AN ANALYSIS OF THE TRADE RELATIONSHIP OF SRI LANKA WITH BANGLADESH AFTER TRADE LIBERALIZATION

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Abstract

This study aims to examine the trade relationship of Sri Lanka with Bangladesh after trade liberalization enforced in Sri Lanka after year 1977 by using quantitative approach. The time series data collected for this study are ranging from 1980 to 2015. The primary tool used to analyze the collected is Gravity Regression Model. The dependent variable used in this research is the value of total bilateral trade between Sri Lanka and Bangladesh. The independent variables of the model are defined as PCGDPij, TRi/GDPi, TRij/GDPj, IFij, ERij, and SAFTA. The free trade system could be able to change Sri Lanka's regional trade after Sri Lanka's liberalization.

Key words: Sri Lanka, Bangladesh, Trade Liberalization, Gravity Model, SAFTA

1. Introduction

Trade is an integral part of economic development and efforts sustaining the national growth of economy and prosperity. This is, in fact, a crucial instrument for industrialization while accessing to foreign exchange is essential for sustainable economic development. The liberal economist always argues that 'all countries that had sustained growth and prosperity have opened up their markets to trade and investment. On their views of comparative advantage, by liberalizing trade can benefit economically. In some other useful resources such as land, physical, and human capital are to make sure they can be useful highly at level best.

Sri Lanka's economic growth and development experiences are viewed throughout various periods, especially, after the episode of 1977 as it is more important than before. During that period, the government has implemented many development strategies and framed policies as well as they were turning to Sri Lanka's economy. The dimension of that policies and strategies varies more than before (Balakrishnen, 2010:15-16).

The government's new policy has included flexibility on dominancy, restrictions or control and intervention, and followed liberal policy, relaxation of interest rate, strengthening market oriented, ownership, privatization, foreign investment, export oriented industrialization and outlook development. Now, the economic liberalization policy is 35 years old. During this long period the development and economic growth experiences, and effects of the liberalization varies on large scales.

Nowadays, the system of trade has come to be seen in a two ways. One is that of the international trade and other one is regional pattern of trade or as called intra-regional trade. Based on this point of view the first one is indicating the mutual transaction of tradable goods and services taking place between the two countries for a long period of years. Next one is

the transactions of goods and services between regional or intra-regional set up as well as neighbouring countries which made it under the special circumstances (Nufile 2006).

2. Literature Review

It examines empirical research on the economic effect of regionalism based on trade liberalization is examined. The original study of the Jacob Viner (1950) contributes illustratively the possibilities of the trade creation and trade diversion effect through the formation of the custom union. Further, the above study divides empirical approaches into four categories: one is partial equilibrium analysis, second is general equilibrium analysis, third is gravity model approaches and the fourth is ex-post studies of regionalism.

According to Anuar Ariffin (2007) the first and second model-based counterfactual analyses while they involve either perfectly or imperfectly competitive markets. The third group of study originally developed by Jan Tinbergen (1962) with the reason of analyzing determinants of bilateral trade flows between partners. Fourth one is followed by Augusto de la Torre and Margaret Kelly (1992).

Original empirical studies have been done over the years to calculate the economic and welfare effects of regional trading arrangement (RTAs). This type of study started soon after Viner's (1950) vital contribution in theoretical impact of trade diversion effect due to the formation of custom union. Thereafter Verdoon (1954), Janssen (1961) and Krause (1963) also contributed to study of the economic effects on regionalism. Balassa (1967) also pointed out their significant role in examining the custom union in his study. Originally under Viner's outline, trade creation is linked with the expansion of trade between partner countries in agreement with comparative advantage.

These researches were carried out by Waqif and Chatterjee (1993), Ahuja and Battachaya (1993), Reddy (1993), Shrestha (1993), Thapa (1993), Wanigaratne (1993), and Yapa (1993) belong to the primary stage. These researches reveal the advantages obtained by the co-operation in the fields of agriculture, energy, manufacturing, and services through the inflow of investment with intra-regional trade. Furthermore, the limitation of economic and organizational constrains found among intra-regional economic co-operation of SAARC have been compared with that of European Union. Besides, it has been pointed out in these researches that, through regional arrangement, welfare increase will occur and it is inevitable that a SAARC member country continue to maintain the trade relationship with a third country.

Sirinivasan and Canonero (1993 a, 1993 b), Sirinivasan (1994) maintain that, South Asian countries could obtain innumerable benefits through their regional co-operation and regional trade extension. The research conclusion reached by them states that, small economy of SAARC countries have contributed remarkably to the intra-regional trade development. That is to say that, comparatively in small economy trade extension has taken place more than big economy. But, according to Das (2001) big economic countries like India and Pakistan did not have a considerable trade-creation effect.

3. Objective of the Study

To examine the trade relationship of Sri Lanka with Bangladesh after trade liberalization

4. Methodology

It explains the sources of data and explains the coverage of this study that runs over a period of 35 years, from 1980 to 2015. This study covers a total of 02 countries. These countries are chosen on the basis of importance of trading

partnership with Sri Lanka and availability of required data. Data used in this part of research covers a period of 35 years (1980-2015) after the liberalization in Sri Lanka. Two countries of SAARC (out of eight) such as Sri Lanka and Bangladesh are analyzed in this study to achieve the objective of this study.

For this objective, a regression analysis of the gravity model is used as follows:

$$\text{Log } T_{ij} = \beta_0 + \beta_1 \log (\text{PCGDP}_{ij}) + \beta_2 \log (\text{TR}_i/\text{GDP}_i) + \beta_3 \log (\text{TR}_{ij}/\text{GDP}_j) + \beta_4 \log (\text{IF}_{ij}) + \beta_5 \log (\text{ER}_{ij})$$
$$+ \beta_6 \log (\text{IEF}_{ij}) + \beta_7 \log (\text{SAFTA}) + \epsilon_{ij}$$

Where:

Tij = Total bilateral trade (US $) between Sri Lanka and country j (Bangladesh) at *t* time

PCGDPij = per capita GDP (US $) of Sri Lanka and country j (Bangladesh) at *t* time

TRi/GDPi =Trade-GDP ratio [openness (US $)] of Sri Lanka at *t* time

TRij/GDPj = Total bilateral trade-GDP ratio [openness (US $)] of country ij (Bangladesh) at *t* time

IFij = Inflation (GDP Deflator) annual percentage of Sri Lanka and country j (Bangladesh) at *t* time

ERij = Nominal Exchange Rate of Sri Lanka and country j (Bangladesh) at *t* time

IEFij = Index of Economic Freedom of country i and country j (Bangladesh) at *t* time

SAFTA is a dummy variable representing SAARC bloc and takes the value of 1 if both trading partners are members of SAARC and 0 if otherwise

ϵ_{ij} = error term, and β0, β1, β2, β3, β4 β5, β6 and β7 = parameters

5. Analysis and Findings

The Effects of Free Trade on Sri Lanka's Bilateral Trade with Bangladesh

The objective of this study is to examine how the trade of Sri Lanka and Bangladesh as member of SAARC/SAFTA has been carried out during the period of study (1980-2015). To lean-to this question, this research analyses trade patterns of Sri Lanka with Bangladesh to examine how trade has changed, especially, post- economic liberalization period of Sri Lanka. Thus, this study is to examine the trade relationship of Sri Lanka with Bangladesh.

Sri Lanka – Bangladesh Bilateral Trade

The attempt to identify the characters of determining factors of Sri Lanka's bilateral trade, importance of region of the SAARC countries has been taken as first. However, systematically simplified the countries are considered in alphabetical order. Therefore, first, Bangladesh, a SAFTA member country is used to estimate the relationship between selected variables and regional trade. The following multiple regression models, namely, linear-linear, log-linear, log-log, and linear-log have been used in this study and the best model will be selected based on various model selection statistics.

According to the values of all model selection statistics, namely, adjusted R square, 'F' Value and VIF are very good in all models except linear-log model. Further, Variance-Inflating Factor (VIF) specified between 1.2- 4.8 in the above models. This indicates that there is no serious multicollinearity among the variables.

But, according to the Durbin-Watson (DW) d statistic has been stipulated as dL = 1.18511 ≤ DW ≥ dU = 1.61296, therefore, not to decide autocorrelation among the error observation in all models (α = 0.05). However, all these values are very good in log-log model. Therefore, the log-log model is selected for Sri Lanka- Bangladesh trade test completion. According to that, the regression results for the selected model (log-log model) are presented in Table No: 6.1.

According to the below Table 1, sign of all variables are as expected in the theoretical or hypothetical argument. Regression results show that TRi/GDPit, TRijt/GDPjt, and ERijt are statistically highly significant to determine bilateral trade of Sri Lanka- Bangladesh.

Table 1 : Regression Results for the Log-Log Model of Post-liberalization Period (1980-2010)
(Influence factors on Sri Lanka- Bangladesh bilateral trade)

Predictor/Variables	Co-efficient	Probability
Constant	8.257	0.002***
Log PCGDPijt	0.01878	0.125
Log TRi/GDPit	-0.4936	0.030**
Log TRijt/GDPjt	1.02044	0.000***
Log IFijt	-0.01592	0.157
Log ERijt	1.6659	0.000***
Log IEFijt	-1.1573	0.179

Estimated $\alpha = 0.1^{*}; 0.05^{**}; 0.01^{***}$

However, per capita income, inflation, and index of freedom do not influence on bilateral of both two countries. Though, the trade to GDP ratio has only negatively influences while other two factors are positively influence on bilateral trade activities. That is, if trade to GDP ratio to be increased by 1 percent, the bilateral trade activities has to decrease about 0.49 percent, thus unilateral trade openness do not help to the growth of bilateral trade. If openness intra-trade to GDP ratios to be increased with 1 percent the bilateral trade behaviour has to increases by 1.02 percent.

While, the nominal exchange rate also raise by 1 percent the bilateral trade activities among both countries also move up with 1.6 percent. The regression results, further, explain that per capita GDP differ as larger between these two countries. Bangladesh is consisting of a large number of populations other than Sri Lanka. Thus, Sri Lanka tried to export more through free trade agreement. The matter of inflation should be considered as positive into bilateral trade in future, otherwise, inflation would be leading to cut down the bilateral trade.

And also, the subject of existing economic freedom achieved not supported both countries, therefore, both countries must allow more economic freedom such as business, trade, fiscal, monetary, investment, financial, and labour freedom other than existing capacity of peoples of the countries. Therefore, the free trade system could be able to change Sri Lanka's regional trade after Sri Lanka's liberalization.

6. Summary and Conclusions

The results were clearly proved that, trade liberalization is more helpful to Sri Lanka for her bilateral trade expansion or increase with SAARC member countries. But, individually, the per capita GDP differ as larger among them. I.e. Bangladesh is consisting of a large number of populations comparing with Sri Lanka. Thus, Sri Lanka tried to have more export through free trade agreement. The matter of inflation was cut down the bilateral trade. And also, the subject of existing economic freedom did not support to both countries. Thus, Sri Lanka tried to have more exports through free trade agreement. The subject of existing economic freedom achieved meaningfully to both countries.

Reference

Ahuja, S and Bhattacharya, R (1993), "SAARC-ASEAN Trade Complementarities and Regional Import Substitution Prospects", Economic and Sectoral Co-operation in South Asia, Edited by A A Waqif, New Delhi-India, Friedrich Ebert Foundation

Ariffin, Anuar (2007), "The Free Trade Doctrine, the ASEAN Free Trade Area and their Effect on Trade and Trade Policy", Unpublished Thesis, Murdoch Business School, Australia, Murdoch University

Balakrishnan, N (2010), "Development Problems in Sri Lankan Economy", Colombo-Sri Lanka, Kumaran Press, ISBN 978-955-659-240-5

Balassa, Bela (1967), "Trade Creation and Trade Diversion in the European Common Market", John Wiley, Economic Journal, Vol: 77, No: 305, Pp: 1-21

Das, D K (2001), "Regionalism in a Globalizing World: An Asia- Pacific Perspective", CSGR Working Paper, No-80/01, UK, Centre for the Study of Globalization and Regionalization [Also available at http://www.csgr.org]

Janseen, L H (1961), "Free Trade, Protection and Customs Union", Leiden: H. E. Stenfert Kroese

Krause (1963), "European Economic Integration and the United States", AEA, American Economic Review, Papers and Proceeding, May, Pp: 185-196

Nufile, A A M (2006), "SAARC: Intra-Regional Trade and its Impact on Member Countries: Special Reference to Sri Lanka", Unpublished Thesis, Peradeniya-Sri Lanka, Department of Economics, University of Peradeniya

Reddy, M J (1993), "Indo-Canadian Trade and Implications for Economic Co-operation", in Economic and Sectoral Co-operation in South Asia, Edited by A A Waqif, New Delhi-India, Friedrich Ebert Foundation

Shrestha, P R (1993), "Economic Perspectives and Regional Co-operation", in Economic and Sectoral Co-operation in South Asia, Edited by A A Waqif, New Delhi-India, Friedrich Ebert Foundation

Srinivasan, T N (1994), "Regional Trading Arrangement and Beyond: Exploring Some Options for South Asia: Theory, Empirics and Policy", Report, No: IDP-142, South Asia Region, World Bank

Srinivasan, T N, and G Canonero (1993 a), "Liberalization of Trade Among Neighbours: Two Illustrative Models and Simulations", South Asia Region Discussion Paper Series, Supplement II to IDP No: 142

Thapa, A N S (1993), "Areas of Co-operation in Specific Economic Sectors and Commodities", in Economic and Sectoral Co-operation in South Asia, Edited by A A Waqif, New Delhi-India, Friedrich Ebert Foundation

Tinbergen, Jan (1962), "An Analysis of World Trade Flows- Suggestions for an International Policy", in Shaping the World Economy, Edited by J Tinbergen, New York-USA, The Twentieth Century Fund

Torre, Augusto de la, and Margaret Kelly (1992), "Regional Trading Arrangement", IMF: Occasional Paper, No: 93, Washington DC -USA, International Monetary Fund

Verdoorn, P J (1954), "A Customs Union for Western Europe- Advantages and Feasibility", World Politics, Vol: 6 (July), Pp: 482-500

Viner, Jacob (1950), "The Customs Union Issue", CEIP, New York-Sri Lanka, Carnegie Endowment for International Peace

Wanigaratne, R A M C (1993), "Investment Co-operation in South Asia- is it Possible?", in Economic and Sectoral Co-operation in South Asia, Edited by A A Waqif, New Delhi-India, Friedrich Ebert Foundation

Waqif, A A and A Chatterjee (1993), "Economic and Sectoral Co-operation in South Asia", in Economic and Sectoral Co-operation in South Asia, Edited by A A Waqif, New Delhi-India, Friedrich Ebert Foundation

Yapa, L F (1993), "Co-operative Development and Promotion of Exports- A Sri Lankan Perspective", in Economic and Sectoral Co-operation in South Asia, by A A Waqif, New Delhi-India, Friedrich Ebert Foundation.