



TRENDS AND GROWTH OF FOREIGN TRADE-A STUDY WITH REFERENCE TO BRICS AND TIMP NATIONS



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ABSTRACT

Foreign Trade plays a significant role in restructuring economic and social attributes of Nations around the world, especially the developing Nations. The paper aims to analyze the trends and growth of foreign trade in BRICS and TIMP Nations. Foreign Trade is a vital sector of a country's national economy and contributes substantially to the economic welfare of the people and the development of resources. Relevant data were collected from the reports of IMF (International Monetary Fund) data. The article purely based on the secondary data for the period of ten years from 2005-2006 to 2014-2015. The collected data were analyzed by using statistical tools and econometric tools namely Mean, Standard Deviation (SD), Co-efficient of Variation (CV), Compound Annual Growth Rate (CAGR), Trend Analysis, Average Annual Growth Rate (AAGR), Co-integration test, and Error correction model. The macro-economic variables used in the study are Exports, Imports, Interest rate, Exchange rate, Inflation rate, Gross Domestic Product, National Income, and Unemployment rate. It has been proven that exports have an improved performance of foreign trade. From the BRICS and TIMP Nations, Brazil, Russia, India, Indonesia and Mexico show a positive influence on Foreign Trade.

KEYWORDS: Foreign Trade, Trends, Growth, Economic Welfare, BRICS, TIMP.

INTRODUCTION

Foreign Trade could be defined as trade between the different Nations of the world. It is also called as International trade, External trade or Inter-Regional trade. Foreign Trade plays a vital role in the country's national economy, and contributes substantially to the economic welfare of the people and the development of resources. Foreign Trade is the potential weapons for developing an economy and plays an important role in achieving the country's socio-economic objectives. Foreign Trade has been an area of interest to decision makers, policy makers as well as economists. It enables Nations to sell their domestically produced goods to other Nations of the world. In a nutshell, Foreign Trade basically takes place

for mutual satisfaction of wants and utilities of resources. Hence, a study has been made to identify the growth of foreign trade in BRICS and TIMP Nations during the recent decade.

REVIEW OF LITERATURE

Nasim Shah Shirazi (2005) based on his study "Export-Led Growth Hypothesis: Further Econometric Evidence from South Asia" examined the Export-Led Growth (ELG) hypothesis for five South Asian countries through co-integration and multivariate Granger causality tests and the annual data were drawn from the IMF's International Financial Statistics. The objective of the study is to investigate the dynamic relationship among the variables that is Gross Domestic



Product (GDP), Real Imports and Real Exports. The study concluded by way of recommendation that those countries should continue with the import of necessary raw material for value addition and needed technology to expand capacity and improve productivity to increase output growth.

Priyanka (2012) in her study *“Export -Led Growth In India: An Empirical Investigation”* states that the present study attempts to test the mechanisms of Export - Led Growth in India by taking a time- series data from 1980-1981 to 2008-2009. It applies Ordinary Least Square (OLS) method to investigate the relationship between Gross National Product, Total Exports, Manufactured Exports and Investment. The author concluded the results of the study by indicating that there exists a significant and positive relation between exports and Gross National Product (GNP) for the whole period under study.

Rohit Singh Tomar (2014) in his study *“Selected Macro - Economic Variables and its Impact on Chinese and Indian Exports”* analysed that there is a wide cleft between the exports from India to the world and exports from China to the world. The share of Chinese and Indian exports is 11.13 per cent and 1.60 per cent respectively of the overall world’s export. This prompts the researcher to find out the impact of selected Indian and Chinese macro-economic variables such as Gross Domestic Product (GDP), FDI inflows, Exchange Rate, Per Capita Real Income and Inflation on the exports of India and China respectively. The author concluded that both the countries must focus on increasing GDP per capita to give a positive thrust to the export sector.

STATEMENT OF THE PROBLEM

The BRICS and TIMPs economy still experience some element of economic instability and this trade has turned the Nations to an import dependent economy. Foreign trade is one of the most important goals in both developed and developing Nations. But BRICS and TIMP Nations suffer from the balance of trade and balance of

payment and others. According to policies of liberalization and openness to trade, the Foreign Trade is not just a process of exchange of goods and services with the Nations of the world; it is an indicator that reflects the level of the Economic Development and openness to world trade markets. Therefore, Foreign Trade in BRICS and TIMP Nations increases competition, technological advancements, etc., based on the above issues the researcher has attempted to find out the answers for the following research questions:

- What is the growth of Foreign Trade in BRICS and TIMP Nations?
- What is the relationship between macro-economic variables in BRICS and TIMP Nations?

OBJECTIVES OF THE STUDY

1. To examine the trends and growth of Foreign Trade in BRICS and TIMP Nations.
2. To analyse relationship between the macro-economic variables in BRICS and TIMP Nations.

APPLIED RESEARCH DESIGN

The study is based on secondary data and the data reliable for analysis are collected from various reports, publications, magazines, journals, websites and various articles. The collected data have been used for analysis with the help of statistical tools and econometric tools. The various statistical tools used are Mean, Standard Deviation (SD), Co-efficient of Variation (CV), Compound Annual Growth Rate (CAGR), Trend Analysis, Average Annual Growth Rate (AAGR) and econometric tools, namely, Co-integration test, and Error correction model. The ARDL Bound Test was performed to detect whether there is a Co-integration in these series. The study covers a period of 10 years from 2005-2006 to 2014-2015.

ANALYSIS AND INTERPRETATION

Table 1 and 2 present the Annual Growth rate of Foreign Trade in BRICS and TIMP Nations.

Table 1 Annual Growth Rate of Foreign Trade in BRICS Nations from 2005-2006 to 2014-2015 (In Percentage)

YEAR	BRAZIL	AAGR	RUSSIA	AAGR	INDIA	AAGR	CHINA	AAGR	S.AFRICA	AAGR
2005-2006	47.21	-----	54.54	-----	-49.71	-----	48.93	-----	48.37	-----
2006-2007	46.97	-0.51	54.77	0.42	-51.80	4.20	48.99	0.12	49.24	1.80
2007-2008	45.68	-2.75	54.71	-0.11	-53.74	3.75	49.12	0.27	48.98	-0.53
2008-2009	43.63	-4.49	52.45	-4.13	-54.60	1.60	49.25	0.26	49.71	1.49
2009-2010	44.79	2.66	55.36	5.55	54.55	-0.09	46.14	-6.31	48.44	-2.55
2010-2011	46.01	2.72	57.79	4.39	-55.84	2.36	47.58	3.12	46.83	-3.32
2011-2012	46.18	0.37	54.86	-5.07	-56.23	0.70	48.00	0.88	42.63	-8.97
2012-2013	47.44	2.73	55.49	1.15	-53.82	-4.29	44.84	-6.58	51.63	21.11
2013-2014	48.34	1.90	56.24	1.35	-54.90	2.01	46.96	4.73	50.12	-2.92
2014-2015	46.23	-4.36	55.95	-0.52	-55.46	1.02	45.28	-3.58	51.07	1.90
2019-2020**	47.39	2.51	57.5	2.77	-58.62	5.70	43.52	-3.89	49.84	-2.41
Mean	46.35		55.42		-54.47		47.15		48.81	
SD	1.33		1.47		2.33		1.97		2.44	
CV	2.87		2.66		-4.27		4.17		4.98	
CAGR	-0.20		0.25		1.10		-0.77		0.54	

Source: Calculated and Compiled from IMF Data

** Trend prediction value

The table 1 revealed the annual growth of Foreign Trade in BRICS Nations during the period from 2005-2006 to 2014-2015. The average contribution of BRICS nation highest is 55.42 per cent in Russia, followed by 48.81 per cent in South Africa, and the lowest of -54.47 per cent in India. The Compound Annual growth rates of India is 1.10 per cent, followed by South Africa 0.54 per cent,

Russia 0.25 percent and negative growth of Brazil 0.20 per cent and China 0.77 per cent. The growth of Foreign Trade is expected to attain the following figures for the BRICS Nations in the year 2019-2020. The negative trend shows in India 58.62 per cent, and positive trend in Brazil, Russia, China and South Africa is 47.39 per cent, 57.5 per cent, 43.52 per cent and 49.84 per cent respectively.

Table 2 Annual Growth Rate of Foreign Trade in TIMP Nations from 2005-2006 to 2014-2015 (In Percentage)

YEAR	TURKEY	AAGR	INDONESIA	AAGR	MEXICO	AAGR	PHILIPPINES	AAGR
2005-2006	45.32	-----	61.94	-----	51.51	-----	51.94	-----
2006-2007	45.96	1.41	63.10	1.87	51.89	0.74	47.96	-7.66
2007-2008	44.12	-4.00	62.77	-0.52	51.64	-0.48	40.12	-16.35
2008-2009	47.95	8.68	61.43	-2.13	52.46	1.59	48.84	21.73
2009-2010	42.69	-10.97	63.01	2.57	51.67	-1.51	40.63	-16.81
2010-2011	46.97	10.03	62.87	-0.22	53.14	2.84	41.17	1.33
2011-2012	48.17	2.55	62.48	-0.62	51.98	-2.18	46.24	12.31
2012-2013	47.45	-1.49	61.97	-0.82	53.30	2.54	48.13	4.09
2013-2014	47.62	0.36	60.96	-1.63	52.51	-1.48	48.62	1.02
2014-2015	46.73	-1.87	61.55	0.97	51.40	-2.11	46.60	-4.15
2019-2020**	48.95	4.75	61.07	-0.78	53.26	3.62	45.46	-2.45
Mean	46.53		62.10		52.25		45.97	
SD	1.87		0.78		0.72		3.82	
CV	4.02		1.26		1.38		8.31	
CAGR	0.30		-0.06		-0.02		-1.07	

Source: Compiled and Calculated from IMF Data

** Trend prediction values

The table 2 exhibits the annual growth of Foreign Trade during the period from 2005-2006 to 2014-2015. The highest average contribution of TIMP nation is 62.10 per cent in Indonesia, followed by 52.25 per cent in Mexico. The lowest annual growth rate of foreign trade is 45.97 per cent in Philippines. The Compound Annual growth rates of Turkey are 0.30 per cent, Indonesia -0.06 per cent,

Mexico -0.02 per cent and the Philippines -1.07 per cent which shows a negative growth of Foreign Trade. The growth of Foreign Trade is expected to attain the following figures for the TIMP Nations in the year 2019-2020. The positive trend in Turkey shows 48.95 per cent, Indonesia is 61.07 per cent; Mexico is 53.26 per cent and the Philippines shows 45.46 per cent respectively.

H₀₁: There is no co-integration between Foreign Trade and macro-economic variables in BRICS and TIMP Nations.

Table 3 Bound Testing for ARDL Co-Integration

NATIONS	Wald Test :			
	Null Hypothesis : C(18)=C(19)=C(20)=C(21)=C(22)=C(23)=C(24)=C(25)=C(26)=0			
BRAZIL	F-statistic	1.2525	Probability	0.0240
	Chi-square	11.2732	Probability	0.0100
RUSSIA	F-statistic	5.9384	Probability	0.0022
	Chi-square	53.44612	Probability	0.0000
INDIA	F-statistic	2.3527	Probability	0.0184
	Chi-square	21.1751	Probability	0.0319
CHINA	F-statistic	2.3851	Probability	0.0452
	Chi-square	21.4661	Probability	0.0107
SOUTH AFRICA	F-statistic	1.5685	Probability	0.0223
	Chi-square	14.1165	Probability	0.0182
TURKEY	F-statistic	1.7210	Probability	0.1809
	Chi-square	15.4890	Probability	0.0783
INDONESIA	F-statistic	1.8106	Probability	0.0160
	Chi-square	16.2958	Probability	0.0410
MEXICO	F-statistic	40.2091	Probability	0.0000
	Chi-square	36.8820	Probability	0.0000
PHILIPPINES	F-statistic	3.4183	Probability	0.0222
	Chi-square	30.7650	Probability	0.0003

Source: Compiled and Calculated from IMF Data

According to the bound test results depicted in the table 3, the probability value of F statistics of BRICS and TIMP Nations is less than 0.05. So the null hypothesis is rejected, that means there is co-integration between the macro-economic variables and Foreign Trade.

To determine the short-term dynamic an Error Correction model of BRICS Nations result is presented in Table 4.

Table 4 Error Correction Model Results

Nations	BRAZIL		RUSSIA		INDIA		CHINA		SOUTH AFRICA	
Variable	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
DLFT(-1)	-0.07602	0.7109	0.2286	0.2262	0.2181	0.2824	0.2310	0.3477	0.2370	0.3521
DLEXT(-1)	26.2947	0.5566	-0.6444	0.3429	-1.5798	0.3613	-22.0513	0.0541	-2.9210	0.7224
DLEX(-1)	-16.6015	0.6650	-0.2407	0.0678	0.3782	0.9202	57.1880	0.5353	-2.0732	0.5064
DLGDP(-1)	-3.9042	0.4610	-0.0095	0.5060	0.2469	0.6594	-0.5657	0.1123	0.3051	0.6122
DLIMP(-1)	8.9396	0.8953	0.4505	0.3261	-1.4698	0.5241	19.7143	0.0687	2.5880	0.6627
DLINF(-1)	48.6672	0.1092	-0.0917	0.1963	0.3023	0.6939	0.0435	0.8875	0.5927	0.6400
DLINT(-1)	32.4048	0.6129	0.0143	0.6665	-0.0550	0.8665	0.0229	0.9468	4.0613	0.2881
DLNI(-1)	-6.1062	0.7895	-0.0430	0.1515	0.0378	0.0481	-0.7071	0.9111	2.0847	0.8666
DLUNEMP(-1)	99.0166	0.1350	-0.2316	0.0768	-0.2246	0.8059	2.8306	0.3315	-1.3963	0.7043
ECT(-1)	-0.3625	0.0257	-0.2124	0.0000	-0.3245	0.0006	-0.0578	0.0038	-0.2624	0.0018
C	1.0646	0.7248	-0.0140	0.1539	0.1023	0.5032	0.0291	0.8552	-0.0517	0.8936

Source: Compiled and Calculated from IMF Data

Table 4 displays the Error correction results of BRICS Nations for the period from 2005Q1 to 2015Q2. The coefficient of the error correction term in the model is negative and statistically significant. The estimated coefficient value of Brazil -0.36 percent, Russia -0.21, India -0.32 percent, China -0.57 per cent and South Africa -0.26 percent of the error correction mechanism implies that

the system corrects its previous period's disequilibrium from the long run estimates. The high significance of the coefficient of ECM term supports the existence of a long-run equilibrium relationship between Foreign Trade and macro-economic variables.

To determine the short-term dynamic an Error Correction model of TIMP Nations result is presented in Table 5.

Table 5 Error Correction Model Results

Nations	TURKEY		INDONESIA		MEXICO		PHILIPPINES	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
DLFT(-1)	0.1739	0.4264	0.0748	0.7463	0.1123	0.3218	-0.2192	0.2000
DLEXPT(-1)	2.6058	0.3822	3.6982	0.5322	-1.0315	0.8857	4.1315	0.2123
DLEXC(-1)	4.4898	0.2195	-7.3602	0.1058	-2.3521	0.5038	-1.6645	0.7693
DLGDP(-1)	-0.4936	0.1916	-1.0587	0.6418	-0.2029	0.5643	-0.0647	0.8739
DLIMP(-1)	-3.1076	0.4062	-5.6443	0.3332	4.2121	0.5355	-4.9667	0.1337
DLINF(-1)	0.8164	0.3688	0.2267	0.7755	-0.9599	0.4138	-0.3391	0.6155
DLINT(-1)	-0.8407	0.1805	-0.3505	0.8387	1.4770	0.5988	-0.5725	0.8179
DLNI(-1)	-0.0158	0.4625	-5.7524	0.1299	-0.0383	0.5774	-6.0467	0.0305
DLUNEMP(-1)	-0.8887	0.7942	0.9944	0.5401	-0.7605	0.7112	-3.6331	0.0779
ECT(-1)	-0.5610	0.0003	-0.0512	0.0039	-0.2447	0.0000	-0.7306	0.0065
C	-0.1301	0.4534	0.1015	0.6492	-0.3107	0.0595	0.0686	0.6548

Source: Compiled and Calculated from IMF Data

Table 5 describes the Error correction results of TIMP Nations for the period from 2005Q1 to 2015Q2. The coefficient of the error correction term in the model is negative and statistically significant. The estimated coefficient value of Turkey -0.56 per cent, Indonesia -0.05 per cent, Mexico -0.24 percent and Philippines -0.73 per cent of the error correction mechanism implies that the system corrects its previous period's disequilibrium from the long run estimates. The high significance of the coefficient of ECM term supports the existence of a long-run equilibrium relationship between Foreign Trade and macro-economic variables.

SUGGESTIONS

- From the BRICS Nations, China and South Africa have the negative impact on Foreign Trade. So the Nations should concentrate more on the reduction of Inflation rate by monitoring the domestic products and money control. By reducing that it will help to enhance the positive growth of Exports for the nation.
- The TIMP Nations of Turkey and the Philippines should concentrate more on Foreign Trade which shows a negative impact. To achieve it, the nation should pay more attention to the proper and appropriate trade strategies to promote Exports and high-tech trade.
- In order to make Exports more competitive in the International market and to improve level of

productivity, a number of measures should be taken by a country such as the diversification of Exports commodities, infrastructure development, reduction in tariff barriers and quantitative restrictions, increase in the incentives and subsidies to the Exporters and operationalization of Exports processing zone.

CONCLUSION

In the light of modernisation and globalisation, Foreign Trade has become inherent for all the Nations to prosper and to show their worthiness among other competitors. International negotiations among the Nations around the globe have proved to be fruitful to the Nations concerned. It has been proven that the Exports, as a component of Foreign Trade, and it has been further proved that there is an improved performance of Foreign Trade. From the BRICS and TIMP Nations, Brazil, Russia, India, Indonesia and Mexico show a positive influence on Foreign Trade. Therefore, conscious efforts should be made by the government to fine-tune the macro-economic variables in order to provide an enabling environment to stimulate Foreign Trade.

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