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Determinants of India's Trade with SAARC Countries- Study of Trade in Textile and Clothing

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Abstract

Trade in textiles and clothing plays a pivotal role in the SAARC regional trade and is a major source of foreign exchange and promoting the growth of industrial sector in the SAARC member nations. The textile and clothing sector features among the top revenue generating sector in the South Asian countries and represents a large proportion of the overall output of the member countries. Textile and clothing sector in SAARC is one of the largest contributing sectors of their exports, employment, industrial production and GDP growth but still contributing lowest in the intraregional trade. Thus, it becomes important to examine the performance of textile and clothing sector in SAARC region. For this we have studied determinants of India's exports and imports in textile and clothing with SAARC members, with the help of Gravity Model. Factors like distance between the capital of two countries, size of the two economies, per capita incomes and whether or not they share a border have been included as independent variables to see their impact on trade of India with neighboring countries. Model shows that Indo-Pakistan trade has huge potential due to the capitals of two countries being closest in SAARC region. Study also concludes that SAARC countries need to improve the quality of their textile and clothing product.

Keywords : 1.SAARC, 2.GDP .GNI. .Gravity Model and 3.WITS.

Introduction

The regional volume of trade in the South Asian region has been limited so far because of the various roadblocks in the region, among which the major reason is tariff restrictions that the member nations impose on each other products. As far as degree of economic integration goes, South Asian region reports the least degree of integration. SAARC is the least integrated region of the world, intra-regional trade in SAARC is just 3% of its total international trade as compared to intra-regional trade in ASEAN region which is 29% of its total international trade (Wilson and Otski, 2007). Direction of trade in the South Asian region is governed by the trade to the rest of world, except, whose trade with India overshadows its trade with the rest of world. Reportedly, the intra- regional trade in South Asian region comprises of only 4 per cent of its total international trade. Most of the member nations in SAARC region trade with the United States of America and the European Union. Taking India as an example, the overall percentage of India's trade with the west is 30 per cent. Similar is the case for Bangladesh where the trade with the US and EU comprise about 81 per cent of the total international trade (Bouët and Corong, 2009).

Trade in textiles and clothing plays a pivotal role in the SAARC regional trade and is a major source of foreign exchange and promoting the growth of industrial sector in the SAARC member nations. The textile and clothing sector is one of the central manufacturing and export industries among the South

Asian countries. The textile and clothing sector features among the top revenue generating sector in the South Asian countries and represents a large proportion of the overall output of the member countries. Since the reduction in the amount of quota restrictions to the trade, the volume of trade in textiles has improved immensely and is expected to expand further (Tewari, 2008). Textile and clothing sector also plays an important role in GDP growth and international trade of SAARC member countries but share of the SAARC countries intraregional trade in textile and clothing shows that it is low as compared to their potential (UNCTAD,2007). It shows that textile and clothing sector in SAARC is one of the largest contributing sector of their exports, employment, industrial production and GDP growth but still contributing lowest in the Intraregional trade. Thus, it becomes important to examine the performance of textile and clothing sector in SAARC region.

Against this Background, issue of present study is to find out the reasons behind the lower trade of textile and clothing amongst SAARC countries. For this purpose we have reviewed some studies that relate to the determinants of exports and imports of textile and clothing among different countries of the world. These studies show that national income, trade openness (measured through free trade agreements), tariffs and non-tariff barriers, transportation cost, GDP, GNI, Distance, Border Sharing and foreign direct investment are the major determinants of exports and imports of the textile and clothing. But studies connecting them to the textile and clothing sector amongst SAARC countries were missing. In view of the issues raised above present study proposes to find out the determinants of exports and imports of textile and clothing amongst SAARC countries.

Methodology

To know the determinants of India's exports and imports of textile and clothing with SAARC member countries, we have used Gravity Model. Various kinds of gravity models are present in the literature of social sciences. Gravity models represent the original gravity theory given by Isaac Newton, gravity theory states that gravitational force varies proportionately with the masses of the two entities and inversely with the distance in between them. Similarly, it has been stated that economic flows in between two countries depend directly on the masses of economic activity in the two countries and inversely on the distance in between them. Gravity model has been used for studying bilateral trade in various studies. It has been used for studying north south trade by Coe & Hoffmaister (1998) and for studying trade between Eastern and Western Europe by Havrylyshyn & Pritchet (1991). Intra-region trade like that between EC and EFTA and the intra-Arab trade has been studied by Bayoumi & Eichengreen (1995) and Al-Atrash &Yousef (2000). Hassan (2001) has used this model specifically in the case of SAARC region.

The gravity model that has been used in this study is as follow:

$$X_{ij} = G\frac{Y_i E_j}{D_{ij}}$$

Where X_{ij} = Economic flows in between country i and country j

G = Gravitational constant

Y_i = relevant economic activity at origin

E_j = relevant economic activity at destination

D_{ij} = Distance in between country i and country j

This model has been used in this study considering two economic activity or variables that of Gross Domestic Products of the country and Per Capita Incomes of the countries. Gross Domestic Product represents the production capacity of the country whereas Per Capita Incomes represents the cumulative purchasing power of its citizens. Regression modeling has been conducted on this equation after applying natural log to it.

$$\ln(X_{ij}) = \ln(Y_i) + \ln(E_j) - \ln(D_{ij})$$

Another variable that has been used in addition to the above mentioned variables is a dummy variable for border sharing. Two countries that share borders are more probable of exchanging products and having trade compared to those which doesn't share the borders; the dummy of border sharing is therefore justifiable. The variable of border sharing assumes the value 0 and 1 where 1 represents border sharing and 1 represents no border sharing.

$$T_{ij} = G\frac{(GDP_i * GDP_j)(GNI_i * GNI_j)(\text{Border Sharing})_{ij}}{D_{ij}}$$

$$\ln(T_{ij}) = \ln(GDP_i * GDP_j) + \ln(GNI_i * GNI_j) + (\text{Border Sharing})_{ij} - \ln(D_{ij})$$

Where T_{ij} = Trade flows in between country i and country j

GDP_i* GDP_j = Combined production capacity country i and country j

GNI_i * GNI_j = Combined purchasing power country i and country j

Border sharing = whether or not country i and country j share borders

D_{ij} = Capital distance in between country i and country j

The data considered is in panel data format with Year and Country-pair variables. Panel Data OLS regression has been applied in order to know about the impact of these variables on the trade flows between the two countries. The resulting regression coefficients would represent the nature of the relationship that the independent variables have with the dependent variable of trade flows. It is expected that the variables other than capital distance will have a positive relationship. The data for Gross Domestic Product and Per Capita Income (GNI per capita) have been sourced in from the World Bank datasets. Data for trade flows were collected from the United Nation Commodity Trade (UNCOMTRADE) data source. we have extracted the UNCOMTRADE data by using the World Integrated Trade Solution (WITS) software of World Bank. WITS was developed by the World Bank in close collaboration with the United Nation Conference on Trade and Development (UNCTAD).

Results

Gravity model has been used to look at the determinants that affect the export and import of products in between the countries. In this model, factors like distance in between the capital of two countries, size of the two economies, per capita incomes and whether or not they share a border have been included as independent variables to see their impact on trade of India with neighboring countries.

$$\ln(\text{trade volume})_{ijt} = B_1 \ln(GDP_{it}GDP_{jt}) + B_2 \ln(PCI_{it}PCI_{jt}) + B_3\ln(\text{Distance}_{ij}) + B_4(\text{Border Sharing}_{ij})$$

GDPs of a country represents the size of its economy, the product of GDP that has been used as a variable in the model represents the combined production capacity of the two partner countries, in this case India and its partner country. GNI per capita is used as a representation of purchasing power, and therefore, the product of the GNI per capita of the two nations represented the combined purchasing power. The distance between the capitals of the two trade partner countries, India and the partner nation, is a variable that will negatively affect the trade in between the two countries. More the distance, lesser will be the trade between partners. The other factor that has been considered is whether or not two countries share border which is an important factor. As is clear, border sharing will enable easy and low cost trade of products.

The results of the analysis presented in table 4.52 shows that all the four variables significantly impact the trade volume in between India and its partner countries. The regression model was found to be overall significant too at 5% level of significance [R^2=0.7761, F (118) = 103.3, p< 2.2e-16. The impact of products of GDP or the combined production capacities of the two countries was found to be positive (β = 1.8877, p < 2e-16) implying that more the production capacity more will be the trade in between two countries.

Table 4.52 Factor Affecting Volume of Trade; Result of Regression Analysis

Independent Variable	B	Error	t-value	Significance
Constant	-101.5598	9.3062	-10.913	< 2e-16***
GDP Product	1.8877	0..1249	15.111	< 2e-16***
GNI Product	-1.4411	0.1987	-7.252	5.3e-11***

Distance between capitals	-5.2554	0.6752	7.784	3.5e-12***
Border Sharing	2.2827	0.5690	4.012	0.000108***

Note: *** significant at 5%, R-square: 0.7761

It was however found that the products of GNI per capita of the two countries had a negative impact on the trade volume (β = -1.4411, p = 5.3e-11). This negative relationship indicated that more the purchasing power of the countries, lesser will be the trade between them. This result is not totally unexpected and can be justified. For example, a person who has a higher purchasing power will not like to buy goods that are inferior in quality. The goods produced by the third world countries are considered to be inferior in quality as compared to those produced by the advanced countries. This can be cited as a reason for decreasing trade corresponding to higher purchasing power. Moreover, even if the purchasing power of only one country has increased and not the other, even then the country with higher purchasing power would not want to import from the partner country which would decrease the overall trade volume.

Distance between the countries' capitals was another variable that was used in the model. The impact of this variable was found to be negative (β = -5.2554, p = 3.5e-12). This negative relationship indicated that more the distance between two countries, lesser will be the trade between them. This result is not totally unexpected and can be justified, for example analysis of tends and patterns of trade shows that India has more trade with Bangladesh, Nepal and Pakistan as compare to Afghanistan, Maldives and Bhutan which are far away from India as compare to Bangladesh, Nepal and Pakistan.

The variable of border sharing is more significant in case of India as compared to the variable of its distance with partner countries. The results of the analysis show that border sharing has a positive impact on the trade volume in between India and its partner nations (β = 2.2827, p = 0.000108). This shows that if a country shares border with India, then the probability to have a higher trade volume with India is greater as compared to one that doesn't. SAARC nations that doesn't share border with India are Sri Lanka and Maldives. Sri Lanka shares water with India but not border due to which Sri Lanka and Maldives are probable to have lesser trade volume with India.

Conclusion

Study concludes that India and Pakistan can increase their trade more by solving their political conflict because gravity model result shows that distance between the capitals of two nations will negatively affect the trade. This shows that Indo-Pakistan trade has huge potential due to the capitals of two countries being closest in SAARC region.

Moreover, variable of border sharing could be more important in case of India as compared to the variable of its distance with partner countries. SAARC nations who do not share border with India are Sri Lanka, Maldives, Pakistan and Bangladesh. So this could be the reason of less trade between SAARC countries because border sharing is positively related with volume of trade between two countries.

Study also concludes that SAARC countries need to improve the quality of their textile and clothing product because result of the gravity model shows the negative relation between GNI per capita and volume of textile and clothing trade amongst SAARC countries. Its shows that items of textile and clothing produced in SAARC region are inferior of quality as compared to others.

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