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## ESTIMATING INDIA'S TRANSPORT COST IN NEW TRADE THEORY

#### **Shelly Gupta**

Abstract:-India has always witnessed the problem of rising trade deficits. Though exports have increased over the years, rising demand for inelastic imports (particularly crude oil and gold) more than the exports puts the trade deficit number in negative. However, high transportation costs continues to prohibit trade and increases the cost of imports (in the same way as tariff does). A higher trade deficit impacts several key macroeconomic variables of the economy like exchange rates, interest rates etc. and hence the growth of the economy. The aim of this paper is to analyze India's transportation cost with its trade partners and then see how its imports are affected by it.

#### **INTRODUCTION:**

In the present globalized world, trade is considered to be an important engine of economic growth. India's foreign trade has grown in absolute number since independence, but its share in the world trade has gone down from around 2.5 percent then to 0.67 percent in 1991 and increased to more than one percent in 2007.

In the case of India, imports are growing at an increasing rate particularly the intermediate and capital goods and with high transportation costs, it pushes up the landed price of imports making them more expensive. This is clear from the fact that India's trade balance has always been negative since independence except for the two fiscal years 1972-73 and 1976-77. A trade deficit culminates in a current account deficit and leads to increasing problems especially in the present scenario of high volatility of currency. A study by Prabir De and B. Ghosh shows the specific case of trade between Bangladesh and India where high transaction costs pose significant barriers to trade.

Major theories on international trade – the Classical Theory of Trade and the Heckscher-Ohlin Theory assumes transportation, tariff and other costs to be zero and believes that the driving forces behind the international trade flows are technological differences between the countries or the differences in their relative abundance of factor endowments respectively.

However, the New Trade Theory brings increasing returns and transport costs into one model where transport costs play a pivotal role in integrating the countries. It explains why trade volume increases as transport cost decreases.

#### DEFINITION, DATA AND METHODOLOGY:

Trade costs are defined as the costs incurred in exchanging of goods across national borders. It drives a wedge between export and import price, so one can take a difference between the two which will give all the costs incurred by the exporter in sending the good abroad. Transport costs are considered to be one of the major determinant of trade costs and hence are calculated as difference between export price and import price. Also for our model, distance adjusted transportation cost has been taken which we have calculated as the transport cost divided by the distance. (Distance was calculated as the distance between two countries based on bilateral distances between the biggest cities of those two countries, those inter-city distances being weighted by the share of the city in the overall country's population.)

The objective of this study was to analyse how India's imports are affected by various variables and the role of transportation costs in affecting imports. We will see how various factors affect the quantity of imports in India with its major trading partners.

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India as the reporter country and its 93 partner countries were taken into account to study. Rest of the countries were removed mainly due to the non-availability of the data.

Among the regressors other than the transportation costs, we include variables like crude oil, GDP of both partner and reporter countries, distance, tariff, and three dummy variables (dummy 1: language similarity between the reporter and partner country, dummy2: adjacency between the reporter and partner country and dummy3: RTA membership) which according to our theoretical construct is believed to have significant effect on imports.

Using OLS technique, a pooled regression analysis was estimated in Excel for the years 2001, 2005 and 20091. It is to be noted that due to the large figures of the import and GDP figures, the data is transformed into log values except for dummy variables( log zero is non-existent). Hence, the results will be interpreted in terms of percentage change (or elasticity).

#### **INTERPRETING RESULTS:**

Running the OLS regression (assuming that our data satisfies all assumptions of classical linear regression model), we obtain a R2 value of 0.629 which implies that 62.9% of variation in imports are affected by variation in explanatory variables. Also the p-value of the test (the lowest level at which the null hypothesis can be rejected) is zero which validates that F test is significant.

The signs of coefficients are in accordance with the theory except for the dummy1 i.e. language similarity but it holds little significance.

If we see the contribution of various regressors in explaining the increasing imports, that a 1 percent increase in GDP of reporter country increases the imports value by 0.43% whereas a similar 1 percent rise in GDP of partner countries leads to a rise of 0.87% in imports. Despite of increased integration, larger distances between countries leads to less imports between the two as seen in the negative coefficient of distance. Amidst all variables, transport costs seems to explain less variation in the imports as suggested by a negative value of 0.045 which means that a 1 percent increase in transportation costs leads to a decline in imports by 0.045%. Even though the coefficient is small, but this could have a significant impact when goods worth billions of dollars are traded.

#### **CONCLUSION:**

From the preceding analysis, it is made clear that transport costs, though little in value, are rising over time and can have significant effect on the imports and hence on trade balance. Moreover, in the recent Doing Business Report 2014, India ranks 142 out of 189 countries which is adverse.

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