The Impact of Exports and Imports on Exchange Rates in India

Dr. Abhishek Kumar,

Assistant Professor,

Kydc Rahimapur Jhushi Allahabad

ABSTRACT

In the era of a globalized world, the interdependence amongst countries in terms of international trade of goods and services and capital flows has increased considerably. There is a considerable change in the trade composition of the developing countries with a magnificent shift from exporting commodity to manufacturing product exports. This change in the trade composition has made the developing countries terms of trade more stable, but its exports are becoming more sensitive to exchange rate fluctuations. This study empirically examines the impact of India's export and import on exchange rate using time series data for the period from January 2006 to October 2015 This study finds that there is positive relationship between export and exchange rate but negative relationship between import and exchange rate. Also, finds that the change in export will influence in positive changes in Indian Rupee against Euro, Pound, Dollar and Yen. But, Import is not positively influence on exchange rate between Euro, Dollar, Pound and Yen.

Keywords: Export, Import, Exchange Rate, Relationship, Granger Causality

INTRODUCTION

In open economies, the policies of foreign exchange rate are some of the most important macroeconomic indicators, because the world's investment decisions are affected by them. Also the success of the policy is affected by the effect of foreign exchange rates on imports and exports, in terms of a reduction in the foreign trade deficit. Today, the trends in the world economy as well as the movement of goods and services, labor, technology and capital throughout the world, regardless of the geographical boundaries, affect the economies of countries. Trade transactions involving more than one region normally require the conversion of a currency to another currency. The purpose of this research is to determine the impact of exchange rates on the imports and exports of emerging countries. The intention of this research was to develop an empirical study which will illustrate the nature of the relationship between imports-exports and exchange rates. The movement in exchange rates will be assumed to be as a result of exchange rate policies. Additionally, it is a chance for the researcher to apply theoretical knowledge to a practical situation through critical and robust methodologies as described by Iqbal, Khalid &Rafiq (2011) and Bhattarai (2011). In the next section, the literature review is

summarized with the objective of gaining adequate knowledge of the subject under research. In the literature, there have been several studies indicating the relation between exchange rate and foreign trade i.e. Export and import. However, this study differentiates from previous studies in two aspects. First, foreign exchange rate has been used as a dependent variable, in this study the foreign exchange rate was used as an indicator that considers inflation differences, as well. Second, although most of studies in the literature investigate the effect of foreign exchange rates on the foreign trade balance, in this study the effect of foreign exchange rates on imports and exports were analyzed separately. In the second part of the study similar studies in the literature and different opinions are mentioned. In the third part, information about the empirical methodology and data are given and the empirical results are evaluated.

DATA AND METHODOLOGY

This study uses time series data. The main objective of study is to examine whether the import or export effect the exchange rate (USD, EURO, POUND and YEN) in India. The monthly exchange value of EURO, POUND, DOLLAR and YEN as well as EXPORT and IMPORT has been used for the study. The data period is from January 2006 to October 2015. All-time series contains total of 118 observations. The data are collected from database of Reserve Bank of India and SEBI.

Time series annual macro data on Exports (Y) and Imports (X) from 1949-50 to 2004- 05 in nominal terms required to provide empirical content to the objectives of the study have been collected from the Economic Survey [Ministry of Finance, Economic Division] 2005-06 and Basic Statistics relating to the Indian Economy ,reserve Bank of India]The long run equilibrium relationship between India's exports [Y] and imports [X] has been looked at by using annual macro time series data for the period from 1949-50 to 2004-05. The method in analyzing the long run equilibrium relationship between India's exports and imports requires the determination of the integration order of each variable. This shall be accomplished by unit root testing of the macro time series variables. The unit root test provides the information about the presence/absence of stationary of the time series variables in levels or first difference If the time series variables, exports and imports, are not stationary in levels, then the series contain unit root. The estimates of economic relationships based on OLS method in the presence of unit root in the levels will be fly-by-night. The non-stationary time series data on exports and imports require to be differenced until stationary has emerged. The popular methods to detect the presence/absence of unit root and for determining the order of integration of each variable, exports and imports are the Augmented Dicky Fuller test and Phillips-Perron test. The order of integration of each time series variable needs to be established first. Briefly stated, a time series variable such as Y and X [exports and imports] is said to be integrated of order d if it is found stationary after differenced d times. This is generally denoted by $[Y] \sim I(d)$ and $[X] \sim I(d)$. According to Engel and Granger representation, the two variables Yand X, despite the fact that they are non-stationary in levels, are said to be co integrated, if the residuals from the co integration regression [linear combination] are integrated of any order less than d. For instance, if $[Y] \sim I(1)$ and $[X] \sim I(1)$, the residuals from the co integration regressions of Y on X or X on Y have to be $I(0)$ in order to have co integration between Y and X . Then there will be long run equilibrium relationship between Y and X. In the short run there may be disequilibrium between actual value of Y [or X] and long run equilibrium values. An

Error Correction Modeling helps to examine the presence of equilibrium or disequilibrium in the short run. Further, the estimate of error correction term explains the extent of disequilibrium that can be eliminated/corrected at each period

CONCLUSION

The present empirical exercise is to perceive the presence of long run equilibrium relationship between India's exports and imports. The empirical evidence based on ADF and PP unit root tests illustrate that the aggregate exports and imports are stationary in first log difference. The estimates based on cointegration and error correction modeling show that India's exports and imports are co integrated showing the existence of long run equilibrium relationship between them during 1949-50 to 2004-05

REFERENCES
1) Ahmad, Z. B., Lau, E., &Fountas, S. On the sustainability of current account deficits: evidence from four ASEAN countries. Journal of Asian Economics, 14, 465–487. 2003.
2) Arize, A. C. Imports and exports in 50 countries: Tests of cointegration and structural breaks.
3) BrarJaswinder Singh , "Elasticities of Demand for India's Exports : An Econometric Analysis", Foreign Trade Review ,Vol. 30 , No. 2-3 , 1995
4) Da Costa G C , "Elasticities of Demand for Indian Exports - An Empirical Investigation", The Indian Economic Journal , Vol. 13 , No. 1 ,1965 Engel.R.F., and C.W.J.Granger, "Cointegration and Error Correction :Representation,Estimation and Testing", Econometrica,Vol.55,No.2,March,1986
5) GeetanjaliNataraj,PravakarSahoo and B Kamaiah,"Export-Led Growth inIndia:What Do the VarsReveal?",Working Paper-84,Instatute for Social and Economic Change,2001
6) Gregory, A. W., & Hansen, B. E. Residual-based tests for cointegration in models with regime shifts. Journal of Econometrics, Vol.70. 1996.
7) Hakkio, C. S., & Rush, MCointegration: How short is the long run? Journal of International Money and Finance, Vol.10,No.4, 1991
8) Kantawala B S , "Price and Income Elasticities of Demand for Indian Exports and Imports", The Indian Economic Journal , Vol. 43 , No. 3 ,1996
9) Mallick S K "Causality Between Exports And Economic Growth In India:Evidence From Cointegration Based On Error Correction Model" The Indian Journal Of Economics , Vol. LXXVI,No.302, , 1996
10) Ramesh Chandra,"Export Growth And Economic Growth:AnInvestifgation Of Causality In India", The Indian Economic Journal , Vol. 49 , No,3 ,Jan – March 2001-2002
11) Tang, T. C. (). Are imports and exports of the five ASEAN economies co-integrated? An
12) Tang, T. C. Are imports and exports of the five ASEAN economies co-integrated? An empirical study. International Journal of Management, Vol.20.Vol.1, 2003
13) Upender,M,Aruna "Are exports and imports drifting apart from each other in India ?
14) An Application of co integration and error correction modeling" Indian Journal Economics and BusinessVol.3,No.2,2004
15) WadhvaCharan D , "Elasticities of Demand for India's Exports and Imports and the Question of the Devaluation of the Indian Rupee", Foreign Trade Review , Vol. 8 , No. 4,1974