

## CHAPTER XVII

# A STUDY OF INDIA AND ITS TRADE INTENSITY INDEX WITH MERCOSUR

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## ABSTRACT

*It is comprehended that complementarity in the trade structure of the countries encourages more export and import between them and there is scope for common advantage from this expanded exchange. Thus distinguishing and measuring trade complementarity is an essential task in acknowledging trade potential among countries. Regional Trade Agreements are effective and successful only if they are carefully designed by identifying and collating complementary products and sectors. There are different indices developed to examine the trade pattern and to see whether expanded participation is conceivable between countries. One of the indices is the Trade Intensity Index (I(a) Export Intensity Index (EII) and (b) Import Intensity Index (III)). The study is an attempt made to construct the indices for India and MERCOSUR and to see whether increased trade cooperation between these two trading partners is possible or not.*

**Key Words:** Trade, India, MERCOSUR, Intensity Index.

## INTRODUCTION

The study concentrates on MERCOSUR as India consented to a Preferential Trade Arrangement with MERCOSUR which came into effect from 1st June 2009. The principal research issue floats around the investigation of the effect of India – MERCOSUR PTA on India's trade pattern.

Usually RTAs are formed by more than two countries. When two countries decide to give each other free entry into their markets, it is called a bilateral free trade agreement. These began to proliferate from the 1990s. After 1990, more countries wished to develop bilateral trade and investment relationships, as a result many bilateral RTAs were concluded. For example, at the beginning of the twenty-first century, Japan signed a bilateral FTA with Singapore whilst Australia has become a bilateral trade partner with both Thailand and Singapore.

The phenomenon of the 'spaghetti bowl' came into existence as more RTAs were implemented, as pointed out by Bhagwati (1992). For instance, nowadays, most of the WTO members have participated in one or more RTAs (WTO 2007), which means those RTAs intersect each other. To outline the extent of this phenomenon, member countries of EU and European Free Trade Agreement (EFTA) are involved in more than 19 RTAs whilst South American countries like Brazil, Colombia, Venezuela, Chile and a number of countries from Central America are each involved in eight to eighteen RTAs (Crawford and Laird, 2001).

## REVIEW OF LITERATURE

There is a lot of empirical investigation conducted on the relationship between regional integration and economic growth. Thirlwall (2000), Wacziarg and Welch (2003), and Frankel and Romer (1999) highlighted a positive relationship in their studies between trade liberalization and growth. However, there exist skeptics like Rodriguez and Rodrik (1999) and Cruz (2008) who doubt the role of trade openness per se in stimulating growth. The relationship between different forms of international integration and economic growth was extensively surveyed and empirically investigated by Haveman, Lei and Netz (2001). They came to a conclusion that increased growth takes place due to membership into a trade block and foreign direct investment into a country. Two presumptions were tested by Dee (2007), which state that economic integration promotes economic growth and preferential trade agreements promote economic integration.

A number of studies focus on the reason behind the rapid increase in bilateral and regional trade agreements in the arena of international trade. The argument put forth by Fiorentino Verdeja and Toquebeuf

(2006) is that the proliferation of RTAs is a challenge as well as opportunities for the WTO members and that the RTAs should be designed and implemented in such a way so as to ensure that the RTAs complement the multilateral process. Sager (1997) said there is a widespread disagreement regarding the effect of regional trade agreements on the multilateral trading system.

### India-Latin America Trade Relations

Preferential Trade Agreements (PTAs) have been signed between India and some of the larger countries of the region like Colombia, Chile, Brazil and Venezuela. Joint Working Groups have been set up to explore bilateral mechanisms to improve the economic and trade linkages with Mexico, Brazil and Colombia. Major capital cities are the targets of various Indian banks who intend to open up their branches in the region. India's relation with Mexico has reached a stage of meaningful financial collaboration and a mature international partnership. The focus is on strengthening bilateral economic cooperation in agricultural development, food production, industry, energy, science and technology, communication, tourism and financial cooperation. The commodity trade exchange is also a part of economic co-operation.

### India – MERCOSUR Trade Relations

MERCOSUR (Southern Common Market) is an economic and political agreement among Argentina, Brazil, Paraguay, Uruguay, and Venezuela with Bolivia becoming an accessing member on 7 December 2012. PTA was signed between India and Latin America on January 25, 2004. India-MERCOSUR PTA came into effect from 1st June, 2009. India-Argentina relations are multifaceted and it encompasses different aspects like political, trade, cultural and cooperation in science and technology. Areas in which such technological collaboration have occurred incorporate joint ventures in sugar refining, consumable liquor, chemicals utilized as a part of textile industry, telecom sector, shipping containers, in all of which Argentine organizations/companies will work together with organizations/companies in India. Additionally, some Indian organizations have set up endeavors in Argentina for

assembling and sale of bikes and production of reactive colour dyes for cotton and silk yarns.

The third ranking Latin American nation with which India is progressively moving closer on bilateral terms is Brazil. Persuaded of their parallel encounters in appreciation of economic advancement, the two nations have been making efforts for some time to build two-way relations. Concerning activities as far as swearing off relations with India, it might be said Venezuela is prepared to be the best business accomplice of India. Despite the fact that India is an expansive producer of oil, yet it is additionally a substantial buyer since 1994. Venezuela has been supplying fuel for an era in India. In the domain of trade, India has great business potential outcomes with Venezuela in products such as pharmaceuticals, vehicles parts and materials. Indian industrialists ought to need to come to Venezuela and find for themselves the conceivable outcomes for joint endeavors. Truth be told, it is the enthusiastic ventures of individuals, for example, Vasco da Gama and Christopher Columbus whose endeavors made conceivable the Indian mango to turn into the national product of Venezuela pretty much as the European potato turned into a prominent dish in India.

Trade between India and Uruguay is ideal to India, though restricted. Nonetheless, since 1992 trade between the two nations has benefitted both the economies. Our fundamental exports to Uruguay are chemicals, materials, metal items, electrical material and some vehicle parts. Indian bikes, particularly Hero Puch, Kinetic, Bajaj and TATA vehicles are broadly acknowledged in the Uruguayan market. There is a Free Trade Zone in Uruguay where Tata Consultancy Services (TCS) have opened their branch. Our fundamental imports from Uruguay are materials, wool, cowhide and plastic materials.

### OBJECTIVES

Following are the objectives of the paper:

1. To study if there is a high degree of Trade Intensity between India and MERCOSUR.
2. To study if the PTA signed between India and MERCOSUR has benefitted the nations.

## METHODOLOGY

The main source of data collection for the study is the secondary data. Statistical data relating to the study is collected from UNCTAD Statistical Yearbook. UNCTAD is the database from which the data for exports and imports has been derived.

Trade Intensity Index enables the assessment of the trade value in a bilateral context of the two countries with respect to the value of the trade whether increased or decreased. If the index shows more than one, then it is indicative of a healthy flourishing trade.

## DATA ANALYSIS

### Trade Intensity Index (TII)

The index can be defined as a certain quantity share exports of a country to its partner divided by the quantity share exports of the world to its partner. The formula used is as follows:

$$T_{ij} = (x_{ij}/X_{it}) / (x_{wj}/X_{wt}) \quad (1)$$

Where,  $x_{ij}$  = the values of country  $i$ 's exports to country  $j$

$x_{wj}$  = country  $i$ 's total exports

$X_{it}$  = the values of world exports to country  $j$

$X_{wt}$  = total world exports

An index value of more (less) than one indicates a bilateral trade flow that is larger (smaller) than expected, given the partner country's importance in World trade. Trade Intensity Index is divided into (a) Export Intensity Index (EII) and (b) Import Intensity Index (III) for understanding the pattern of exports and imports. The trade intensity index as stated by Kojima (1964) and Drysdale (1969) is as follows:

### Export Intensity Index (EII)

$$\text{EII between India and MERCOSUR} = \frac{X_{im}/X_i}{M_m/(M_w - M_i)} \quad (2)$$

$X_{im}$  = India's export to MERCOSUR

$X_i$  = India's total export

$M_m$  = MERCOSUR's total import

$M_w$  = World's total import

$M_i$  = India's total import

### Import Intensity Index (III)

$$\text{III between India and MERCOSUR} = \frac{M_{im}/M_i}{X_m/(X_w - X_i)} \quad (3)$$

$M_{im}$  = India's import from MERCOSUR

$M_i$  = India's total import

$X_m$  = MERCOSUR's total export

$X_w$  = World's total export

$X_i$  = India's total export

### Trade Intensity Index between India and MERCOSUR

Trade Intensity Index (TII) is computed for MERCOSUR and India from the time period of 1995 to 2017 using the data from the UNCTAD (United Nations Conference on Trade and Development) statistical database. Both EII and III are ascertained for MERCOSUR and India. If the index is equivalent to one, it implies that there is a higher degree of trade intensity between two given nations. Vice-versa, if the calculated index is nearing zero, then it implies that there is a lower trade relation. If the index is numerically greater than one, this would infer over-representation of one nation in the other nation's exports/imports. Then again, if estimation of the index is less than one, then it implies under-representation. Table 1 and Figure 1 demonstrate the Trade Intensity Index between India and MERCOSUR.

Table 1: Trade Intensity Index between India and MERCOSUR

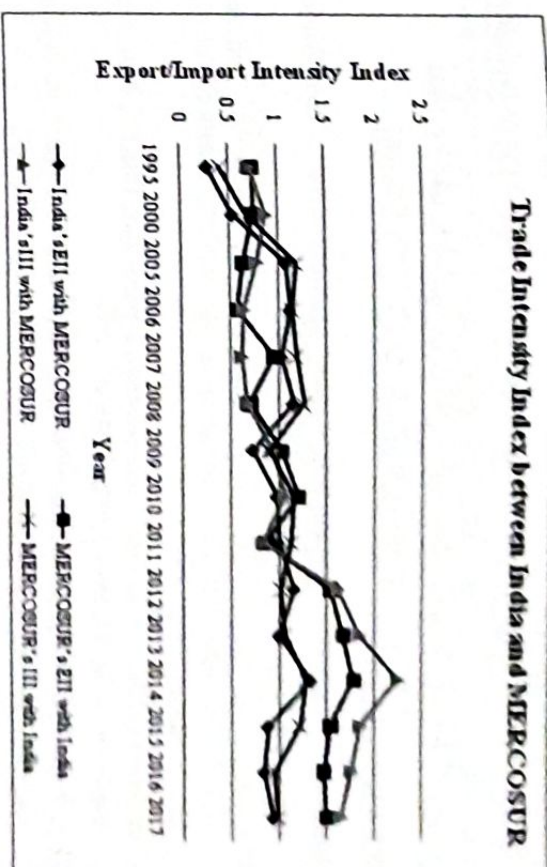
Year	Export Intensity Index		Import Intensity Index	
	India's EII with MERCOSUR	MERCOSUR's EII with India	India's III with MERCOSUR	MERCOSUR's III with India
1995	0.27 (UR)	0.74 (UR)	0.71 (UR)	0.41 (UR)
2000	0.53 (UR)	0.74 (UR)	0.88 (UR)	0.68 (UR)
2005	1.08 (OR)	0.63 (UR)	0.78 (UR)	1.18 (OR)
2006	1.12 (OR)	0.57 (UR)	0.64 (UR)	1.14 (OR)
2007	1.03 (OR)	0.95 (UR)	0.62 (UR)	1.18 (OR)
2008	1.15 (OR)	0.70 (UR)	0.67 (UR)	1.26 (OR)
2009	0.73 (UR)	1.03 (OR)	0.93 (UR)	0.90 (UR)
2010	0.98 (UR)	1.20 (OR)	1.06 (OR)	1.16 (OR)
2011	0.99 (UR)	0.86 (UR)	0.83 (UR)	1.12 (OR)
2012	1.16 (OR)	1.54 (OR)	1.62 (OR)	1.02 (OR)
2013	1.00 (OR)	1.67 (OR)	1.59 (OR)	1.10 (OR)
2014	1.33 (OR)	1.78 (OR)	2.25 (OR)	1.28 (OR)
2015	0.88 (UR)	1.54 (OR)	1.85 (OR)	1.22 (OR)
2016	0.84 (UR)	1.47 (OR)	1.76 (OR)	0.95 (UR)
2017	0.94 (UR)	1.50 (OR)	1.65 (OR)	0.99 (UR)

Note: (OR) denotes Over Representation and (UR) denotes Under Representation.

Data Source: Computed from UNCTAD database

It can be seen from Table 1 that the index value of India's export and import intensity for the years 1995-2011 with MERCOSUR maintained less than unity value throughout the period barring 2005-2008 and 2010, subsequently it mirrors that India has been under-represented in MERCOSUR's trade and trade relation appears to be feeble. The trade potential for the years 2012 to 2014 increased reflecting the trade intensity index above one. This reveals that India has strengthened the trade relation with MERCOSUR. As a consequent effect of 'Demonetisation' in 2015, India's export intensity with MERCOSUR weakened and depicts that till the year 2017 India has been under-represented in MERCOSUR's trade. While, MERCOSUR's commodities are over-represented in India's trade.

Figure 1: Trade Intensity Index between India and MERCOSUR



Data Source: Computed from UNCTAD database

MERCOSUR's export intensity with India maintained less than unity value throughout the period barring 1995-2008. This implies that exports to India from MERCOSUR are lower than would be expected given India's share of world trade. This situation is the reverse when examining the import intensity values, which was less than unity in 1995, 2000, 2009, 2016 and 2017. This analysis shows that India, as a source of exports for MERCOSUR is under-represented. Whereas, the import market for MERCOSUR's goods, is over-represented in India's trade. The natural trading partner theory reveals that the countries tend to trade more with neighbours and close proximate partners. Both the index will descend/reduce once it is adjusted for the geographical distance.

## CONCLUSION

Firstly, India has taken many initiatives in the direction of improving the strategic partnership between India and Latin America. The emergence of regional integration has become the most important trade development in the recent past with large number of regional, bilateral and trilateral agreements. India-MERCOSUR PTA is the foremost among them. India is expected to increase its trade with the

MERCOSUR countries. India accepts and visualizes Latin American country as a major provider of its food security and energy needs.

Secondly, the results of the trade indices calculated between India and MERCOSUR reveal the presence of complementary sectors and products available for improving trade cooperation between them.

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