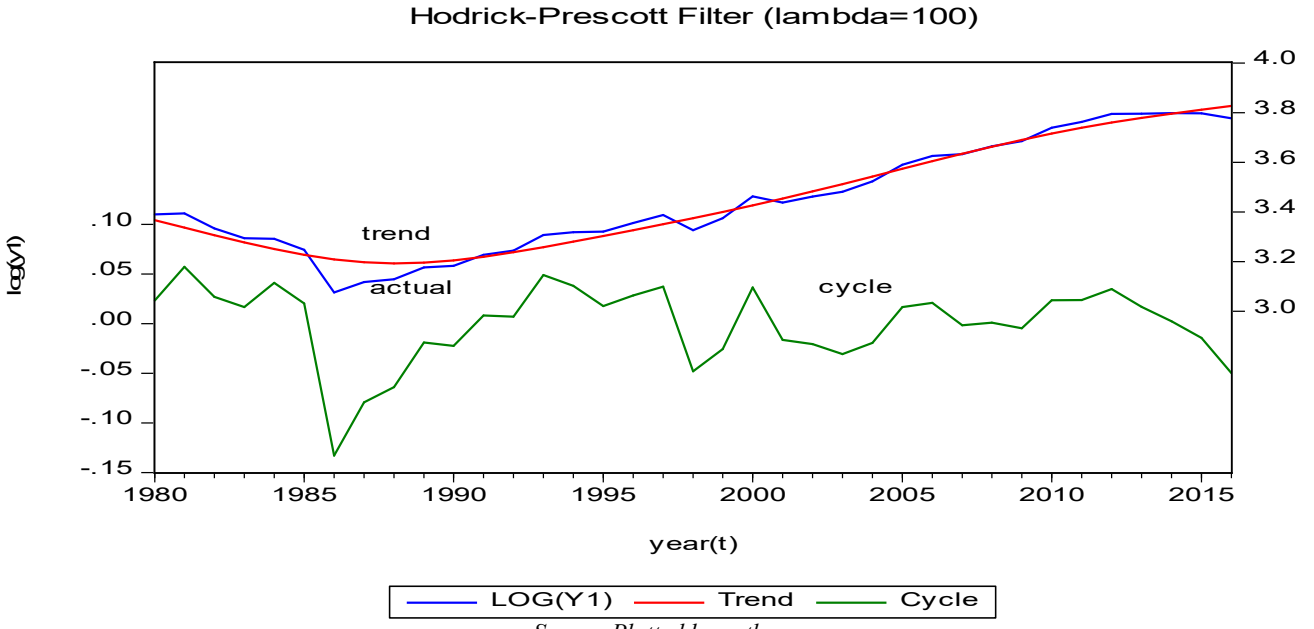

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Figure 2: HP Filter model of export share of the developing countries

The import share of the developing countries during 1980-2016 has been stepping up at the rate of 1.72% per year significantly.

$$\text{Log}\,(y_2) = 3.055759 + 0.017235t\ (100.83)^*\ (12.39)^*$$

$R^2 = 0.81$, $F = 53.64^*$, $DW = 0.28$, y_2 = import share of the developing countries,* = significant at 5% level.

It has one downward structural break in 1985, and three upward structural breaks in 1982, 2005 and 2010 respectively which were found by Bai-Perron test [15].

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Table 2: Structural breaks of import share

Variable	Coefficients	Standard error	T statistic	probabilities
		1980-1984…..5obs		
C	3.2421	0.0130	248.64	0.00
		1985-1991….7obs		
C	3.1145	0.0185	167.49	0.00
		1992-2004……13obs		
C	3.3526	0.0122	273.34	0.00
		2005-2009….5obs		
C	3.5180	0.0281	124.91	0.00
		2010-2016…..7obs		
C	3.7131	0.0131	282.77	0.00

Source-Calculated by author, $R^2 = 0.95$, $F = 171.89$, $DW = 2.21$*

In Figure 3, these four structural breaks were clearly plotted.

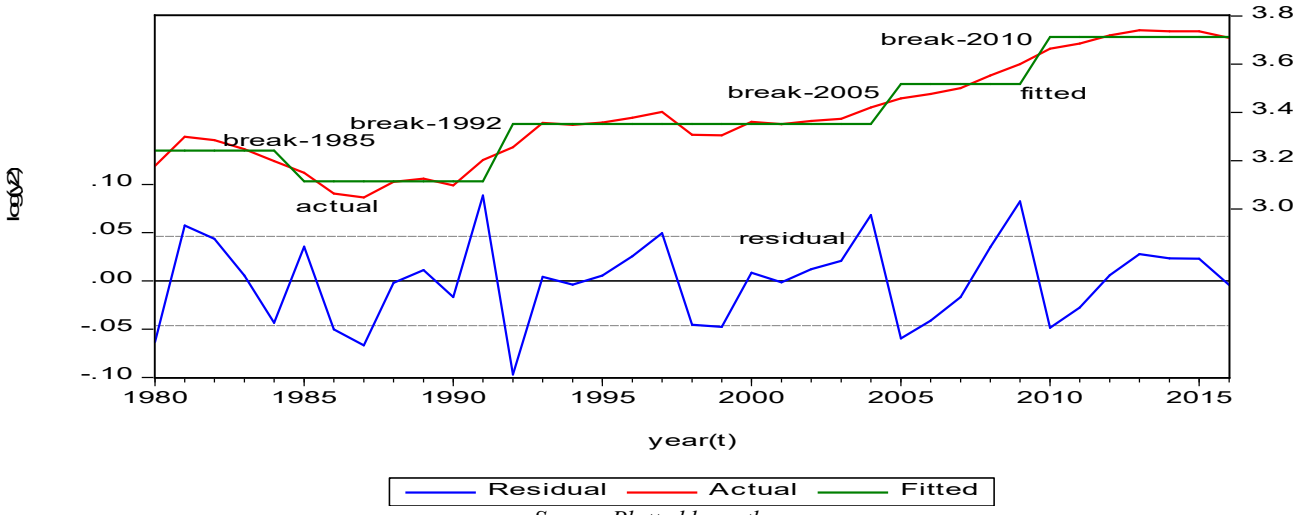

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Figure 3: Structural breaks

In Figure 4, the H.P. Filter model [16] showed one trough and upward rising trend cycle clearly.

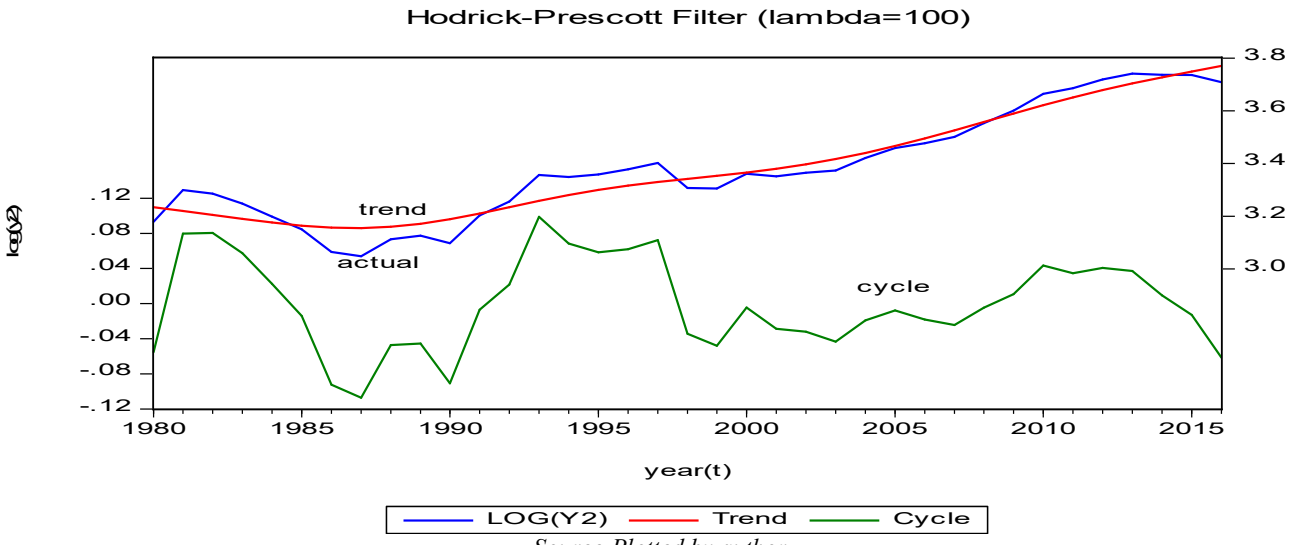

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Figure 4: Smooth cyclical trend of import share

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It is observed that one percent increase in export diversification index and export concentration index have induced 1.16 per cent decrease and 0.0368 per cent increase in export share of developing countries during 1980-2016 where former is significant and later is insignificant.

$$\text{Log } (y_1) = 1.9819 + 0.0368\log (x_5) - 1.16149\log (x_6) \quad (14.42)^* \ (1.22) \ (-16.79)^*$$

$R^2 = 0.94$, $F = 175.80^*$, $DW = 0.54$, x_5 = export concentration index, x_6 = export diversification index

In the similar way, one percent increase in import diversification index and import concentration index have induced 0.94 per cent decrease and 0.458 per cent increase in import share of developing countries during 1980-2016 significantly.

$$\text{Log } (y_2) = 2.9784 + 0.04582\log (x_7) - 0.9455\log (x_8) \quad (8.67)^* \ (5.30)^* \ (-7.25)^*$$

$R^2 = 0.83$, $F = 48.55^*$, $DW = 0.83$, x_7 = import concentration index, x_8 = import diversification index

The export share and export concentration index have bidirectional causality, but export share and export diversification index have no causality and export concentration index and export diversification index have bidirectional causality which are tabulated below.

Table 3: Causality test

Null hypothesis	Obs	F Statistic	Prob
x_5 does not Granger Cause y_1	21	0.02518	0.875
y_1 does not Granger Cause x_5		2.68875	0.118
x_6 does not Granger Cause y_1	21	5.16895	0.0355
y_1 does not Granger Cause x_6		15.7626	0.0009
x_5 does not Granger Cause x_6	21	2.5137	0.1303
x_6 does not Granger Cause x_5		0.1715	0.680

Source-Calculated by author

Likewise, the import share and import concentration index have bidirectional causality, but import share and import diversification index have unidirectional causality and import concentration index and import diversification index have bidirectional causality. It is given in Table 4.

Table 4: Test of causality

Null hypothesis	Obs	F Statistic	Prob
x_7 does not Granger Cause y_2	21	2.90861	0.1053
y_2 does not Granger Cause x_7		0.018	0.8948
x_8 does not Granger Cause y_2	21	5.31257	0.0333
y_2 does not Granger Cause x_8		4.2946	0.0529
x_7 does not Granger Cause x_8	21	0.6806	0.4202
x_8 does not Granger Cause x_7		0.7445	0.3996

Source-Computed by author

Growth-inflation trade-off has no significant evidence in the developing countries during 1980-2016 which is estimated below.

$$x_1 = 4.13377 + 0.0082x_2 \quad (10.70) \ (1.88)$$
$$R^2 = 0.09, \ F = 3.56, \ DW = 1.156$$

Yet they have bidirectional causality with each other which is tabulated below.

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Table 5: Growth-inflation trade-off

Null hypothesis	Obs	F-statistic	Prob
x_2 does not Granger Cause x_1	36	0.75406	0.3915
x_1 does not Granger Cause x_2		1.49387	0.2303

Source-Computed by author

But the growth -FDI nexus in the developing countries is positive which is significant. One percent increase in FDI per year inflows induced 0.1334 per cent hike in growth per pear during 1980-2016.

$$\text{Log}(x_1) = -0.115248 + 0.133478\log(x_3)\ (-0.18)\ (2.476)^*$$

$R^2 = 0.149$, F = 6.13*, DW = 1.19, * = significant at 5% level, * = significant at 5% level.

Even FDI inflows and growth in the developing countries have bi-directional causality given below.

Table 6: Growth-Inflation causality

Null hypothesis	Obs	F-statistic	Prob
x_3 does not Granger Cause x_1	36	0.02932	0.8651
x_1 does not Granger Cause x_3		1.98150	0.1686

Source-Computed by author

The developing countries' export share is positively related with GDP growth rate, inflation rate, foreign direct investment, current account balance and export concentration index respectively during 1995-2016 where inflation rate is significant and it has negatively related with export diversification index and REER respectively during 1995-2016 where both are significant. High R^2 indicates multiple regressions are good fit.

$$y_1 = 67.9254 + 0.9782x_1 + 0.06188x_2 + 1.12E\text{-}07x_3 + 0.12366x_4 + 0.2152x_5 - 130.72x_6 - 0.07103x_9$$
$$(8.26)^*\ (0.88)\ (3.82)^*\ (0.040)\ (0.81)\ (0.1136)\ (-130.72)^*\ (-0.071)^*$$

$R^2 = 0.99$, F = 319.59*, DW = 2.37, x_1 = growth, x_2 = CPI, x_3 = FDI, x_4 = CAB, x_5 = export concentration index, x_6 = export diversification index, x_9 = REER,* = significant 5% level

Again, the developing countries' import share is positively related with GDP growth rate, inflation rate, and FDI and import concentration index respectively during 1995-2016 where inflation rate is significant and it is negatively related with current account balance, import diversification index and REER respectively during 1995-2016 where all are significant. High R^2 indicates that multiple regressions are good fit.

$$y_2 = 40.5835 + 0.1119x_1 + 0.1247x_2 + 4.44E\text{-}06x_3 - 0.622x_4 + 30.3698x_7 - 54.425x_8 - 0.1353x_9$$
$$(7.06)^*\ (0.72)\ (6.026)^*\ (1.16)\ (-2.67)^*\ (0.67)\ (-2.30)^*\ (-5.32)^*$$

$R^2 = 0.99$, F = 236.77*, DW = 2.44, x_7 = import concentration index, x_8 = import diversification index, x_9 = REER, * = significant at 5% level.

The estimated VAR model of the export share of the developing countries which is a good fit and is given below where y_t is significantly related with x_{4t-1},x_{9t-1};x_{1t} is significantly related with x_{3t-1},x_{4t-1};x_{2t} is significantly related with x_{2t-1},x_{3t-1},x_{6t-1},x_{9t-1};x_{3t} is significantly related with x_{2t-1};x_{4t} is significantly related with x_{4t-1};x_{6t} is significantly related with y_{1t-1},$x_{3t-1}$and x_{9t} is significantly related with x_{9t-1} respectively.

[1] $y_{1t} = -5.6824 + 0.9748y_{1t-1} - 0.1365x_{1t-1} + 0.03438x_{2t-1} + 9.75E\text{-}06x_{3t-1} - 0.4359x_{4t-1} + 1.3050x_{5t-1}$
$(-0.24)\ (3.09)^*\ (-1.13)\ (1.26)\ (3.27)^*\ (-2.56)^*\ (0.65) + 81.4672x_{6t-1} - 0.1658x_{9t-1}\ (1.62)\ (-4.5)^*$
$R^2 = 0.99$, F = 213.71*, * = significant at 5% level

[2] $x_{1t} = -66.46 + 1.1668y_{1t-1} - 0.0879x_{1t-1} + 0.0057x_{2t-1} + 7.1E\text{-}06x_{3t-1} - 0.0418x_{4t-1} - 2.85x_{5t-1}$
$(-1.21)\ (1.57)\ (-1.13)\ (1.26)\ (3.27)^*\ (-2.56)^*\ (-0.60) + 168.10x_{6t-1} - 0.0703x_{9t-1}\ (1.42)\ (-0.81)$
$R^2 = 0.69$, F = 2.56

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[3] x_{2t} = -124.98 + 0.9416y_{1t-1} + 0.1733x_{1t-1} + 1.0181x_{2t-1} + 1.16E-05x_{3t-1} - 0.2223x_{4t-1} - 4.2406x_{5t-1} (-1.21) (1.58) (0.76) (19.83)* (2.06)* (-0.69) (-1.12) + 265.37x_{6t-1} + 0.2513x_{9t-1} (2.79)* (3.60)*
R^2 = 0.99, F = 2674.0*

[4] x_{3t} = -3012770 + 60128.18y_{1t-1} - 9584.8x_{1t-1} - 2108.8x_{2t-1} + 0.6502x_{3t-1} - 8379.5x_{4t-1} + 21435.7x_{5t-1} (-1.03) (1.52) (-0.62) (19.83)* (1.74) (-0.39) (0.08) + 6394173x_{6t-1} - 2227.14x_{9t-1} (1.01) (-0.48)
R^2 = 0.94, F = 19.38*

[5] x_{4t} = 16.68 - 0.1427y_{1t-1} + 0.1694x_{1t-1} + 0.0291x_{2t-1} - 6.65E-06x_{3t-1} + 0.6907x_{4t-1} - 2.0504x_{5t-1} (0.62) (-0.39) (1.22) (0.92) (-1.93) (3.5)* (-0.88) - 33.33x_{6t-1} - 0.0341x_{9t-1} (-0.57) (-0.80)
R^2 = 0.90, F = 10.77*

[6] x_{5t} = 1.106 + 0.0229y_{1t-1} - 0.0059x_{1t-1} - 0.0045x_{2t-1} - 2.9E-07x_{3t-1} - 0.0019x_{4t-1} - 0.2130x_{5t-1} (0.30) (0.46) (-0.31) (-1.07) (-0.62) (-0.07) (-0.68) - 3.96x_{6t-1} - 0.0016x_{9t-1} (-0.50) (-0.29)
R^2 = 0.32, F = 0.53

[7] x_{6t} = 0.6555 - 0.0081y_{1t-1} - 0.0001x_{1t-1} + 0.0001x_{2t-1} - 6.1E-08x_{3t-1} + 0.0048x_{4t-1} - 0.0205x_{5t-1} (3.7)* (-3.37)* (-0.17) (0.84) (-2.71)* (3.72) (-1.34) - 0.7226x_{6t-1} + 0.0004x_{9t-1} (-1.88) (1.52)
R^2 = 0.99, F = 112.51*

[8] x_{9t} = -107.33 + 0.6025y_{1t-1} - 0.2376x_{1t-1} + 0.1659x_{2t-1} + 7.41E-06x_{3t-1} - 0.1252x_{4t-1} - 16.20x_{5t-1} (-0.57) (0.23) (-0.24) (0.75) (0.30) (-0.097) (-1.00) + 239.50x_{6t-1} + 1.1155x_{9t-1} (0.59) (3.75)*
R^2 = 0.94, F = 182530*, * = significant at 5% level.

But, this VAR model is not stable because all the roots are not lying inside the unit circle which is shown below in Figure 5.

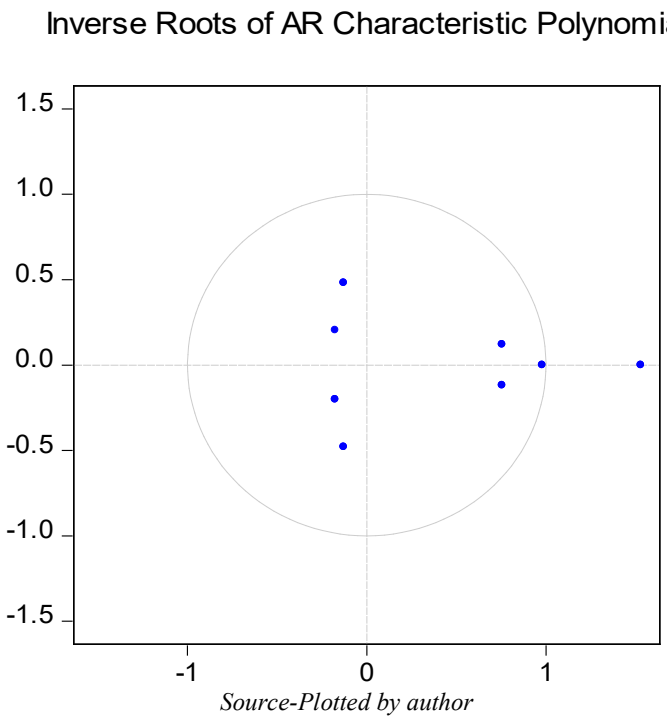

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Figure 5: Unit circle

All the impulse response functions of the VAR model of export share of the developing countries are diverging due to external shock which means the VAR model is non stationary.

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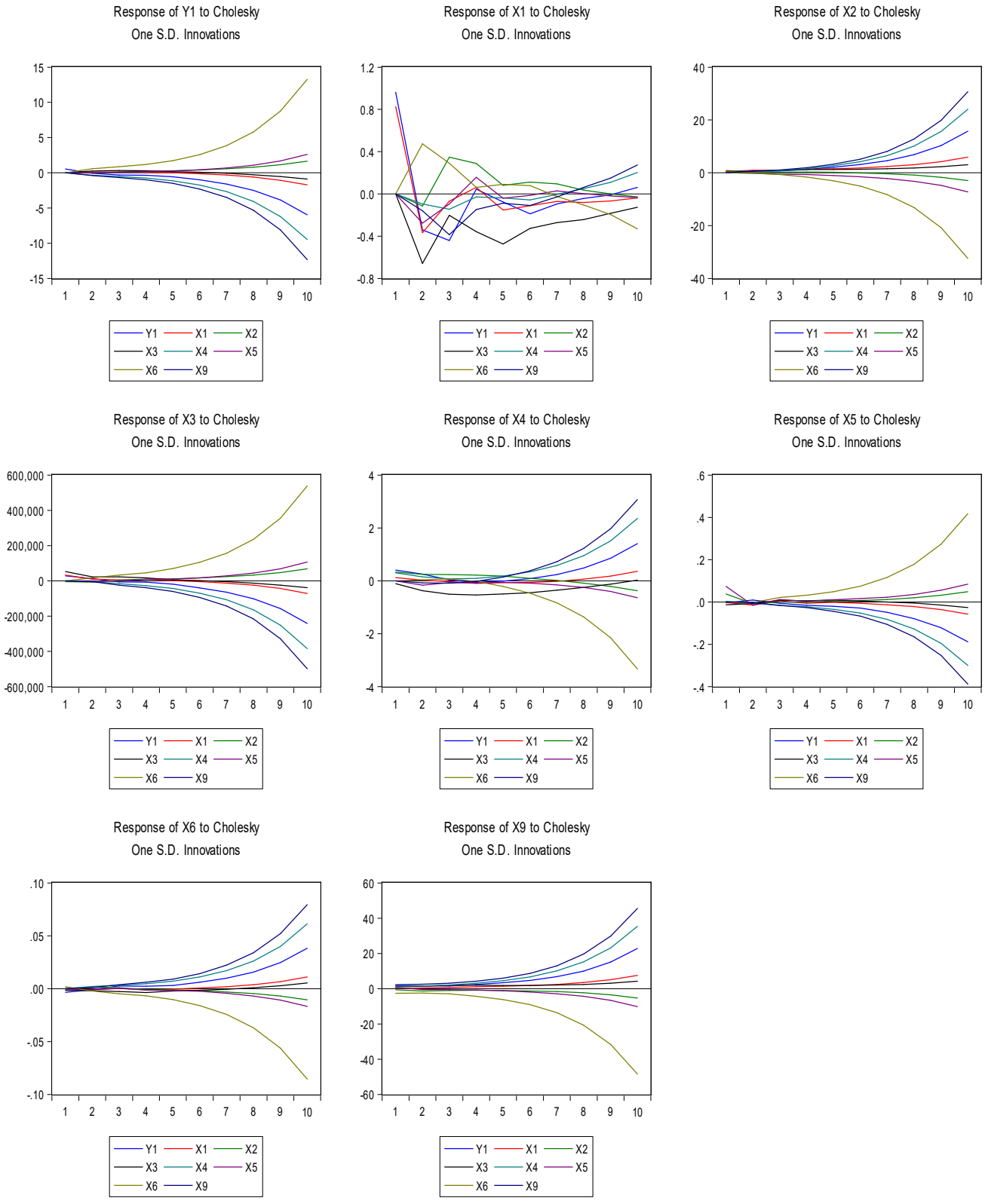

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Figure 6: Impulse Response Functions

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The VAR model of the import share of the developing countries is estimated below.

[1] y_{2t} = 11.96 + 0.8567y_{2t-1} - 0.3674x_{1t-1} - 0.0194x_{2t-1} + 1.18E-06x_{3t-1} - 0.3113x_{4t-1} + 49.30x_{7t-1} (1.08) (3.61) (-2.83)* (-0.55) (3.42) (-1.25) (1.24) + 27.68x_{8t-1} - 0.1433x_{9t-1} (1.22) (-3.53)*

R^2 = 0.99, F = 306.38*

[2] x_{1t} = -18.029 + 0.9164y_{2t-1} + 0.0690x_{1t-1} - 0.0223x_{2t-1} - 1.32E-05x_{3t-1} + 0.9556x_{4t-1} + 49.303x_{7t-1} (1.08) (3.61) (-2.83)* (-0.55) (3.42) (-1.25) (1.24) + 27.68x_{8t-1} - 0.1433x_{9t-1} (1.22) (-3.53)*

R^2 = 0.99, F = 306.38*

[3] x_{2t} = -40.29 + 0.8567y_{2t-1} + 0.3888x_{1t-1} + 0.9860x_{2t-1} + 2.49E-06x_{3t-1} + 0.7299x_{4t-1} - 208.20x_{7t-1} (-1.97) (0.94) (1.59) (14.90)* (0.38) (1.56) (-2.80)* + 76.72x_{8t-1} + 0.3202x_{9t-1} (1.80) (4.21)*

R^2 = 0.71, F = 2.86

[4] x_{3t} = 777018.3 + 55278.3y_{2t-1} + 2280.5x_{1t-1} - 2420.8x_{2t-1} + 0.0471E-06x_{3t-1} + 54304.3x_{4t-1} -6107547x_{7t-1} (-0.51) (1.70) (0.12) (-0.50) (0.10) (1.60) (-1.13) - 132208x_{8t-1} + 262.38x_{9t-1} (-0.04) (0.04)

R^2 = 0.95, F = 22.94*

[5] x_{4t} = 8.41 + 0.0734y_{2t-1} + 0.3589x_{1t-1} + 0.051x_{2t-1} - 1.10E-05x_{3t-1} + 1.07x_{4t-1} - 108.83x_{7t-1} (0.69) (0.28) (2.50)* (1.31) (-2.89)* (3.91)* (-2.49)* - 21.03x_{8t-1} - 0.0065x_{9t-1} (-0.84) (-0.14)

R^2 = 0.93, F = 17.08*

[6] x_{7t} = 0.0525 + 0.0021y_{2t-1} + 0.0013x_{1t-1} + 6.93E-05x_{2t-1} - 4.52E-08x_{3t-1} + 0.0032x_{4t-1} + 0.3585x_{7t-1} (0.43) (0.81) (0.93) (0.17) (-1.19) (1.20) (-0.82) - 0.0570x_{8t-1} + 2.13E-05x_{9t-1} (0.65) (0.04)

R^2 = 0.67, F = 2.23

[7] x_{8t} = 0.3095 - 0.00847y_{2t-1} - 0.0006x_{1t-1} + 0.0011x_{2t-1} - 2.71E-08x_{3t-1} - 0.0012x_{4t-1} + 0.2394x_{7t-1} (1.83) (-2.34)* (-0.31) (2.06)* (-0.51) (-0.32) (0.39) + 0.2274x_{8t-1} - 0.00014x_{9t-1} (0.65) (-0.23)

R^2 = 0.94, F = 19.14*

[8] x_{9t} = 34.76 - 1.267y_{2t-1} + 0.3016x_{1t-1} + 0.3296x_{2t-1} + 3.80E-07x_{3t-1} - 0.1092x_{4t-1} - 219.22x_{7t-1} (0.31) (-0.53) (0.23) (0.93) (0.011) (-0.044) (-0.55) - 38.86x_{8t-1} + 0.9815x_{9t-1}(-0.17) (2.42)*

R^2 = 0.93, F = 16.51*, * = significant at 5% level

The estimated VAR model of the import share of the developing countries which is a good fit and is given above where y_{2t} is significantly related with x_{1t-1},x_{9t-1};x_{1t} is significantly related with x_{1t-1},x_{9t-1};x_{2t} is significantly related with x_{2t-1},x_{7t-1},,x_{9t-1};x_{4t} is significantly related with x_{3t-1},x_{7t-1};x_{8t} is significantly related with y_{2t-1},$x_{2t-1}$and x_{9t} is significantly related with x_{9t-1} respectively.
This VAR model of the share of import of the developing countries is unstable because one root lies outside the unit circle shown below.

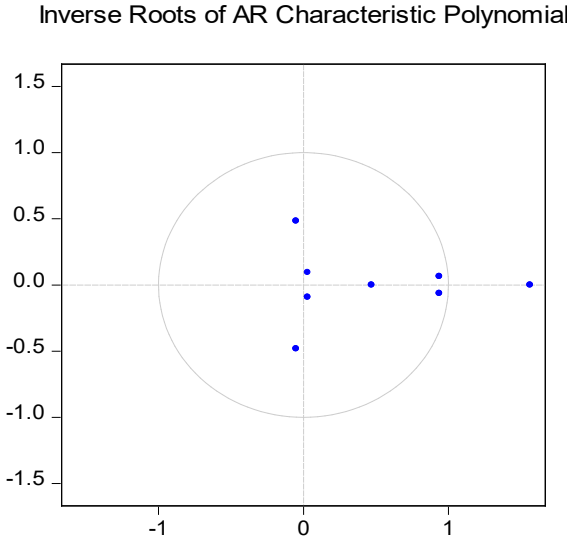

Figure 7: Unstable VAR (Source-Plotted by author)

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The impulse response functions of the VAR model of developing countries' import share has been diverging which means it is non stationary as a result of external shocks.

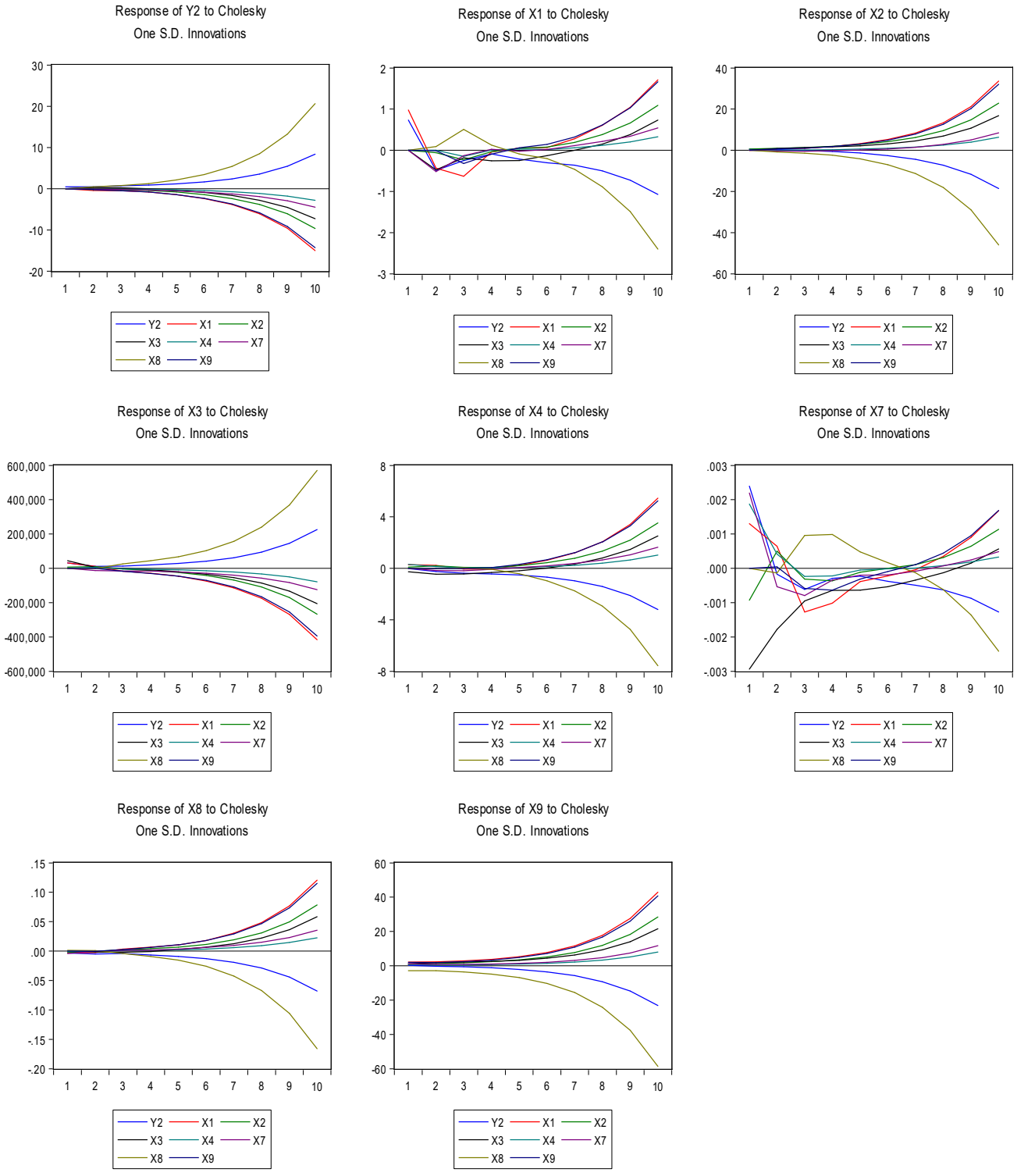

Figure 8: Impulse response function of import share (Source-Plotted by author)

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Policy Recommendations

In order to honour the observations of the econometric models, the improvement of export and import shares of the developing countries need to increase growth rate, reduce inflation rate and to stabilize the exchange rate mechanism especially declining nature of REER. Since FDI, diversification index enhanced export and import shares significantly so that these variables may be improved for betterment. Reduction of concentration index may rather increase the shares of export and import of the developing countries. Besides, the convergence of high growth rates in every region like Asia, Africa, Latin America and South Asia might be helpful in stipulating the export and import shares of the developing countries.

Limitations and Future scope of research.

The export and import shares of the developing countries may change with terms of trade, rate of tariffs, elasticity's of demand and supply respectively which were not included in this paper. The two sets of data during 1980-2016 and 1995-2016 have been taken due to non-availability of data from UNCTAD. This may cause differential results. Since the diversification index significantly influenced export and import shares, therefore product diversification could be studied region wise. Role of exchange rate behavior of NEER, REER and nominal exchange rate with the export and import shares of the developing countries may another area of research. Even, this analysis can be broken into Asian developing countries, African developing countries and Latin American Developing countries respectively from where comparative study might be done.

Conclusion

The paper concludes that the export and import shares of the developing countries have been increasing significantly at the rates of 1.8% per year and 1.72% per year respectively during 1980-2016.Both of them have shown upward structural breaks and smooth cyclical trends with one downswing. They have significant positive impact with foreign direct investment, inflation rate and diversification index and significant negative impact with real effective exchange rate but showed insignificant influence with growth rate. All these variables did not show co-integrating equations and their VAR models are unstable and non-stationary.

Reference

1. Jha, Raghabendra (1994) Macro-economics for Developing countries, London: Routhledge
2. UNCTAD (1999) African Development in a comparative Perspective, African World Press, Inc.
3. SESRTCIC (2006) Economic Problems of the Least Developed and Land –Locked OIC Countries, Journal of Economic Cooperation 27(3) 51-120.
4. Bardhan Pranab, Mukherjee, Dilip (2007) Decentralisation and Local Governance in Developing Countries: A Comparative Perspective, Delhi: Oxford University Press.
5. Choudhury, Robin (2012) Macroeconomic modeling in developing countries, Rapporter Report 31, Statistics Norway.
6. Vegh Gramont, Carlos A, Vegh, Carlos A (2013) Open Economy Macro Economics in Developing Countries, MIT Press.
7. Nayyar, Deepak (2013) Catch Up: Developing Countries in the World Economy, Oxford University Press.
8. Lane, Philip R (2014) Capital Flows to Low –Income Countries, DFID/IMF
9. Bremus, Franziska, Buch, Claudia M (2014) Banking market Structure and Macroeconomic Stability: Are Low –Income Countries Special? Paper presented at IMF on Macroeconomic Challenges Facing Low-Income Countries, Washington D.C.
10. Lim G.C, McNelis, Paul D (2014) Income Inequality, Trade and Financial Openness, Paper presented at the joint RES-SPR Conference on "Macroeconomic Challenges Facing Low-Income Countries "Hosted by the International Monetary Fund.
11. Lane, Philip R (2015) International Financial Flows in Low-Income-Countries, Pacific Economic Review, 20(1), 49-72.
12. Philip,Folarin A (2016,Jan-June) Job Security in Developing Countries: A Comparative Perspective, IPE Journal of International and Comparative Law, Part 1,51-75.
13. Johansen S (1988) Statistical Analysis of Co-integrating Vectors. Journal of Economic Dynamics and Control, 12, 231-254.
14. Johansen S (1996) Likelihood-Based Inference in Co-integrated Vector Autoregressive Models, (2nd Edition),Oxford University Press
15. Bai,Jushan, Perron,Pierre (2003) Critical values for multiple structural change tests, Econometrics Journal,6,72-78.
16. Hodrick ,Robert, Prescott, Edward C (1997) Post War US Business Cycles: An Empirical Investigation, Journal of Money, Credit and Banking,29(1),1-16
17. UNCTAD (2017) Trade Statistics, 2017.