

## Pakistan's Trade with India – Disaggregated Prospects

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### Abstract

*The study has made an attempt to expose the disaggregated dynamics Pakistan's trade with India for a period of 2004-14 at HS-2 digit classification. It was observed that at least three quarters of Pakistan's total exports to as well as imports from India comprised of top ten categories at HS-2 digit classification in each case. Nearly half of Pakistan's bilateral trade with India comprised of edible vegetables, organic chemicals, plastics and its articles and cotton, almost consistently during 2004-14 and each of these four categories were also included in Pakistan's top ten exports to and imports from India. The study further revealed that Indian exports to Pakistan enjoyed three times more complementarity in Pakistan than Pakistani exports enjoyed in India, consistently during this period. Pakistan's imports from India were more than expectations in all the top ten categories though India possessed consistent revealed comparative advantage only in three of the top ten Pakistani imports from India.*

**Keywords:** Pakistan-India Trade, Disaggregated Trade, Trade Complementarity, Revealed Comparative Advantage, Export/Import Intensity Index

**JEL Classification:** F140

### 1. Introduction

India was the major trading partner of Pakistan at the time of independence (Zaidi, 2015) but the three major wars and persistent bilateral trust deficit did not allow trade volumes to grow in the later years. There has been a gradual revival in Pakistan's trade with India since mid1990s in general, and after 2004, in particular. Pakistan's aggregate trade with India increased more than three times in four years from 2004-08 from \$ 612 million to over \$ 2 billion; but then remained below that value till 2012, duly reflected in the statistics provided in Table 1. However, aggregate analysis does not capture the interesting dimensions of bilateral trade that cannot be reflected through aggregate volume. The authors have attempted to explore and expose some critical dynamics of Pakistan's bilateral trade with India at disaggregated level during 2004-14.

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Most of Pakistan's bilateral trade with India has been in the form of imports from India (especially since mid 1990s) despite the fact that India has extended the Most Favoured Nation (MFN) status to Pakistan in 1996 while Pakistan has yet to return this favour. Table 1 shows that Pakistan's exports to India as a percentage of its total world exports remained low and generally declined whereas its imports from India as a percentage of Pakistan's total world imports increased during the reference period. It is interesting to note that Pakistan's total trade with India as percentage of its trade with neighbours has generally declined in the same period when trade with India as a percentage of world trade has increased. The reason behind this phenomenon was the extraordinary growth in Pakistan's trade with its neighbour China<sup>2</sup>.

**Table 1: Pakistan's Trade with India in Global and Local Context**

Years	Volume in million \$			India as % of World			India as % of Neighbours		
	Imports	Exports	Total Trade	Imports	Exports	Total Trade	Imports	Exports	Total Trade
2004	454.41	158.5	612.9	2.53%	1.18%	1.96%	20.08%	15.44%	18.63%
2005	576.7	337.22	913.9	2.30%	2.10%	2.22%	17.25%	16.73%	17.06%
2006	1115	326.7	1442	3.74%	1.93%	3.08%	24.57%	16.31%	22.04%
2007	1266.2	291.7	1558	3.88%	1.64%	3.09%	21.26%	15.44%	19.86%
2008	1691.5	354.64	2046	4.00%	1.75%	3.27%	23.32%	12.00%	20.04%
2009	1080.4	235.32	1316	3.42%	1.34%	2.68%	18.20%	8.23%	14.96%
2010	1559.9	274.98	1835	4.16%	1.28%	3.11%	19.92%	7.69%	16.09%
2011	1607.3	272.86	1880	3.69%	1.08%	2.73%	18.73%	5.73%	14.09%
2012	1572.6	347.99	1921	3.59%	1.41%	2.81%	18.25%	6.68%	13.89%
2013	1874.1	402.75	2277	4.28%	1.60%	3.30%	20.88%	7.87%	16.16%
2014	2104.8	392.21	2497	4.43%	1.59%	3.46%	17.15%	8.59%	14.83%

Source: Author's calculation from UNCOMTRADE

The changes in the aggregate volume of trade usually attract more attention and bilateral trade between India and Pakistan is not an exception, in this regard. This study was being carried out in order to study the individual categories being traded between the two countries. More specifically, the study explained why Pakistani imports from India remained greater than its exports to India in the context of trade complementarity with the help of Trade Complementarity Index (TCI) of both the countries for each other's goods from 2004-14. Moreover, the study has estimated Revealed Comparative Advantage (RCA) for all the

<sup>2</sup> Based on Author's calculation (from UNCOMTRADE), Pakistan's bilateral trade with China increased from less than 6% of its world trade in 2004 to more than 16% in 2014.

categories being traded between the two countries, separately both for India and Pakistan for the same duration, to check whether leading trade categories between the two countries have followed the economic rationale of RCA or not. Lastly, the study estimated trade intensities of Pakistan's exports to and imports from India to check whether the intensities of traded categories exceeded expectations or not with the help of Trade Intensity Index (TII), Export Intensity Index (EII) and Import Intensity Index (III) for the same duration.

There is no shortage of studies on bilateral trade between India and Pakistan. This paper aimed to shed light on disaggregated trade between the two countries. Mostly, the studies that have investigated disaggregated trade and prepared Indices for this purpose used one or two indices at a given point of time. The present study has been carried out with five representative indices for a period of eleven years. Moreover, these indices have been discussed for the leading categories of bilateral trade between the two countries that covered nearly two third of their bilateral trade. The reference period of the study 2004-14 was used to carry out comparison of average index values of the two time periods 2004-09 vis-à-Vis 2010-14 to compare the contemporary trends of the indices with their respective trends in recent past.

The specific objectives in this regard included calculation of TCI and RCA of India and Pakistan at 2-digit HS classification for each year in the reference period. Moreover, EII and III of Pakistan's exports to and imports from India respectively, were calculated for each category during the reference period. Thereafter, leading categories of bilateral trade between the two countries were identified and their trends were analyzed in the context of these indices.

## **2. Literature Review**

India and Pakistan are founder members of South Asian Association for Regional Cooperation (SAARC) and Coulibaly (2007) argued that countries joining a regional block earlier stand a better chance of yielding benefits of trade liberalization than the ones that join latter. Mukherji (2004) emphasized a central role of India and Pakistan for success of South Asian Free Trade Agreement (SAFTA) among the SAARC member countries, but Hussain (2012) termed South Asia as one of the least integrated regions in the world.

Williamson, (1998) emphasized that India and Pakistan face similar challenges in the success of SAARC that France and Germany faced for the successful foundation of the EU. Mehta (2011) has provided examples from East Asia where Thailand, Vietnam, Cambodia, China and Laos removed their

political differences or lessened their impact through the forum of ASEAN; and how Argentina and Brazil, in South America, eased their historic rivalry through regional integration with the help of trade; and recommended India and Pakistan to follow the foot prints of countries in Europe, East Asia and South America for their shared welfare. Asghar and Nazuk (2015) and Jalil (2011) also pointed out the potential benefits of positive political developments between India and Pakistan on regional economic prospects.

There were studies that theoretically argued lack of trade complementarity between India and Pakistan to be responsible for low trade volumes between the two countries (Kemal, 2004; Mehta and Kumar, 2004; Mukherji, 2004; and Pitigala, 2005). There were a number of studies that estimated separate trade complementarity of both India and Pakistan for their trade with each other, using disaggregated trade data (TDAP, 2012; PILDAT, 2012; Najib, Baig and Ansari, 2012; Pasha, Burki and Imran, 2012; Raihan and De, 2013). The availability of disaggregated data attracted a lot interest of researchers to use the rich disaggregated data of world trade available in many different classifications. Gopalana, Ammar and Kenneth (2013) used SITC classification; TDAP (2012) used HS-2 digit classification; while Pasha et al. (2012) and Raihan and De (2013) used HS-4 digit classification to explore Pakistan's trade with India.

Pitigala (2005) reported that RCA indices of trade competition and trade concentration profiles of the SAARC member countries. Mehta and Kumar (2004) however were of the opinion that though there is low trade complementarity across SAARC member countries in goods trade (because of relatively similar resource endowment and environment) yet there is a better trade complementarity for trade in services, in particular health and education across SAARC member countries. Dorosh (2008) recommended greater private sector role in South Asian food markets than that of the public sector on the premise that the private sector has a better ability to react to price shocks than the public sector due to the inefficiencies and slow mechanisms at work.

While there were many studies that identified and explored the potential benefits of stronger trading relations between India and Pakistan, there were also some that identified the challenges of liberalizing trade between the two countries especially in the context of agriculture (Khan and Hussain, 2014; Ahmad, Nadia and Sohain, 2012; Dorosh, 2008); presence of tariff and non-tariff barriers (PILDAT, 2015; Avula, Devashish and Imtisal, 2013; Raihan and De, 2013; and Pasha et al., 2012); the lost revenues to the governments of the two countries as a

result of informal trade and the trade routed through the third country ports (TRTA, 2015; Acharya and Marwaha, 2012; and Mehta, 2011).

Khan and Hussain (2014) argued that while Pakistan has removed most of its price support and subsidies over its agriculture, there can be serious challenges and implications of trade liberalization with India on Pakistan's agriculture, as India heavily protects its agriculture through price supports and subsidies for Indian agricultural crops. Ahmad et al. (2012) identified heavily protected Indian agriculture and warns of negative implications on Pakistan's agricultural crops in the event of easing agricultural trade with India. Dorosh (2008) however believed that both India and Pakistan manage food prices to avoid adverse domestic implications and this policy has kept real food prices in the two countries to be different from competitive international prices of such crops.

### **3. Data and Methodology**

The availability of disaggregated data did increase with time but there were problems of multiple classifications and inconsistency across countries in compiling and reporting disaggregated data internationally that needed to be consistent across countries in terms of units of measurement, coverage for a given classification etc. There has been increasing consistency in data reporting for all the recognized countries and increased disaggregation of reported data in the last twenty five years. The most commonly administered classification of disaggregated data is Harmonized System (HS) of classification that was last revised in 2007.

The availability of disaggregated trade data has allowed a number of studies that were not possible in the absence of it. Researchers developed many indices that could be worked out for a given point in time or over a period of time. Some of these indices include EII, III, TCI, RCA Index and host of other indices as well. World Bank (2008) gives a comprehensive review of the ways in which indices could be built to explain the pattern of disaggregate trade between the partner countries.

Yamazawa (1970) first developed Trade Intensity Index (TII) and then many others made use of the index and introduced developments, especially Kim (2009) and Chandran (2010). Kim (2013) offered trade index of South Korea with its major trading partners and Chandran (2010) has studied trade similarity and complementarity between India and ASEAN countries. According to Chandran (2010) and Kim (2013) TII of a country is the ratio of, the proportion that country's export to partner country in its total exports, to proportion of partner

country's import in total world trade. For example, Pakistan's TII with India would be

- Pakistan's bilateral trade with India/Pakistan's total trade (Numerator)
- Total trade of India /total trade of the world (denominator)

TII index may be worked out both for aggregate trade as well as disaggregated trade. For overall trade between any two countries i and j, TII of country i for j (for aggregate trade) is

$$TII_{ij} = \frac{(X+M)_{ij} / (X+M)_i}{(X+M)_j / W} \quad (1)$$

Where  $(X+M)_{ij}$  are exports and imports of country i to/from country j whereas  $(X+M)_i$  &  $(X+M)_j$  are total trade of countries i & j respectively while W is total world trade.

Similarly, TII for disaggregated trade between countries i and j can be worked out as

$$TII_{ij}^H = \frac{(X+M)_{ij}^H / (X+M)_i^H}{(X+M)_j^H / W^H} \quad (2)$$

Where all the components of formula in EQ-2 for disaggregated TII are the same as the components of EQ-1, except, that each component appears with a superscript H, denoting TII for a particular classification. Therefore, we can work out TII between any two countries for their overall bilateral trade as well as the bilateral trade in a particular sector or industry with homogenous classification across the two countries. Chandran (2010) further explored TII between any two countries in to EII and III. EII can be determined as

$$EII_{ij} = \frac{x_{ij} / X_i}{M_j / (W - M_i)} \quad (3)$$

Where the numerator is the proportion of country i's exports to the partner country j ( $X_{ij}$ ) in its total exports ( $X_i$ ) while the denominator is the proportion of imports of country j ( $M_j$ ) taken from the difference of the volume of world trade (W) and imports of country i ( $M_i$ ). Similarly, III can be determined as:

$$III_{ij} = \frac{M_{ij}/M_i}{X_j/(W-X_i)} \quad (4)$$

Where the numerator is proportion of country i's imports from country j ( $M_{ij}$ ) in its total imports ( $M_i$ ) while the denominator is the proportion of country j's exports ( $X_j$ ) taken from the difference of world trade ( $W$ ) and country i's exports ( $X_i$ ).

Just like TII, EII and III can be worked out both at aggregate and disaggregate levels for bilateral trade between any two countries for given (homogeneous) sectors or industries. The disaggregated export and import indices can be determined for any HS classification. An index of TII, EII or III that is greater than one means that trade flow (overall bilateral, export or import) is greater than expected for a given partner country in world trade while value of these indices below one mean that the trade flow is less than expected (Chandran, 2010). Any country's exports to and imports from world for any particular good is an outcome of its comparative advantage/disadvantage with rest of the world when the good is homogeneous, and there are no transportation costs or other trade barriers in the trade (Kim, 2013).

Comparative advantage determines the direction of trade in the theory of international trade. As the overall trade between any two parts of the world comprises of thousands of things, it is not possible to determine comparative advantage with aggregate trade volumes and hence disaggregated trade volumes are used to explore comparative advantage of any country with its partner for different types of traded things between them. Such a kind of comparative advantage is RCA and it can be measured for any level of disaggregation.

The traditional measure of RCA was developed by Balassa (1965) where it was measured by taking a ratio of, proportion of export of a given category "H" in a country's overall exports; to the proportion of trade of the same category in the overall world trade.

$$RCA_i^H = \frac{X_i^H/X_i}{W^H/W} \quad (5)$$

If this ratio in EQ-5 is greater than one for the country in question for a given category of traded goods, that country is considered to have RCA in that category. The problem with RCA index is that there are incredibly higher values for categories with RCA and values close to zero for the ones with no RCA.

Therefore Laursen (2000) introduced a change in estimating RCA and he called it Normalized RCA or NRCA.

$$NRCA = \frac{RCA-1}{RCA+1} \quad (6)$$

The value of NRCA is between zero and one and thus the distribution of RCA across the categories become more symmetric as a result. Trade complementarity is critically important for the possibility of inter-industry trade between two countries. If two countries possess RCA in the same categories in a given classification, there is less likeliness of trade possibilities for that category between the countries in question. A measure of assessment of complementarity between any two countries over the entire range of all the categories within any given classification at a given point of time is called Trade Complementarity Index (TCI).

In a more formal manner, TCI was introduced by Michaely (1996) while investigating the possibilities of natural trading partners between two given countries. TCI is measured as

$$TCI_{ij} = 100[1 - \sum_{H=1}^n |m_i^H - x_j^H|/2] \quad (7)$$

$m_i^H$  and  $x_j^H$  stand for the proportion of import of category H in country i's total import (demand of country i) and proportion of export of the same category in the total exports of country j (offer of country j) respectively. The absolute difference in the offer of country j for any category H ( $x_j^H$ ) and the demand of country i for the same category H ( $m_i^H$ ) is taken for all the possible categories in a given classification. After dividing these absolute differences for each category from 1 to n by 2, the sum of these divided absolute differences provide the entire scale of complementarity of country i's demand to the offer of country j. In order to make the TCI easy to interpret, it is then subtracted from 1 and multiplied with 100. Higher the value of TCI of any country "i" greater is the complementarity of that country with a partner country "j's" exports and vice a versa.

The study has constructed five indices, namely, TCI, RCA, TII, III and EII for both Pakistan and India for the duration of 2004-14 and then analyzed the performance of those indices for Pakistan's leading exports to and imports from India. The duration of the study was divided in to two parts 2004-09 and 2010-14 for before and after analysis.



#### **4. Analysis of Results**

This section comprises of five subsections where each subsection discusses one aspect of Pakistan's disaggregated trade with India. First subsection identifies leading Pakistani exports to and imports from India, followed up by a section on leading categories in Pakistan's bilateral trade with India and their respective shares in bilateral trade of the two countries. The third subsection provides the economic rationale of Pakistan's leading exports and imports with India on the basis of NRCA. The fourth subsection provides TCI of both countries from 2004 to 2014 to explain complementarity of both the countries for each other's exports on the basis of disaggregated data. The last subsection carries out a before and after analysis of export, import and trade intensities of Pakistan's leading exports and imports with India.

##### **4.1. Pakistan's Leading Exports to and Imports from India**

Pakistan's exports to India remained rather stable in terms of percentage of its exports to the world while exports nearly halved in terms of percentage of exports to the neighbours since 2004. It is a very interesting trend that shows although Pakistan's export to India has not changed much vis-à-vis its exports to the world but this trend has almost reversed when seen in the context of Pakistan's neighbours. This trend suggests that there is a lack of penetration of Pakistan's exports to India whereas Pakistan's export penetration with the other neighbouring countries has increased.

Pakistan's import from India has shown persistent growth since 2006 with an average growth of over a hundred million dollars in terms of value of trade. This trend was kick started when Pakistan's imports from India nearly doubled from 2005 to 2006 in such a way that total imports increased from a little over half a billion to well over a billion dollar in that one year's time (Table 1).

##### **4.1.1. Pakistan's Leading Exports to India**

The top ten categories of Pakistan's exports to India in Table 2 constituted more than 86% of Pakistan's total exports on average during 2004-09. The proportion of exports in these categories in overall exports declined to 75.4%, on average during 2010-14, despite increase or relative stability in the shares of all the categories except two – mineral fuels (27) as its share declined from 38% of total exports (2004-09) to a mere 4% (2010-14) and edible vegetables (07) as its share declined from 4.7% during 2004-9 to 0.3% during 2010-14. The export of mineral fuels to India averaged more than a \$100 million annually, during 2004-08 and then it drastically fell down to average annual exports of nearly \$15

million during 2009-14. The export of edible vegetable is in the list of leading exports only because in 2005 when the volume of its exports to India reached nearly \$70 million but export in this category did not register any significant volumes in any other year during 2004-14.

**Table 2: Pakistan's Leading Exports to India**

Code	Title	2004-09 (Average)		2010-14 (Average)	
		000 \$	%	000 \$	%
'27	Mineral fuels, oils, distillation products, etc	108945.67	38.4%	13628.8	4.0%
'52	Cotton	43425.50	15.3%	50605.6	15.0%
'08	Edible fruit, nuts, peel of citrus fruit, melons	33501.67	11.8%	59719.2	17.7%
'25	Salt, Sulphur, earth, stone, plaster, lime and cement	18226.67	6.4%	46418.8	13.7%
'29	Organic chemicals	12404.83	4.4%	20825.4	6.2%
'41	Raw hides and skins (other than fur skins) and leather	6933.83	2.4%	18505	5.5%
'74	Copper and articles thereof	2435.17	0.9%	21896.6	6.5%
'07	Edible vegetables and certain roots and tubers	13408.33	4.7%	976.2	0.3%
'39	Plastics and articles thereof	3117.33	1.1%	12051.6	3.6%
'12	Oil seed, oleaginous fruits, grain, seed, fruit, etc	3603.83	1.3%	10360	3.1%

Source: Author's calculation from UNCOMTRADE

The share of cotton somehow remained relatively stable at 15% of total exports to India whereas share of all the other categories increased quite significantly over the years. Although share of cotton has relatively remained stable yet the absolute volume of exports in cotton increased nearly five times from 2004 to 2014 with a few hiccups over these years. The share of edible fruits (08) dominates Pakistan's trade within the period of 2010-14 with more than 1/6<sup>th</sup> of Pakistani exports to India in that category alone.

#### 4.1.2. Pakistan's Leading Imports from India

Just like Pakistan's exports to India, its import from India was also quite concentrated around few top categories. More than three quarters of Pakistan's imports from India come from the categories listed in the table 3. The collective

share of these categories has slightly decreased by 2% from 79.7% during 2004-09 to 77.7% during 2010-14. The share of organic chemicals (29) that dominated Pakistan's imports from India has drastically fell down from 28.7% during 2004-09 to 16.5% during 2010-14. The share of Plastics (39), sugar (17) and rubber (40) in total imports from India has also declined over the years whereas the shares of all the other categories have increased over the years. The share of edible vegetables (07) in Pakistan's imports from India more than doubled from 5.2% during 2004-09 to 10.9% during 2010-14.

**Table 3: Pakistan's Leading Imports from India**

Code	Title	2004-09 (Average)		2010-14 (Average)	
		000 \$	%	000 \$	%
'29	Organic chemicals	295698.5	28.7%	287828.2	16.5%
'52	Cotton	173035.7	16.8%	324871.6	18.6%
'23	Residues, wastes of food industry, animal fodder	76661.83	7.4%	218740.6	12.5%
'07	Edible vegetables and certain roots and tubers	53593.83	5.2%	189702.6	10.9%
'39	Plastics and articles thereof	72165.5	7.0%	99478.4	5.7%
'17	Sugars and sugar confectionery	54751.67	5.3%	42316	2.4%
'32	Tanning, dyeing extracts, tannins, derives, pigments etc	26558.17	2.6%	55036.6	3.2%
'09	Coffee, tea, mate and spices	20104.83	2.0%	51873	3.0%
'40	Rubber and articles thereof	33866	3.3%	32965.6	1.9%
'38	Miscellaneous chemical products	14838.17	1.4%	52478.6	3.0%

Source: Author's calculation from UNCOMTRADE

It is interesting to note that nearly two thirds of all the Pakistani imports from India pertain to top five categories in both the periods, despite major fluctuations in their respective shares. The stability in the collective share of these categories is so much that it was on average 64.3% during 2004-09 and slightly increased to 64.6% for the period of 2010-14.

#### **4.2. The Concentration of Pakistan's Bilateral Trade with India**

There are four categories in the list of Pakistan's leading exports to India that are also in the list of Pakistan's overall leading world exports – Edible

Vegetables (07), Organic Chemicals (29), Plastics (39) and Cotton (52). The collective share of these four categories in Pakistan’s bilateral trade with India was equivalent to nearly half of Pakistan’s total bilateral trade volume with India and is shown in Table 4.

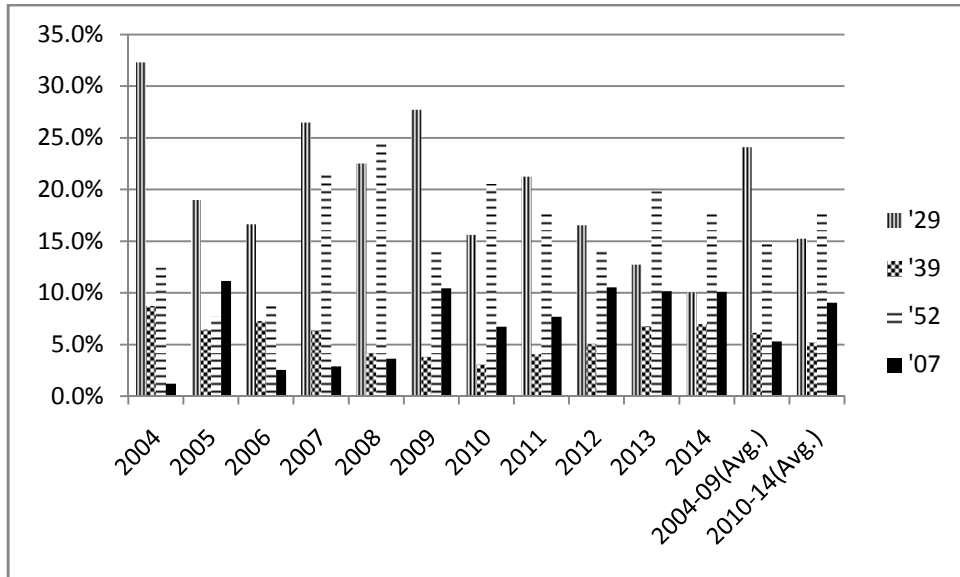
**Table 4: Leading Categories of Pakistan’s Bilateral Trade with India**

Code	Title	Average % Share		Average Volume \$ 000	
		2004-09	2010-14	2004-09	2010-14
'07	Edible vegetables and certain roots	5.3%	9.0%	67002.17	190678.8
'29	Organic chemicals	24.1%	15.2%	308103.3	308653.6
'39	Plastics and articles thereof	6.1%	5.2%	75282.83	111530
'52	Cotton	14.9%	18.0%	216461.2	375477.2
	Total	50.4%	47.5%	666849.5	986339.6

Source: Author’s calculation from UNCOMTRADE

Although the share of these four categories, collectively, has fractionally declined from 50.4% during 2004-09 to 47.5% during 2010-14, yet their absolute volumes have considerably increased over the years as seen in Table 4.

**Figure 1: Proportion of Leading Categories in Pakistan’s Bilateral Trade with India**



In order to explain the fluctuation in the share of these leading categories in bilateral trade of the two countries, Figure 1 explain fluctuations in the share of these categories in overall bilateral trade, over the years. The fluctuations in the individual shares of each of these four categories over the years in Figure 1 reveal that, organic chemical (29) and cotton (52) have traditionally dominated bilateral trade between Pakistan and India. Nearly one third of the bilateral trade between the two countries comprises of organic chemicals and cotton. Organic Chemicals have mostly dominated Pakistan's bilateral trade with India, but the share of cotton exceeded the share of organic chemical for 2013 and 2014.

#### 4.3. Economic Rationale of Pakistan-India Leading Traded Categories

RCA is used to explain a country's comparative advantage of trade for a particular category. The values of RCA index are sometimes quite exaggerated to make meaningful inferences difficult on the basis of those numbers, therefore Normalized RCA or NRCA has been used to explore whether there is an economic justification for Pakistan's leading exports to India or not. Table 5

**Table 5: Comparison of RCA of India and Pakistan for Leading Pakistani Exports to India**

Codes	Titles	Pakistan		India	
		2004-09	2010-14	2004-09	2010-14
'27	Mineral fuels, oils, distillation products, etc	0.5202	0.6800	0.0681	0.0482
'52	Cotton	0.9599	0.9635	0.7309	0.7753
'08	Edible fruit, nuts, peel of citrus fruit, melons	0.2453	0.4713	0.1998	0.0209
'25	Salt, Sulphur, earth, stone, plaster, lime and cement	0.5783	0.8227	0.5093	0.3835
'29	Organic chemicals	0.8129	0.8486	0.2708	0.2375
'41	Raw hides and skins (other than fur skins) and leather	0.7885	0.8275	0.4115	0.3363
'74	Copper and articles thereof	0.6475	0.2358	0.2192	0.1159
'07	Edible vegetables and certain roots and tubers	0.1498	0.3796	0.1606	0.0419
'39	Plastics and articles thereof	0.3913	0.2637	0.2526	0.2972
'12	Oil seed, oleaginous fruits, grain, seed, fruit, etc, nets	0.2078	0.2368	0.1927	0.0843

Source: Author's calculation from UNCOMTRADE

presents the average NRCA index values (for two time periods, 2004-09 and 2010-14, both for Pakistan and India) for ten leading exports of Pakistan to India that contributed more than 3/4<sup>th</sup> of Pakistan's exports to India during the two time periods.

There were only two categories in Pakistan's leading exports to India where Pakistan possessed slightly lesser NRCA than that of India. Pakistan's NRCA for Edible vegetables (07) was slightly less than that of India during 2004-09 which later became significantly more than that of India during 2010-14. Similarly, NRCA for plastics (39) was slightly less than that of India during 2010-14, which earlier was reasonably higher than that of India during 2010-14. In the remaining eight categories of Pakistan's leading exports to India the value of NRCA of Pakistan remained more than that of India in both the time periods.

**Table 6: Pakistan's Top Imports from India Comparison of RCAs of India and Pakistan**

Code	Title	Pakistan		India	
		2004-09	2010-14	2004-09	2010-14
'29	Organic chemicals	0.8129	0.8486	0.2708	0.2375
'52	Cotton	0.9599	0.9635	0.7309	0.7753
'23	Residues, wastes of food industry, animal fodder	0.7562	0.2971	0.5473	0.3735
'07	Edible vegetables and certain roots and tubers	0.1498	0.3796	0.1606	0.0419
'39	Plastics and articles thereof	0.3913	0.2637	0.2526	0.2972
'17	Sugars and sugar confectionery	0.4588	0.4689	0.5171	0.2878
'32	Tanning, dyeing extracts, tannins, dyes, pigments etc	0.5745	0.4724	0.2501	0.2504
'09	Coffee, tea, mate and spices	0.1321	0.0825	0.6511	0.5586
'40	Rubber and articles thereof	0.7511	0.9026	0.0541	0.1414
'38	Miscellaneous chemical products	0.8722	0.8711	0.0397	0.0354

Source: Author's calculation from UNCOMTRADE

Pakistan's top ten imports from India are presented in Table 6, in the context of their respective NRCAs for both the countries in both the periods. There were three categories sugar (17), tanning, dyeing extracts (32) and coffee

and tea (09) where India maintained NRCA values more than those of Pakistan. There were two categories residue, waste of food industry (23) and Plastic (39) where Pakistan possessed comparative advantage over India during 2004-09 while India become more competitive latter on, with NRCA values greater than those of Pakistan during 2010-14 for both the categories. In case of edible vegetables (07), India had a fractional advantage over Pakistan in the first period while Pakistan had significant advantage over India in the second period.

There were four categories in Pakistan's leading imports from India where Pakistan demonstrated advantage over India in both the time periods and in all those cases Pakistan's NRCA was significantly higher than that of India. The two top categories of Pakistan's imports from India namely organic chemicals (29) and cotton (52) traditionally dominated Pakistan's trade with India, and Pakistan possessed significant advantage over India in both the categories on the basis of NRCA values of both the countries in those categories.

#### **4.4. Trade Complementarity with India**

The adversity of Pakistan's trade performance vis-à-vis that of India in their bilateral trade was evident in their respective TCIs, for each other, in Table 7. India's TCI for Pakistan's demand was about three times more than that of Pakistan's TCI for Indian demand. Despite the fact that Pakistan did not grant MFN to India, while India granted it to Pakistan in 1996, Pakistan's exports to India remained modest as compared to India's exports to Pakistan.

India's TCI for Pakistan's demand consistently increased each year from 2004 to 2008 and declined drastically in 2009 by about 5%, much of which was recovered in 2010. The TCI of India has remained nearly 60% in line with Pakistan's demand profile during 2010-14. Pakistan's TCI for India's demand also showed improvement generally from 2004 to 2010, however, it started to decline since 2012 such that it almost reached the level in 2014 where it was in 2005-06.

#### **4.5. Trade Intensities of Leading Categories of Trade**

There were three categories in Pakistan's leading exports to India where both trade and export intensities with India were, on average, less than expectations (in Table 8), namely Mineral fuels (27), plastics (39) and cotton (52) in both the time periods. Exports were more than expectations in all the other seven categories in both the time periods. Although Pakistan's exports to India remained more than expectation in both the time periods for each of these seven categories, yet the value of average EII declined in three cases of edible fruits

(08), edible vegetables (07) and oil seeds during 2010-14 from their respective average EII values during 2004-09.

**Table 7: Pakistan's Trade Complementarity with India**

Years	TCI of India's offer for Pakistan	TCI of Pakistan's offer for India
2004	52.31%	15.56%
2005	53.26%	17.32%
2006	56.55%	16.79%
2007	58.31%	19.85%
2008	60.95%	20.57%
2009	55.78%	20.66%
2010	59.95%	22.27%
2011	58.69%	19.86%
2012	59.26%	21.92%
2013	61.90%	17.17%
2014	59.91%	16.99%

Source: Author's calculation from UNCOMTRADE

**Table 8: Intensity of Pakistan's Leading Exports to India**

Codes	Titles	Average TII		Average EII	
		2004-09	2010-14	2004-09	2010-14
'27	Mineral fuels, oils, distillation products,	0.02	0.00	0.19	0.01
'52	Cotton	0.46	0.40	0.96	0.87
'08	Edible fruit, nuts, peel of citrus fruit	22.61	22.75	77.50	53.21
'25	Salt, sulphur, earth, lime and cement	1.37	2.55	2.82	4.70
'29	Organic chemicals	1.20	0.60	2.82	3.07
'41	Raw hides and skins (other than fur skins) and leather	0.69	1.16	2.32	4.00
'74	Copper and articles thereof	0.19	0.36	1.03	1.27
'07	Edible vegetables and certain roots	40.79	40.53	78.60	1.11
'39	Plastics and articles thereof	0.53	0.24	0.17	0.19
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nuts	14.88	9.83	239.26	122.98

Source: Author's calculation from UNCOMTRADE



It was interesting to notice that there were four categories which were simultaneously in Pakistan's leading exports and imports with India and with an exception of organic chemicals (39) during 2004-09; trade with India in all the other categories was less than expectations in both the time periods. The trade of organic chemicals too fell below expectations during 2010-14.

The analyses of trade and import intensities of Pakistan's leading imports from India are presented in Table 9.

**Table 9: Intensity of Pakistan's Leading Imports from India**

Codes	Titles	Average TII		Average III	
		2004-09	2010-14	2004-09	2010-14
'29	Organic chemicals	1.20	0.60	2.53	1.33
'52	Cotton	0.46	0.40	2.09	2.27
'23	Residues, wastes of food industry, animal fodder	56.69	26.32	67.15	34.19
'07	Edible vegetables and certain roots and tubers	40.79	40.53	98.19	169.08
'39	Plastics and articles thereof	0.53	0.24	1.34	0.74
'17	Sugars and sugar confectionery	24.14	8.88	19.42	17.15
'32	derives, pigments etc.	3.64	3.87	6.46	7.10
'09	Coffee, tea, mate and spices	14.43	16.70	17.72	22.12
'40	Rubber and articles thereof	1.89	1.03	4.01	2.44
'38	Miscellaneous chemical products	0.55	0.96	1.27	2.29

Source: Author's calculation from UNCOMTRADE

Pakistan's imports from India were overwhelmingly more than expectations for all the top ten categories in both the time periods with an exception of plastics (39), where imports were slightly more than expectations during 2004-09. But the import of plastics were less than expectations in the second time period of 2010-14, when average III fell below unity unlike the earlier period. Pakistan's imports were more than expectations by a huge margin in two categories of edible vegetables (07) and residues and waste of food industry (23) and their overall average intensities of trade were also more than expectations by a significant margin.

## 5. Conclusions and Recommendations

On the basis of disaggregated analysis of Pakistan's trade with India, it appeared that both Pakistan's exports and imports were quite concentrated around

a few categories of HS-2 digit classification. It was seen that nearly 3/4<sup>th</sup> of both Pakistan's exports to and imports from India were being carried out in top ten traded categories. Moreover, there were four categories edible vegetables (07), organic chemicals (29), plastics and its articles (39) and cotton (52) that were also included both in Pakistan's leading exports and imports and constituted nearly half of Pakistan's bilateral trade with India during 2004-14. On the basis of these findings it was concluded that Pakistan and India have not managed to broaden the base of their bilateral trade over these years, in spite of fluctuations in the share of leading categories being traded between the two countries.

It was further concluded, on the basis of estimated TCI of both the countries that the trading profile of the two countries was such that India's export pattern had greater compatibility with Pakistan's import pattern than the compatibility of India's import profile with Pakistan's export pattern. India enjoyed nearly three times more compatibility for exports to Pakistan than Pakistan experienced for its exports to India.

Although Pakistan's exports to India were much less than India's exports to Pakistan, Pakistan had greater economic justification of comparative advantage for its leading exports to India than India had for its leading exports to Pakistan. There were eight categories in Pakistan's leading exports to India where its average NRCA was more than that of India for those categories consistently, whereas there were only three categories in India's leading exports to Pakistan where NRCA of India was consistently higher than that of Pakistan.

Mostly, trade between India and Pakistan was cursed for the application of tariff and nontariff barriers especially in Pakistan. It was observed that Pakistan's imports from India were more than expectation in almost all the leading categories while most of Pakistan's leading exports to India were also more than expectation on the basis of estimated indices of exports and imports between the two countries for a period of 2004-14. It was therefore concluded that special treatment was being offered to some categories that enjoyed preferential treatment in both the countries and therefore become an exclusive opportunity for the traders in those categories on both sides of the border.

The strength of bilateral trade relations is enhanced with a wider portfolio of trading relations between any two countries. The concentration of bilateral trade between India and Pakistan around a few top categories should be broadened with the use of effective commercial policy. This can be done by drawing the attention of domestic manufacturers and traders to the categories with strong Indian demand as well as efficient or potentially efficient Pakistani supply.

Looking at the respective TCI of both the countries, it seems not granting MFN to India is a good policy choice as Pakistan has much more complementarity for Indian exports than India has for the Pakistani exports and Pakistani imports from India have been growing while its exports to India have been relatively stagnant. However, continued Pakistani reluctance to return bilateral commercial courtesy (granting MFN) to India is bound to have its negative implications. Ministry of commerce and trade should take all necessary measures to fulfill its own commitment to grant MFN to India. It is hoped that such an effort would work as a confidence building measure to benefit bilateral trade relations between the two countries.

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