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An Investigation into the Trade Pattern of Goods Exported from Pakistan to China through FTA Analysis

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Abstract

Sighting the trends of global economic outlook, the venture of international trade has become all the more imperative. This is especially true for a country like Pakistan that suffers from a current account deficit that consistently takes hit on the countries' already dwindling foreign reserves. To boost trade, countries opt for Free Trade Agreements to remove the hindrances created by tariffs and increase their competitiveness. This study aims to highlight the vacuum as well as flaws incurred in the biggest FTA signed by Pakistan with its second biggest trade partner, China. This study utilizes the Balassa's (1965) Index to calculate the Revealed Comparative Advantage of the products being exported. An analysis is drawn in comparison to the competing countries that are also the highest exporters of those particular products to China. The data set essentially has 2 sets; 2003-2006 signifies a pre-FTA position whilst the years 2007-2017 make for a post-FTA outlook. The study found that the products wherein Pakistan has boasted a comparative advantage, improved its competitive positions, and holds great volume for potential exports, have mostly faced a similar increase in the RCA and competitive positions of their competition and that too at a considerably lower tariff. Furthermore, finding indicates that products added to the FTA present a low current export volume as well as an unremarkable portfolio for potential export in comparison to the competition. This analysis has brought about the conclusion that the FTA has been biased in favor of China and requires considerable renegotiation to add products into the FTA that hold benefit for Pakistan and contribute towards reducing the burden of the persistent trade deficit.

Keywords: *Revealed Comparative Advantage, Free Trade Agreement, Balassa Index, Export Potential, Competitive Position, Pakistan.*

1. Introduction

During the last few decades, the composition and volume of international trade has undergone a considerable transformation; transfer of technology, rise in real income, and trade liberalization have been the major determinants of this transformation in a greatly globalized world. This globalization of international trade has increased international competition and integrated international markets all over, and in a world as globalized as we have it today, trade has never been more significant as the virtual boundaries between countries become relatively obsolete. Considering this viewpoint, the significance of Free Trade is established even further.

A Free Trade Agreement (FTA) is defined by the World Trade Organization as “an agreement between countries that removes tariffs and other restrictions on “substantially all” goods traded between them...” (Bevington et al., 2018). This means the establishment of an area wherein commerce can be free flowing and continue without any hindrance. An FTA is expected to entail a win-win circumstance in which either party accrues great benefit through an increase in export volumes of products that they possess a comparative advantage in, or through the relative ease of trade without the cost of tariffs or other barriers levied upon them.

Today, China has become a titan of trade in the global economy, contributing to 14.55% to the overall exports, citing it to be the number one exporter in the world (WITS¹, 2017). Pakistan and China have always been dubbed as brothers with borders, and with a longstanding relationship of understanding and mutual strategic cooperation, it was only a matter of time that an extended degree of economic integration be established between them. Such an association with a powerhouse such as China that boasts a GDP worth \$12.238 trillion in 2017 means that China has a vast cushion available for potential Pakistani exports, allowing an assurance that quality products shall be met by equivalent demand (World Bank, 2017). As this notion finally came to fruition, an FTA was established between the two countries in 2006.

The China-Pakistan Free Trade Agreement (CPFTA) came into effect a year after its signing, on July 2007. This agreement was divided into two phases. The first phase required both countries to reduce their total tariff lines by 36% during the first three years of the initial phase and was accomplished by ended 2012 (Kamal & Malik, 2017). It included five annexes that listed all products and the respective reductions they would face. These categories were: elimination of tariff, reduction of 0-5%, 20%, 50%, and no concession.

¹ World Integrated Trade Solutions.

It has been unfortunate to see that the CPFTA has not been as beneficial for Pakistan as was initially predicted. Empirical studies (Baier & Bergstrand, 2007) have suggested that an FTA results in bilateral trade between two members to increase to double after 10 years, yet Pakistan is struggling to gain balance in bilateral trade. This is easily observed, as it is realized that under the provided concessions in the purview of the FTA, China has availed 57% whilst Pakistan has only utilized a mere 5% of the concessions. A large cause for this imbalance is the addition of products not previously being imported into Pakistan in the FTA (Mukhtar & Hongdao, 2017). Table 1 shows these results through empirical data. The tariffs reduction provided to Pakistan may seem impressive initially - but the reduction is even greater in the case for ASEAN² - so those products in which Pakistan did possess an initial comparative advantage have now become relatively uncompetitive (The Pakistan Business Council, 2013).

There persists a dire need for an in-depth analysis of the goods being exported from Pakistan to China under the CPFTA and further analyze the implications of this FTA on export competitiveness, which is of paramount significance to Pakistan, as China is currently the second largest importer of Pakistani products with immense potential and the incentive to top the list, overtaking the US (OEC, 2017). The analysis would be useful to bridge the historic trade deficit that exists for Pakistan as the imports from China are significantly greater than the exports made to it, resulting in a trade deficit of \$12.1 billion (WTIS, 2017).

Table 1. Tariff Lines under Pakistan China FTA

Under phase 1	China's offer for Pakistan	Pakistan's Utilization of FTA	Pakistan's offer for China	China's Utilization of FTA
100% Reduction(Three Years)	2,682	169	2,423	1,332
0-5% (Five years)	2,604	72	1,338	747
Reduction on Margin of Preference of 50% (Five years)	604	31	157	92
Reduction on Margin of Preference of 20% (Five years)	529	29	1,768	1,174
No Concession (Sensitive List)	1,132	49	1,025	556
Exclusion (not to be imported)	—	—	92	8
	7,550	350 (50%)	6,803	3,909 (57%)

Source: The Pakistan Business Council, 2013.

² The Association of Southeast Asian Nations is a regional intergovernmental organization comprising ten Southeast Asian countries, which promotes intergovernmental cooperation and facilitates economic, political, security, military, educational, and sociocultural integration among its members and other Asian states.

This study will use the RCA to develop intertemporal analyses of the goods traded prior to the 2006 FTA signed with China, as well as afterwards. This will allow the study to observe whether Pakistan has been actually better off because of this agreement, despite an increase in the absolute volume of bilateral trade from US\$ 1.4 billion in 2001 to \$13.7 billion in 2016 (WITS, 2018).

1.2 Research objectives

In order to analyze the impact of CPF⁷FTA on traded goods and get an insight regarding the potential benefits from this FTA, the study pursues the following objectives:

- 1) To calculate and analyze the RCA of the products exported from Pakistan to China, before and after the FTA.
- 2) To compare and analyze tariff structures and competitiveness of Pakistani products with countries that are the highest exporters of the products to China.
- 3) To analyze the tariff structures and RCAs of traded goods that are not included under the FTA.

By considering the already signed FTA, this paper analyses the comparative advantage of product exports to China under this agreement, by employing an RCA analysis targeted at the HS-6-digit level of classification. The analysis carried out in this study regarding the trade flows between Pakistan and China will be helpful in devising appropriate measures to materialize the benefits under the FTA that are still untapped.

2. Literature Review

Balassa & Noland (1989) examined the variation in comparative advantage for the United States and Japan; they derived the RCA index for 167 manufactured, and 157 primary goods. For the period 1967 to 1983, they found that Japan's pattern of specialization has changed and shifted to capital-intensive products instead of the previously labor-intensive products. On the other hand, Japan has become uncompetitive in natural resource intensive goods. The study also found that both, Japan and the United States gained comparative advantage in high technological commodities. By comparing the exports and net export indices, they showed that at the expense of raw-labor intensive products and raw material Japan increased specialization in skilled-labor intensive products, while the United States increased specialization in natural-resource intensive products.

Mahmood & Nishat (2004) examined the Revealed Comparative Advantage of Pakistan's non-agricultural sectors and ranked them according to the position of product as; competitively positioned,

weakly positioned, threatened products, and emerging products. The study also determines which products have lost, gained, or maintained their comparative advantage. The result of the study shows that Pakistan's non-agriculture exports have revealed comparative advantage and some sectors of Pakistan's non-agriculture exports stood as competitively positioned. The study further shows that RCA value for textile and clothing sectors have remained stable over time. It means these sectors have maintained comparative advantage over time but are likely to face more competition in international market, especially from China.

Shabir & Kazmi (2007) analyzed the advantages and disadvantages of signing an FTA with China by considering the structure, trade pattern and size of Pakistan's economy. They also tried to answer some questions such as: Can the newly signed Free Trade agreements with China benefit Pakistan? Will Pakistan's trade and growth increase or not with the trade liberalization under FTA with China? By thoroughly analyzing the trends and trade pattern of Pakistan, they concluded that the existing economy of Pakistan has the potential to increase inter-regional trade and export diversification by further making strong economic relation with China. The study finally presented some recommendations including the trade diversion from a sluggish economy to an active consumer base of one billion Chinese, given that the quality and competitiveness of the products must increase.

Chaudhry, Jamil & Chaudhry (2017) adopted the approach of a difference-in-difference analysis to examine both firm-level and sectoral level data post and prior to the FTA with China to determine whether the FTA actually influenced the competitiveness of Pakistani exports or whether the industry was already in decline. The study included a range of metrics including; value added, employment, productivity, trade flows, and the number of firms. The study concluded that as a result of the lower Chinese tariffs levied upon Pakistani goods, these products gained a greater access to Chinese markets, but had a negative effect on the productivity in sectors subjected to a reduction in tariffs, which otherwise could have gained immense benefit as a result of the FTA. A marked reduction in the value added by these sectors, relative to others, has been witnessed during the same period. These lowered Chinese tariffs on Pakistani goods have also resulted in a rise in the level of employment as well as the total volume of Pakistani exports to China. Despite this increase in volume, contention rises when it is found that production has been diverted from high-productivity firms to lower-productivity firms, which is far from an optimal context. Another issue that persists is the fact that many sectors that were granted access to this new Chinese market are the same ones that have alternatively been granted a similar reduction in tariffs by Pakistan, coming in from China. As a result, the net effect seems to be zero as these sectors have gained no net advantage because of greater

competition from the other end, and so the subsequent reduction in tariffs to China has compromised the ability of these sectors to take advantage of the new opportunities.

Mukhtar & Hongdo (2017) critically analyzed the CPFITA to inquire why Pakistan could not reap the benefits it was predicted to gain from this FTA. The study found that a major cause for trade imbalance was the inclusion of many products, not being initially imported, into the FTA concessions list. Additionally, due to Pakistan's relatively weaker position, it has not been able to capitalize on all provided concessions, in addition to the inappropriate product list, which ended up excluding many products wherein Pakistan did boast a competitive advantage as opposed to adding those in which it did not. The study suggests greater protection of domestic industry where competitiveness is preserved and the addition of the local business community on the negotiation table to conclude a comprehensively beneficial agreement.

The empirical studies have revealed that there are some insightful studies on the global competitiveness of Pakistan, but the present literature has ignored the international competitiveness and comparative advantage of the goods being traded from Pakistan to China under the FTA. This means that there is no well-established existing literature that has investigated the international competitiveness of Pakistani exports to China under this agreement, at the micro level, using an RCA analysis. In order to fill this gap, there is a need for a thorough and insightful study to analyze and investigate the goods being traded from Pakistan to China through the RCA approach, at the micro level. Accordingly, this study investigates the RCA and competitiveness of Pakistani exports by employing the RCA index, and provides a wholesome image of Pakistan's global competitiveness. The study further aims to weigh the weaknesses and strengths of these goods by investigating the changes in global competitiveness and consequently derive policy suggestions to capitalize the benefit.

3. Methodology

3.1 Theoretical Framework

The literature encompassing international trade and policy moves to address an extensive array of reasons that explain why countries attain an advantageous position in the exports of a particular commodity. Generally, most reasons could be classified into; technological superiority, resource endowments, demand patterns, and commercial policies.

Adam Smith's theory of "Absolute Advantage" and David Ricardo's theory of "Comparative Advantage" are two such theories that find their foundations based upon the notion of technological superiority that one country possesses over another in the production a good. The principle of

absolute advantage refers to a country possessing a higher (absolute) level of productivity, or one that boasts a cost that is lower, in comparison to another country, in the production of a commodity. The principle of comparative advantage on the other hand is not based upon the concept of a higher absolute productivity but it is only subject to a higher relative productivity (a weaker assumption) in producing a commodity and it is a dynamic concept. With regard to a particular product it can vary over time owing to changes in any of the determinants of comparative advantage, including; resource endowments, technology, demand patterns, specialization, business practices, and government policies.

Existence of resources in a country also acts as an additional source of comparative advantage for countries that do not essentially possess a superior technology. Under a particular set of restrictive assumptions, comparative advantage can be attained owing to differences in relative factor endowments. As proposed by Heckscher (1919) and Ohlin (1933), a country possesses a comparative advantage in the production of those commodities that consume the relatively abundant resource in that country intensively. Countries that boast a relative abundance of human capital as a resource will possess a comparative advantage in products that intensively use human capital in the means of their productions, such as electronics, which, require an exceedingly skilled labor force: engineers, programmers, and designers. These sorts of endowments can also be created through measures such as government policies aimed at better education and training.

Economies of scale are a condition that can also provide a comparative advantage through the act of lowering production costs. External economies that operate by shifting the average cost of firms downward can in fact occur due to an industrial policy or a proactive role of the government in providing better infrastructure or even a labor force that is equipped with greater levels of education and training. Such economies of scale are consistent with the Ricardian model. National policies aimed at infrastructure, export promotion, education, training, and research and development with relation to the export industries can go a long way in the creation as well as sustenance of a comparative advantage. Policy driven benefits realized by the industries through internal and/or external economies, in the long run, may become a source of comparative advantage to these industries.

3.2 Empirical Methodology

This study investigates the Revealed Comparative Advantage and competitiveness of the goods being exported from Pakistan to China under the FTA, using the RCA index for the time period from 2003 to 2017. The idea of RCA was first introduced by Balassa in 1965, and was related to a country's export performance in specific products. The RCA approach is amongst a few reliable

methodologies that are employed to measure the comparative advantage of a country in a specific industry. RCA is widely used to analyze how the comparative advantage of an industry may change over time. RCA index uses real data and is not meant to predict the comparative advantage for a country in any following period. However, the estimated RCA index with time identifies a general trend that the pattern of comparative advantage may be following (Maule, 1996).

The RCA index divides industries according to their capacity to compete in a market. The industry will have a relative specialization in exports if it scores high RCA value. When the data of exports are employed then (Balassa, 1965) RCA index of a country y in industry m $(RCA^y)_m$, can be defined as:

$$(RCA^y)_m = X^y_m / X^y_{tot} / X^w_m / X^w_{tot} \quad \dots (1)$$

where,

X^y_m = country y exports of commodity m; X^w_m = world export of commodity m;

X^y_{tot} = country y total exports; X^w_{tot} = world total exports.

In order to resolve the difficulties to compare against countries, specifically in the presence of difference, RCA index is divided into four classes (Hinloopen, 2001; Maqbool et.al, 2018). The classifications are

Class W: $0 < (RCA^y)_m \leq 1$, Class X: $1 < (RCA^y)_m \leq 2$

Class Y: $2 < (RCA^y)_m \leq 4$, Class Z: $(RCA^y)_m > 4$

Class W represents all those industries with an Extremely Weak Comparative Advantage

Class X represents all those industries with a Weak Comparative Advantage

Class Y represents all those industries with a Medium Comparative Advantage

Class Z represents all those industries with a Strong Comparative Advantage

Accordingly, if $(RCA^y)_m$ is greater than 1 then country y shows a Revealed Comparative Advantage or has a specialization in export of commodity m against the world as a whole.

The RCA index is a useful tool to investigate the industries and their position of comparative advantage. The index of RCA is also used to gain an insight into those industries or firms that presently portray an Extremely Weak Comparative Advantage but possess the potential to gain export competitiveness over time (Khurram ,2015; Amir ,2004; Amir & Haji,2009). This insight can be

achieved by employing the exports structure of a country and categorizing the products based on HS-6-digit product lines in to six commodity groups based on RCA value of a country. Based on their revealed comparative advantage position these product groups are shown below (Standard and Poor, 1997; Mahmood, 2004; Mahmood & Hajji, 2009).

1) Competitively positioned products line:

RCA value in these product lines is greater than 1. These product lines exhibit a continuous and efficient improvement with time. Decision criteria for these product lines are as below.

RCA index for the product line is greater than 1, i.e., $(RCA^y)_{\text{current year}}^3 > 1$.

Difference between RCA value of product line in a current year and the average of RCA values for the last three years is positive or greater than zero, i.e.,

$$(RCA^y)_{\text{current year}} - (RCA^y)_{\text{avg (prev 3 years)}} > 0 \quad \dots (2)$$

2) Threatened Product lines:

RCA value in these product lines is greater than 1. But with time the indices are decreasing due to international competitive pressures and/or unfavorable domestic environment. Decision criteria for these product lines are as below:

RCA index for the product line is greater than 1 i.e. $(RCA^y)_{\text{current year}} > 1$

Difference between RCA value of product line in a current year and the average of RCA values for the last three years is negative or less than zero i.e.

$$(RCA^y)_{\text{current year}} - (RCA^y)_{\text{avg (prev 3 years)}} < 0 \quad \dots (3)$$

3) Emerging Product lines: Tier A and Tier B

RCA index for these product lines is less than 1 and these are in a relatively extremely weak position but on the other hand their exports position in international market is improving. These products lines give signals of good export potential in the future. To provide deep analysis the emerging products group has been divided in two groups based on their RCA position in this group. Decision criteria for these product lines are as below:

TIER A:

RCA value for a product line is less than 1 but or equal to or greater than 0.5 in current year., i.e. ,0.5 $\leq (RCA^y)_{\text{current year}} < 1$.

³ The years used are: 2006, 2009, 2013, and 2017. Data are not available after the year 2017.

Difference between RCA value of product line in a current year and the average of RCA values for the last three years is positive or greater than zero i.e.

$$(\mathbf{RCA}^y)_{\text{current year}} - (\mathbf{RCA}^y)_{\text{avg (prev 3 years)}} > 0 \quad \dots (4)$$

TIER B:

RCA value for a product line is less than 0.5 in current year i.e. $(\mathbf{RCA}^y)_{\text{current year}} < 0.5$. Difference between RCA value of product line in a current year and the average of RCA values for the last three years is positive or greater than zero i.e.

$$(\mathbf{RCA}^y)_{\text{current year}} - (\mathbf{RCA}^y)_{\text{avg (prev 3 years)}} > 0 \quad \dots (5)$$

4) Weakly Positioned Product lines: Tier A and Tier B

RCA value for these product lines are less than 1 and decreasing due to domestics and non-conductive international factors. Weakly positioned product line is divided into two groups based on their comparative disadvantage. Decision criteria for these product lines is as below:

TIER A

RCA value for a product line is less than 1 but equal or greater than 0.5 in current year. i.e. $0.5 \leq (\mathbf{RCA}^y)_{\text{current year}} < 1$.

Difference between RCA value of product line in a current year and the average of RCA values for the last three years is negative or less than zero i.e.

$$(\mathbf{RCA}^y)_{\text{current year}} - (\mathbf{RCA}^y)_{\text{avg (prev 3 years)}} < 0 \quad \dots (6)$$

TIER B

RCA value of a product line is less than 0.5 in current year. i.e. $(\mathbf{RCA}^y)_{\text{current year}} < 0.5$.

Difference between RCA value of product line in a current year and the average of RCA values for the last three years is negative or less than zero i.e.

$$(\mathbf{RCA}^y)_{\text{current year}} - (\mathbf{RCA}^y)_{\text{avg (prev 3 years)}} < 0 \quad \dots (7)$$

In addition to the RCA, the study incorporates the calculation of the indicative export potential which is calculated by the potential trade model of two countries by looking at the maximum possible exports for Country A given its capacity (specified by Country A's Exports to World) and need (specified by Imports from World of Country B) less current exports of A to B.

Where Pakistan's Potential exports to China of product k is given by Eq. (9)

$$\mathbf{Min}(X_K^{PW}, I_K^{WC}) - X_K^{PC} \quad \dots (8)$$

where, X_K^{PW} is Pakistan's export to the world of product K; I_K^{WC} is China's imports from the world of product K; and X_K^{PC} is Pakistan's current exports to China of product K.

4. RESULTS AND ANALYSIS

4.1 Shift in Comparative Advantage of Products not under FTA

This section calculates the RCA value for Pakistan and the countries from which Pakistan is facing competition in the Chinese market. These competing countries stand as the highest exporters of those particular products to China. Table 2 gives the RCA values for 25 products upon which Pakistan is facing tariffs from China, and are not a part of the FTA, for the period 2003 to 2017.

Analyzing Table 2, the study finds that the RCA of Pakistan and its competing countries goes through significant dynamic change over time. Changes that represent improving or faltering states of comparative advantage. In 2003, Pakistan held a strong comparative advantage in only 10 products out of a total of 25 products. Over time, this ratio witnessed promising growth and reached a number of 22 products by 2017. The products having a medium comparative advantage didn't find themselves with any extreme degree of variation, but the number of products having weak and extremely weak comparative advantage have drastically fallen from 11 and 1 in 2003 to 1 and 0 in 2017, respectively.

The competing countries that had a strong comparative advantage stood at 10 for the year 2003. This figure saw an increase of 6 products moving to a higher comparative advantage to land at 16 in 2017. The number of products having medium comparative advantage saw consistent fluctuations over time but the overall the ratio met with an ultimate decline from 6 in 2003 to 3 in 2017. The number of Products having weak comparative advantage increased form 1 in 2003 to 3 in 2017 and the product having extremely weak comparative advantage has decreased from 6 in 2003 to 3 in 2007. This result resonates with a global improvement in the levels of competitiveness in trade.

The results show that the comparative advantage of the products increased over time and the ratio of goods possessing a strong comparative advantage rose and those that were limited to the weaker end of the spectrum fell drastically.

Table 2. RCA of 6-digit HS Code Products not under FTA: Pakistan and its Competitors

HS Code	RCA 2003	RCA 2004	RCA 2005	RCA 2006	RCA 2007	RCA 2008	RCA 2009	RCA 2010	RCA 2011	RCA 2012	RCA 2013	RCA 2014	RCA 2015	RCA 2016	RCA 2017
030339 Pak	2.52	2.96	16.42	51.82	58.72	68.65	123.65	187.00	196.30	265.59	217.75	210.47	222.34	141.07	223.05
030339 USA	3.84	4.78	4.27	4.57	5.06	4.69	3.93	4.04	3.36	3.29	4.47	4.45	3.71	3.31	3.21
040120 Pak	0.93	1.57	2.36	3.61	3.05	2.00	2.92	3.48	4.54	5.55	6.77	4.63	5.39	4.93	4.55
040120 Ger	3.40	3.66	3.51	3.23	2.78	2.65	2.64	2.95	2.75	2.05	2.57	2.49	2.36	2.40	2.11
081340 Pak	21.53	26.60	3.17	4.53	12.10	20.43	44.75	33.58	20.03	27.23	72.09	66.81	54.52	42.86	19.60
081340 Thai	23.30	18.85	24.83	17.32	17.83	15.84	18.21	15.34	30.07	34.07	18.00	19.18	16.64	19.56	24.41
100630 Pak	65.85	62.88	82.31	88.24	76.99	99.89	70.61	83.43	64.63	60.62	62.36	65.26	55.10	64.84	62.13
100630 Viet	43.29	42.10	50.53	42.12	37.57	39.09	34.36	38.78	31.59	27.83	18.67	16.17	13.90	10.84	8.87
100640 Pak	0.00	1.66	0.00	36.78	32.37	75.06	71.27	150.41	74.88	110.35	118.11	94.38	187.54	119.07	75.87
100640 Thai	54.25	50.88	42.72	44.74	45.86	42.73	36.81	28.41	30.25	17.93	18.07	23.84	15.40	23.09	22.65
120740 Pak	5.15	7.09	6.61	9.67	17.17	14.73	16.41	3.51	5.94	9.08	11.77	12.85	9.12	11.46	15.93
120740 Ethi	1342.94	1235.33	2318.50	2316.21	1325.89	1315.37	1591.97	866.14	1097.31	1174.48	889.31	1002.89	744.46	1191.93	1088.31
110100 Pak	16.98	15.14	28.46	37.66	22.45	0.44	0.17	7.03	45.38	35.45	28.83	29.00	49.16	28.28	16.37
110100 Ukra	0.11	0.16	0.40	0.31	2.39	5.39	3.12	1.66	1.98	2.59	3.91	4.92	6.08	6.87	8.20
170199 Pak	2.41	2.81	1.87	0.77	0.00	7.07	0.00	0.00	0.00	7.38	23.24	17.02	14.68	6.92	19.15
170199 ROK	0.48	0.42	0.41	0.43	0.53	0.48	0.47	0.54	0.55	0.54	0.43	0.44	0.40	0.39	0.36
240120 Pak	0.78	1.22	0.97	0.94	1.19	0.11	0.62	0.96	2.04	0.97	0.65	0.67	0.50	0.68	2.30
240120 Zim	0.00	371.55	288.02	92.43	135.33	109.95	157.57	238.24	380.13	361.10	456.10	518.74	582.77	535.64	789.63
271019 Pak	1.50	1.36	1.92	2.07	2.28	1.77	1.57	1.98	1.53	0.40	0.61	0.54	0.18	0.20	0.30
271019 Sing	4.38	4.20	3.77	3.71	3.84	3.95	3.94	3.76	3.99	3.58	3.30	3.27	3.55	3.82	3.88
620332 Pak	0.32	0.35	0.38	1.15	1.35	2.46	9.92	25.34	38.03	44.46	40.24	75.92	65.79	216.67	420.55
620332 Italy	0.96	1.09	1.27	1.46	1.63	1.66	1.70	1.97	2.31	2.29	2.24	1.68	1.26	1.03	1.16
391590 Pak	0.20	0.29	0.64	0.77	2.84	3.07	2.53	3.33	6.67	4.04	4.63	4.30	4.41	5.37	5.54
391590 H.K	4.19	8.12	8.94	7.73	6.88	7.50	8.28	6.93	5.85	6.29	4.75	6.23	6.89	6.66	4.72
410712 Pak	0.00	0.00	0.00	1.43	1.84	2.20	1.82	2.81	7.52	12.94	15.73	17.03	18.87	19.80	20.45
410712 Italy	7.77	8.07	8.60	8.80	8.95	10.18	11.21	11.96	12.85	12.78	12.84	11.45	11.50	11.35	12.05
410792 Pak	0.00	0.00	0.00	0.67	4.45	5.34	4.58	7.76	12.44	13.36	16.38	16.45	13.74	14.59	14.23

410792 Italy	2.82	3.26	3.39	3.04	3.39	3.81	4.64	4.93	4.94	4.68	4.61	4.71	3.96	4.21	4.55
481159 Pak	0.00	0.02	0.05	0.10	0.04	0.00	0.00	0.02	0.13	2.42	4.21	4.57	4.89	10.65	10.44
481159 USA	0.56	0.52	0.51	0.67	0.65	0.69	0.67	0.59	0.52	0.53	0.52	0.48	0.50	0.55	0.65
520512 Pak	187.08	214.74	208.99	152.22	164.68	128.41	196.26	179.86	167.01	243.39	242.58	222.31	206.85	172.89	166.07
520512 Viet	3.67	3.27	2.55	2.86	3.05	9.46	13.32	16.35	14.10	13.87	13.39	17.91	15.26	20.70	21.61
520511 Pak	49.87	80.82	106.89	167.68	122.97	124.18	150.54	123.89	181.34	245.52	131.46	98.64	168.03	173.69	188.40
520511 Viet	2.57	0.45	0.05	0.54	0.96	0.38	14.74	13.99	7.61	5.41	3.27	9.91	14.26	15.99	14.52
520522 Pak	125.78	144.56	117.68	82.34	130.00	115.26	138.18	120.79	124.84	99.57	87.80	97.42	83.87	61.87	77.88
520522 India	5.35	4.76	5.67	11.28	13.24	16.27	11.85	14.19	14.65	18.84	18.44	17.33	19.63	21.12	19.14
570110 Pak	105.69	118.64	121.93	117.48	121.24	94.34	71.93	60.49	59.87	72.48	79.82	82.11	67.51	67.77	59.79
570110 India	14.75	14.48	16.42	18.84	18.78	16.93	12.06	17.22	9.55	12.45	12.84	13.51	18.11	14.28	12.51
610910 Pak	4.46	6.28	6.42	7.96	7.79	7.71	7.72	7.61	6.72	6.58	5.74	5.13	5.35	5.80	5.61
610910 Bang	61.93	72.76	75.44	77.21	80.27	110.07	98.64	110.59	120.70	125.38	121.57	0.00	105.76	73.39	80.89
620342 Pak	0.02	0.02	0.03	0.10	0.12	0.18	0.63	1.56	2.47	3.14	3.04	6.39	5.73	21.62	39.61
620342 Bang	43.23	55.39	60.11	73.24	75.00	100.16	96.42	106.24	111.39	121.29	120.12	0.00	100.61	86.23	89.94
640399 Pak	0.09	0.19	0.28	0.29	1.85	2.23	2.19	1.14	1.67	1.77	2.00	2.01	2.05	2.15	2.11
640399 Viet	2.54	4.27	6.21	6.60	12.14	8.08	14.53	15.50	14.28	8.84	12.69	11.70	11.11	10.19	9.25
821420 Pak	25.58	23.33	19.99	29.55	50.38	42.10	52.79	91.54	82.60	79.90	72.32	66.45	63.36	69.73	76.01
821420 ROK	7.99	6.86	6.01	5.67	4.63	4.53	3.74	3.30	2.92	2.77	2.44	2.12	1.81	1.83	1.58
940490 Pak	3.46	6.01	3.53	6.96	2.50	4.83	7.60	8.00	7.15	6.86	7.22	6.61	6.44	5.42	6.21
940490 Thai	1.04	0.96	1.06	0.90	0.68	0.69	0.53	0.41	0.34	0.30	0.27	0.27	0.31	0.39	0.45
731029 Pak	0.14	0.14	0.10	0.03	0.22	0.75	1.76	0.81	0.60	0.73	0.43	1.19	0.86	1.81	13.03
731029 USA	0.65	0.76	0.77	0.75	0.79	0.76	0.92	0.97	1.06	1.03	1.00	1.02	0.89	0.99	1.01

Source: International Trade Center (ITC), and calculations by the authors.

4.1.1 RCA Trends for Pakistan and Competing Countries

Table 2 reveals that for the product line 030339 (Frozen flat fish) the highest competitor of Pakistan is USA. The RCA of Pakistan in this product line was 2.52 in 2003 and rose to 223.05 in 2017. The cause for this rapid increase in the RCA is the annulment of the import ban on Pakistan placed by the EU and the consequent low price of the product. In relation, the USA saw the RCA for the same product fall from 3.85 in 2003 to 3.21 in 2017. This reveals a picture that presents Pakistan as possessing a better comparative advantage relative to its competitor. Similarly, the study finds another such drastic improvement in the case of 100640 (Broken Rice) as its RCA rose from 1.66 in 2004 all the way to 75.87 in 2017. This improvement can be owed to lower costs coupled with rising exports to countries likes of the EU, Afghanistan, Saudi Arabia, and Oman in addition to African markets. This contrasts with the figures presented by its competition, Thailand, which actually saw its RCA fall from a competitive to 54.25 in 2003 to 22.65 in 2017.

For the product line 170199 (Cane/Beet Sugar), its RCA saw a considerable rise from 2.41 to 19.15 during the time period whilst the biggest competitor, Republic of Korea, saw its RCA fall from 0.48 to 0.36. This contrast comes as a result of the persistent support provided by the Pakistani government in the form of subsidies. The product lines 520511 (cotton yarn, of uncombed fibers) and 520522 (cotton yarn, of combed fibers) present some rather interesting results. They both see a change from 49.87 to 188.40 and 125.78 to 77.8 respectively. Though the products may seem similar, but the differentiation made through a very low level of value addition have resulted in the comparative advantages of both to move in opposing directions. Whilst the uncombed fibers witnessed a great increase in its RCA, the slight value-added comb fiber is faced with a great fall in its RCA. The competitors in both categories are Vietnam and India, respectively, and observe an increase in their RCA but at levels below their Pakistani counterparts. 570110 (Carpets) is another interesting product that finds its RCA reduce from 105.69 to 59.79, the only saving grace from this fact might be that its competitor, India, also loses on its RCA from 14.75 to 12.51 but it's not nearly a fall as drastic as that witnessed on Pakistan's side. The product line 610910 (T-shirts and Vests) shows a trend of stability as it starts at 4.46 in 2003 and closes on 5.61 in 2017. The competition on the other hand, Bangladesh, transitioned from 61.93 in 2003 to 80.89 in 2017. 620342 (Men's or boys' trousers), there was a marked increase from an RCA of 0.02 to 39.61 for Pakistan whilst its competitor, Bangladesh saw the RCA for its product shoot up from 43.23 to 89.94.

The study now moves on to the more refined of the spectrum end where a relative degree of value addition exists. Here the study finds that the product line 821420 (Manicure sets and other

instruments) boasts and increase from 25.58 to 76.01 while its competitor, Republic of Korea, finds its RCA for this product dwindle from 7.99 to a low 1.58. Similarly, in the product line 731029 (Drums and other containers of iron/steel), Pakistan has witnessed a gradual increase from 0.14 to 13.03 by the end of the period whilst its competitor, the USA, saw a very slow rise from 0.65 to 1.01.

4.2 Shift in Comparative Advantage of Products under FTA

This part calculates the RCA value for Pakistani products that are provided with tariff exemptions in comparison to countries that are the highest exporters of those particular goods to China; basically, the competition. Table 3 shows the RCA values for 18 products on which Pakistan is facing no tariffs from China for the years 2003 to 2017.

Analyzing Table 3, the study finds that the RCA of Pakistan and its competing countries goes through significant dynamic change over time. Changes that represent improving or faltering states of comparative advantage. In 2003, prior to the FTA, Pakistan possessed a Strong Comparative Advantage in only 10 products of 18. This ratio has increased by considerable amounts, post FTA, and reached 17 as of 2017. On the other end, the number of products having a weak comparative advantage rose from 2 to 3 during the same time, but the products with an extremely weak comparative advantage dramatically fell from 7 to 0 during the time.

The competing countries, as opposed to Pakistan, did not find themselves overcome by a considerable transformation during the period. The products boasting a strong comparative advantage saw a meagre increase from 6 to 8 products while the medium comparative advantage column rose by only one product going up from 2 to 3. The weak and extremely weak categories on the other hand saw slight improvements as their numbers fell from 3 and 7 to 1 and 6, respectively. This result does indicate and improvement in the comparative advantage of the competition, but not at the level witnessed by Pakistan.

4.2.1 RCA Trends for Pakistan and Competing Countries

Table 3 reveals for the product line 130232 (Mucilages and thickeners), prior to the FTA in 2003, the RCA of the product was 0.46 and the addition to the FTA saw the RCA shoot to 27.86, which signals a significant rise in the competitiveness due to the increased market access. The competition, India, on the other hand has seen its RCA suffer in relative terms as it witnessed a decline from 41.85 to 36.46, which still in absolute terms is greater than Pakistan. 220710 (Undenatured ethyl alcohol), a byproduct of sugar cane that was initially discarded, is now refined in distilleries and has witnessed its RCA rise from 6.41 to 41.98, indicating the considerable potential it holds for the future.

Table 3. RCA of 6-digit HS Code Products under FTA: Pakistan and its Competitors.

HS Code	RCA 2003	RCA 2004	RCA 2005	RCA 2006	RCA 2007	RCA 2008	RCA 2009	RCA 2010	RCA 2011	RCA 2012	RCA 2013	RCA 2014	RCA 2015	RCA 2016	RCA 2017
130232 Pak	0.46	0.92	0.00	20.81	24.74	24.05	11.07	13.58	27.29	70.84	26.82	21.85	25.55	21.43	27.86
130232 India	41.85	37.77	39.24	39.96	29.98	22.31	10.95	21.28	59.83	200.57	43.95	45.28	38.50	34.01	36.46
220710 Pak	6.41	6.63	4.83	4.07	5.47	2.21	2.16	12.67	17.68	8.61	29.55	32.59	31.52	30.14	41.98
220710 Viet	0.02	0.03	0.16	0.09	0.16	0.07	0.08	0.06	0.04	0.03	0.01	0.01	0.01	0.01	0.14
230120 Pak	0.00	0.00	0.00	0.00	0.06	0.67	0.56	0.84	2.38	1.46	2.98	2.97	1.96	1.94	3.66
230120 Peru	300.18	295.37	262.47	192.09	193.35	225.96	187.06	167.99	167.21	165.26	143.88	148.19	136.76	110.50	136.12
250100 Pak	1.30	1.23	1.08	1.84	1.47	2.02	2.36	1.65	2.69	4.49	5.24	4.44	7.60	11.09	16.06
250100 India	1.21	1.54	3.00	1.43	1.38	2.00	2.21	1.66	1.97	2.85	2.82	2.68	3.22	3.27	4.09
251512 Pak	5.49	6.10	6.32	7.43	9.74	10.47	9.93	19.75	23.18	20.48	22.43	23.33	23.50	18.36	13.14
251512 Turk	12.60	7.89	8.23	15.70	16.04	12.75	12.70	43.62	55.52	59.67	64.96	64.00	65.27	69.74	73.00
261000 Pak	23.83	28.40	23.56	22.72	41.35	46.52	33.66	43.34	23.76	32.83	30.38	30.98	25.79	30.06	26.35
261000 S.A	64.26	60.56	44.36	72.65	70.56	72.56	94.01	81.74	84.97	80.45	94.74	102.36	127.23	132.64	128.24
520911 Pak	1.02	1.44	29.61	172.26	216.75	292.34	326.95	362.19	401.37	450.33	372.31	176.13	143.67	127.67	147.67
520911 Italy	0.84	0.67	1.22	1.18	1.01	0.95	1.54	0.99	0.46	0.66	0.69	0.58	0.51	0.52	0.90
520912 Pak	0.05	0.17	0.18	7.73	6.54	9.09	10.88	11.46	20.35	32.23	47.09	50.64	43.19	37.41	38.67
520912 Viet	0.01	0.00	0.001	0.00	0.00	0.02	0.01	0.33	0.49	0.61	0.63	0.45	0.22	0.19	0.55
520919 Pak	4.84	11.99	3.53	34.47	91.32	150.49	140.69	174.01	162.00	160.74	201.60	153.15	262.94	282.69	277.31
520919 Viet	0.60	0.00	0.40	0.37	0.35	0.23	0.43	0.27	0.19	1.04	0.05	0.03	0.04	0.05	0.62
520942 Pak	4.37	7.75	11.81	15.51	20.55	27.67	43.76	52.51	68.10	102.47	108.87	110.09	118.58	131.22	139.26
520942 Turk	7.92	9.92	10.05	9.62	10.67	10.04	10.65	11.76	11.61	10.16	11.73	11.97	10.54	11.29	11.38
520831 Pak	3.78	4.50	3.51	56.43	85.53	171.81	167.47	252.02	256.71	288.47	243.52	187.64	136.64	139.95	97.40
520831 Jap	0.73	0.70	0.77	0.80	0.61	0.61	0.48	0.36	0.42	0.43	0.41	0.35	0.25	0.26	0.39
611090 Pak	0.18	0.34	0.44	1.62	5.54	5.81	5.55	8.56	10.00	11.79	16.02	35.10	26.89	49.40	90.15
611090 Italy	1.40	1.28	1.27	1.17	1.42	1.51	1.50	1.68	1.57	1.74	1.80	3.34	1.92	2.83	3.71
630231 Pak	288.42	292.21	228.52	204.80	205.16	173.02	156.37	141.84	148.50	130.43	138.72	162.43	161.48	177.24	182.25
630231 Italy	0.60	0.66	0.48	0.61	0.57	0.65	0.55	0.54	0.52	0.61	0.61	0.56	0.65	0.62	0.69
740319 Pak	0	0	0	0.002	0.26	0.05	0.04	0.44	1.66	4.71	3.93	2.83	1.18	1.47	6.84
740319 S.A	0.04	0.01	0.26	0.43	0.22	0.00	0.05	0.00	0.00	0.00	0.000925	1.06	3.40	4.05	6.37

740321 Pak	0.03	0.09	3.14	1.18	3.17	3.30	0.47	7.41	2.73	0.56	0.88	4.06	2.79	2.20	7.82
740321 ROK	1.95	3.10	3.86	3.35	2.62	3.61	3.28	3.59	4.04	3.79	3.43	3.08	2.97	2.56	1.96
901580 Pak	0.07	0.07	0.07	0.00	0.56	0.59	0.40	2.11	0.26	0.08	1.13	0.61	0.92	1.16	6.36
901580 USA	2.46	2.34	2.56	2.67	2.62	3.05	3.02	3.15	3.05	2.95	3.16	2.97	2.79	2.63	2.61
901890 Pak	4.59	4.27	4.65	4.23	5.72	5.87	4.82	4.19	4.71	5.13	4.93	5.10	5.40	5.29	5.78
901890 USA	2.44	2.64	2.71	2.84	3.05	3.11	3.04	3.11	3.08	3.02	2.96	2.85	2.83	2.84	2.80
950662 Pak	112.10	147.91	142.82	160.45	129.42	109.37	88.26	87.30	87.16	85.78	81.90	95.47	89.92	92.94	99.22
950662 Thai	7.00	9.58	6.72	6.57	6.12	5.35	5.09	4.41	5.39	5.09	5.14	4.57	4.58	4.23	4.63

Source: International Trade Center (ITC), and calculations by the authors.

Vietnam, saw its RCA rise from 0.02 to 0.14, leaving considerable space for Pakistan to maximize its advantage in the Chinese market. 250100 (Salts, incl. table salt and denatured salt) is a product that saw a considerable improvement in terms of its RCA as they grew from 1.30 in 2003 to 16.06 in 2017. Similarly, India also saw a rise in its RCA as it increased from 1.21 to 4.09 but settled below that of Pakistan.

The product line 520911 (Plain woven fabric of cotton) saw its RCA rise from 1.02 to 147.67 while its closest competitor, Italy, had relatively stable but unimpressive progress in this regard as it only moved from 0.84 till 0.9. The product lines 520912 (Woven fabric of cotton, three threaded) and 520919 (Woven fabric of cotton, unbleached) as witnessed extremely similar trends alongside their respective competitors. 520942 (Denim) is a product line that boasts a drastic improvement in its RCA from a relatively meager 4.31 to 139.26 in 2017. This rise has resulted in it overtaking its competitor, Turkey, which saw a slight deviation as it increased from 7.92 to 11.38. 611090 (Jerseys, pullovers, and cardigans) is a product line that has witnessed a remarkable rise in its RCA leaving behind its competitor, Italy, as it rose from 0.18 in 2003 to 90.15 in 2017. Italy, in comparison saw a relatively insignificant rise from 0.18 to 3.71. The product line, 630231 (Bed linen of cotton), presents an unexpected outcome as its high RCA begins to fall from 288.42, a figure prior to the FTA, to 182.25 after the FTA while the competitor Italy, again fails to impress with a meagre improvement from 0.6 to 0.69. It is an alarming indication that a product with such a high RCA prior to the FTA finds its RCA fall after being provided the benefit of tariff exemptions. A very intriguing result was found in the cases of the products lines 901580 (Instruments for topography, hydrography...) and 901890 (Medical and surgical instruments). In both cases, these products ended at values higher than those of the USA, and the product line 901580 even managed to overtake the USA as its RCA was well behind. Both product lines saw respective increases from 0.07 and 4.59 to 6.26 and 5.78. This is in the face of the US values: 2.46 and 2.44 to 2.61 and 2.80.

4.5 Positions of Product Lines not under FTA

Table 4 shows the dynamic change across all product lines facing tariffs. The trends observed allow insight into how the position of a product has changed over the period 2006 to 2017, for Pakistan and its competitors. Using this information, it can be observed which product lines are improving on their previous comparative advantages or which ones are regressing. This deep insight marks a gauge to design policies to address the observed trends to either boost them or mitigate them accordingly.

4.5.1 Competitively Positioned Product Lines

For Pakistan out of the 25 HS 6-digit level product lines, 15 of them, in 2003, have RCA indices that are greater than unity and increasing, placing them in the category of "Competitively Positioned Product Group" and this number only increased to 16 in 2017. As Table 4 shows, the products that managed to gain a competitive positioned in 2017 are: 030339 (Frozen flat fish), 100630 (Semi or wholly milled rice), 120740 (sesamum seeds), 170199 (Cane or beet sugar), 240120 (Tobacco), 391590 (Waste, parings and scrap of plastics), 410712 (Grain splits leather), 481159 (Paper and paperboard), 520511 (Single cotton yarn, of uncombed fibers), 610910 (T-shirts and vests), 620332 (Men's or boys' jackets and blazers), 620342 (Men's or boys' trousers), 640399 (Footwear with outer rubber soles), 821420 (Manicure or pedicure sets), 940490 (Articles of bedding), 731029 (Tanks, drums, cans, boxes). From Table 4, it is evident that the positions for the various product lines have witnessed a significant degree of fluctuation. The number of competitively positioned product lines for Pakistan have only grown by a single additional product line, from 15 to 16. This in comparison to the significant increase in the number of threatened product lines from 3 to 8 paints an alarming situation, signified by a negative trend in the overall trade outlook of Pakistan. The emerging and weakly positioned product lines of both, tier A and B, have ultimately decreased and most of them have instead shifted towards the threatened end of the spectrum.

For the competing countries, out of the 25 HS 6-digit level product lines, 10 of them, in 2003, have RCA indices that are greater than unity and increasing, placing them in the category of "Competitively Positioned Product" group. This figure rose to a total of 14 by 2017, an improvement significantly higher than that of Pakistan.

4.5.2 Threatened Product Lines

In the case of "Threatened Product" group, there are 3 product lines out of 25 that were threatened in 2003. This ratio increased to 8 in 2017. These products exhibit a revealed comparative advantage but have experienced a declining share in world markets during the period of 2003-2017 as can be viewed from the Table 4.3. It is pertinent to note, that 040120 (Milk and cream) was a product that boasted a competitive position in 2003, but ultimately landed under "Threatened Product" category, by 2017. The position for the competitor of this particular product line, Germany, didn't share a much better fate as it began at a threatened position in 2003 and remained threatened till 2017.

Table 4. Competitive Position of 6-digit HS Code Products not under FTA: Pakistan and its Competitors

HS Code	Moving Avg (2003-2005)	Position (2006-Avg 3 Yrs)	Moving Avg (2006-2008)	Position (2009-Avg 3 Yrs)	Moving Avg (2010-2012)	Position (2013-Avg 3 Yrs)	Moving Avg (2014-2016)	Position (2017-Avg 3 Yrs)
030339 Pak	7.3	44.52 (CP)	59.73	63.92 (CP)	216.3	1.45 (CP)	191.29	31.76 (CP)
030339 USA	4.29	0.28 (CP)	4.78	-0.82 (T)	3.56	0.91 (T)	3.82	-0.6 (T)
040120 Pak	1.62	1.99 (CP)	2.89	0.03(CP)	4.53	2.24 (CP)	4.98	-0.43 (T)
040120 Ger	3.52	-0.29 (T)	2.89	-0.25 (T)	2.58	-0.01 (T)	2.42	-0.31 (T)
081340 Pak	17.1	-12.57 (T)	12.35	32.40 (CP)	26.95	-45.1 (CP)	54.73	-35.13 (T)
081340 Thai	22.33	-5.00 (T)	17.00	1.22 (CP)	26.49	-8.49 (T)	18.46	5.95 (CP)
100630 Pak	70.35	17.89 (CP)	88.37	-17.76 (T)	69.56	-7.20 (T)	61.73	0.40 (CP)
100630 Viet	45.31	-3.18 (T)	39.59	-5.23 (T)	32.73	-14.07 (T)	13.64	-4.77 (T)
100640 Pak	0.55	36.23 (CP)	48.07	23.20 (CP)	111.88	6.23 (CP)	133.66	-57.79 (T)
100640 Thai	49.28	-4.55 (T)	44.44	-7.63 (T)	25.53	-7.46 (T)	20.78	1.87 (CP)
120740 Pak	6.28	3.38 (CP)	13.86	2.55 (CP)	6.17	5.60 (CP)	11.14	4.79 (CP)
120740 Ethi	1632.26	683.95 (CP)	1652.49	-60.52 (T)	1045.98	-156.66 (T)	979.76	108.55 (CP)
110100 Pak	20.19	17.46 (CP)	20.18	-20.01 (T)	29.29	-0.46 (T)	35.48	-19.11 (T)
110100 Ukra	0.22	0.09 E(a)	2.7	0.42 (CP)	2.08	1.83 (CP)	5.95	2.24 (CP)
170199 Pak	2.36	-1.59 W(a)	2.60	-2.6 (T)	2.46	20.77 (CP)	12.87	6.27 (CP)
170199 ROK	0.43	-0.003 W(b)	0.48	-0.01 W(b)	0.54	-0.11 W(b)	0.41	-0.06 W(b)
240120 Pak	0.99	-0.05 W(a)	0.75	-0.13 W(a)	1.32	-0.67 W(a)	0.62	1.68 (CP)
240120 Zim	329.79	-237.35 (T)	112.57	45.00 (CP)	326.49	129.61 (CP)	545.72	243.91 (CP)
271019 Pak	1.59	0.48 (CP)	2.04	-0.48 (T)	1.30	-0.69 W(a)	0.31	-0.002 W(b)
271019 Sing	4.12	-0.40 (T)	3.83	0.10 (CP)	3.78	-0.48 (T)	3.55	0.33 (CP)
620332 Pak	0.35	0.80 (CP)	1.65	8.27 (CP)	35.94	4.29 (CP)	119.46	301.08 (CP)
620332 Italy	1.1	0.35 (CP)	1.58	0.12 (CP)	2.19	0.046 (CP)	1.32	-0.16 (T)
391590 Pak	0.38	0.39 E(a)	2.23	0.31 (CP)	4.68	-0.04 (T)	4.69	0.84 (CP)
391590 H.K	7.08	0.64 (CP)	7.37	0.91 (CP)	6.36	-1.60 (T)	6.59	-1.87 (T)
410712 Pak	0	1.43 (CP)	1.82	-0.006 (T)	7.76	7.96 (CP)	18.57	1.88 (CP)
410712 Italy	8.15	0.65 (CP)	9.31	1.90 (CP)	12.53	0.31 (CP)	11.43	0.61 (CP)
410792 Pak	—	0.67 (CP)	3.49	1.09 (CP)	11.19	5.19 (CP)	14.93	-0.69 (T)
410792 Italy	3.16	-0.11 (T)	3.41	1.22 (CP)	4.85	-0.24 (T)	4.29	0.25 (CP)
481159 Pak	0.02	0.07 E(b)	0.04	-0.04 W(b)	0.85	3.35 (CP)	6.7	3.73 (CP)
481159 USA	0.53	0.13 E(a)	0.67	-0.001 W(a)	0.55	-0.03 W(a)	0.51	0.14 E(a)
520512 Pak	203.6	-51.37 (T)	148.44	47.82 (CP)	196.75	45.82 (CP)	200.68	-34.61 (T)
520512 Viet	3.17	-0.31 (T)	5.12	8.19 (CP)	14.77	-1.38 (T)	17.96	3.65 (CP)
520511 Pak	79.19	88.49 (CP)	138.28	12.25 (CP)	183.58	-52.12 (T)	146.79	41.61 (CP)
520511 Viet	1.02	-0.47 (T)	0.63	14.10 (CP)	9	-5.72 (T)	13.39	1.12 (CP)
520522 Pak	129.34	-47.00 (T)	109.20	28.97 (CP)	115.07	-27.26 (T)	81.05	-3.16 (T)
520522 India	5.26	6.02 (CP)	13.6	-1.75 (T)	15.89	2.55 (CP)	19.36	-0.22 (T)
570110 Pak	115.42	2.06 (CP)	111.02	-39.09 (T)	64.28	15.53 (CP)	72.46	-12.67 (T)
570110 India	15.21	3.62 (CP)	15.92	1.29 (CP)	13.07	-0.22 (T)	15.30	-2.78 (T)

610910 Pak	5.72	2.24 (CP)	7.82	-0.10 (T)	6.97	-1.23 (T)	5.43	0.17(CP)
610910 Bang	70.05	7.16 (CP)	89.18	9.45 (CP)	118.89	2.67 (CP)	59.72	21.17 (CP)
620342 Pak	0.02	0.07 E(b)	0.13	0.49 E(a)	2.39	0.65(CP)	11.25	28.36 (CP)
620342 Bang	52.91	20.33 (CP)	82.8	13.61 (CP)	112.97	7.14 (CP)	62.28	27.66 (CP)
640399 Pak	0.19	0.11 E(b)	1.46	0.73 (CP)	1.53	0.46 (CP)	2.07	0.03 (CP)
640399 Viet	4.34	2.26 (CP)	8.94	5.58 (CP)	12.87	-0.179 (T)	11.00	-1.74 (T)
821420 Pak	22.97	6.58 (CP)	40.68	12.11 (CP)	84.68	-12.35 (T)	66.51	9.50 (CP)
821420 ROK	6.95	-1.28 (T)	4.94	-1.20 (T)	2.99	-0.55 (T)	1.92	-0.33 (T)
940490 Pak	4.33	2.62 (CP)	4.76	2.83 (CP)	7.33	-0.11 (T)	6.16	0.04 (CP)
940490 Thai	1.02	-0.11 W(a)	0.76	-0.22 W(a)	0.35	-0.08 W(b)	0.32	0.12 W(b)
731029 Pak	0.13	-0.09 W(b)	0.33	1.43 (CP)	0.71	-0.28 W(b)	1.29	11.74 (CP)
731029 USA	0.73	0.019 E(a)	0.77	0.15 E(a)	1.02	-0.02 E(a)	0.97	0.05 (CP)

Source: International Trade Center (ITC), and calculations by the authors.

The product line 081340 (Dried peaches, pears and other fruit) was threatened in 2003 but became competitive in 2009 and 2013 and then again slipped down to the category of Threatened Product in 2017. Thailand, which is competitor of Pakistan for this product line, found itself in a threatened position in 2003 but transformed to a competitive position by 2017. The product line 100640 (Broken rice) was competitive in the years 2006, 2009 and 2013, but became threatened in 2017. The competitor of Pakistan in this product line, Thailand, improved its position from threatened in all years preceding the current, and managed a jump to a Competitive Position in 2017. The falling comparative advantage for a product line that makes the bulk of Pakistan's export is an alarming signal for any country. One that requires prompt action to mitigate such a negative and hazardous trend.

The product line 110100 (Wheat or meslin flour) was competitive in 2017 and saw great fluctuations as it became threatened in 2009, 2013 and 2017. The competition for this product line is Ukraine, whose product was an emerging product of tier B in 2006, but its position improved over time and eventually became competitive by 2017. The product line 410792 (Grain splits leather) was subject to a competitive position for the years 2006, 2009 and 2013 but lost its competitiveness in 2017 and changed to a threatened position. The competition for Pakistan in this product line is Italy, which was in a threatened position for this product in 2006 and managed to transform and become competitive by 2017.

The product line 520512 (Single cotton yarn, of uncombed fiber) was threatened in 2006 and became competitive in 2009 and then again became threatened in 2013 and 2017. The competitor is India which also saw itself lost its competitive position in 2006 and regress to a threatened position by 2017. This is another instance of Pakistan's major exporting product line losing their comparative advantage over time. A situation if remains persistent could write severe consequences.

The product line 570100 (Carpets and other textile floor coverings) was competitive in 2006 and turned threatened by 2017. The competitor of Pakistan in this product line is India whose position was also competitive in 2006 and similarly, again saw itself regress to a threatened position by 2017. In view of their significance to Pakistan's revealed comparative advantage profile, there is a need for determined efforts to ensure that Pakistan sustains and enhances its export competitiveness by reversing some of the trends analyzed above. Although it is difficult to formulate a product-specific policy response, there is a strong economic rationale for targeting those "Threatened Products" that have significant comparative advantage, but ones that are declining with time. For instance, cotton and rice, now amongst the "Threatened Product" category, are major export earners for Pakistan. These products have witnessed a modest decline in their export competitiveness in recent times. This analysis is aimed towards drawing product-specific measures for product lines in this group, in addition to highlighting product specific industries that require specific attention during trade.

4.5.3 Emerging products: Tier A

The "Emerging Product Group" is sub-divided into two groups to draw a distinction between two types of product lines: Tier A and Tier B.

For Pakistan there was only one product 391590 (Waste, parings and scrap of plastics) lying in this category in 2006 which then shifted to a competitive position in 2017. Pakistan's competitor in this product is Hong Kong which was competitive in 2006 but shifted to a Threatened Position product line in 2017. This change brings about opportunity for Pakistan to capitalize on the area left vacant by Hong Kong in the Chinese market and increase its own market share in the process. For Pakistan in 2013 and 2017 there were no products in this category. For the competing countries on the other hand, there were two products that were in this category in 2006, the ratio rose to 3 in 2017.

4.5.4 Emerging Products: Tier B

In Table 4 it is seen that for Pakistan there are only 3 product lines that show continuous improvement, but their RCA indices are below 0.5. Only 3 products were lying in this category in 2006 but owing to improvements in their comparative advantage, no product remained in this category.

The product lines that were in this category were 481159 (Paper and paperboard), 620342 (Men's or boys' trousers), and 640399 (Footwear) but found themselves entering a competitive position by 2017. The competitors in the product lines 481159 is the USA which has maintained its spot rather than ascending to a competitive position. For the product line 620342, which turned to a competitive position by 2017, the competition, Bangladesh, was competitive in 2009 and remained competitive till 2017.

Representing a difficult market to compete in for Pakistan. The competitor for the product line 640399 stands to be Vietnam, which was competitive in 2006 but became threatened as opposed to evolving to a competitive position.

4.5.5 Weakly Positioned Products: Tier A

Weakly Positioned" products are categorized into sub-grouping of Tier A and Tier B similar to the emerging product lines. The RCA indices of the Tier A product line are less than unity but greater than 0.5 and, thus have experienced negative growth. For Pakistan there were only two product lines included in this category in 2006. A number, which fell to just 1 by 2017. The products lines are: 170199 (Cane or beet sugar) and 240120 (Tobacco), both of which were weakly positioned but with time gradually saw an improvement in their positions to ultimately improve their comparative advantage and attain a Competitive Position in 2017. For the competition on the other hand, there was only one product under this category in 2006 and it remains the same for 2017. This product is 170199, which is exported by the Republic of Korea, and saw itself suffering from a Weak Position Tier B in 2006 which remain the case for 2017. For the product line 240120 the competitor is Zimbabwe which was in a Threatened Position in 2006 but shifted to a Competitive Position in 2017.

4.5.6 Weakly Positioned Products: Tier B

For Pakistan there was only one product line in this category in 2006 and none remained in the year 2017. Similarly, for the competing countries, there was also only one product in this category in 2006, but unlike in the case of Pakistan, the number increased to 2 in 2013 but ultimately improved by 2017 and became 0 as no product remained under this category. The product in question is 731029 (Tanks, drums, boxes and similar containers), which with time saw an improvement in its comparative advantage and turned competitive by 2017. The competitor in this case is the USA that was emerging in 2006 and turned competitive in 2017.

4.6 Positions of Product Lines under FTA

Table 5 shows similar changes to Table 4 but for the product lines exempted from tariffs. These trends aid in observing the impact of the FTA and how those products have capitalized on the increased market access relative to their comparative advantages.

4.6.1 Competitively Positioned Product lines

For Pakistan out of the 18 HS 6-digit level product lines, 11 of them in 2003 have RCA indices that are greater than unity and increasing, placing them in the category of "Competitively Positioned Product Group" and the number of products improved to 13 in 2017.

Table 5. Competitive Position of 6-digit HS Code Products under FTA: Pakistan and its Competitors

HS Code	Moving Avg (2003-2005)	Position 2006-Avg 3 Yrs	Moving Avg (2006-2008)	Position (2009-Avg 3 Yrs)	Moving Avg (2010-2012)	Position (2013-Avg 3 Yrs)	Moving Avg (2014-2016)	Position (2017-Avg 3 Yrs)
130232 Pak	0.46	20.35 (CP)	23.2	-12.13 (T)	37.24	-10.41 (T)	22.94	4.91 (CP)
130232 India	39.62	0.33 (CP)	30.75	-19.79 (I)	93.89	-49.94 (I)	39.26	-2.80 (I)
220710 Pak	5.96	-1.88 (T)	3.92	-1.75(T)	12.99	16.56 (CP)	31.42	10.56 (CP)
220710 Viet	0.07	0.013 E(b)	0.11	-0.03 W(b)	0.04	-0.03 W(b)	0.01	0.13 E(b)
230120 Pak	–	–	0.24	0.31 E(a)	1.56	1.41 (CP)	2.29	1.37 (CP)
230120 Peru	286.01	-93.91 (I)	202.12	-34.13 (I)	166.82	-22.94 (I)	131.81	4.30 (CP)
250100 Pak	1.2	0.63 (CP)	1.78	0.58 (CP)	2.94	2.29 (CP)	7.7	8.36 (CP)
250100 India	1.21	-0.49 (T)	1.60	0.60 (CP)	2.15	0.66 (CP)	3.06	1.03 (CP)
251512 Pak	5.97	1.46 (CP)	9.21	0.71 (CP)	21.14	1.29 (CP)	21.73	-8.59 (T)
251512 Turk	9.57	6.12 (CP)	14.83	-2.13 (T)	52.93	12.02 (CP)	66.33	6.66 (CP)
261000 Pak	25.26	-2.54 (T)	36.86	-3.20 (T)	33.31	-2.92 (T)	28.94	-2.59 (T)
261000 S.A	56.39	16.25 (CP)	71.92	22.09 (CP)	82.39	12.35 (CP)	120.74	7.49 (CP)
520911 Pak	10.69	161.57 (CP)	227.12	99.83 (CP)	404.63	-32.32 (T)	149.16	-1.48 (T)
520911 Italy	0.91	0.26 (CP)	1.04	0.49 (CP)	0.7	-0.01 (T)	0.54	0.36 (CP)
520912 Pak	0.13	7.59 (CP)	7.79	3.09 (CP)	21.35	25.74 (CP)	43.75	-5.07 (T)
520912 Viet	–	-0.00(T)	0.01	0.01 E(b)	0.48	0.15 E(a)	0.29	0.26 E(a)
520919 Pak	6.78	27.68 (CP)	92.09	48.59 (CP)	165.58	36.01 (CP)	232.93	44.37 (CP)
520919 Viet	0.34	0.04 E(b)	0.32	0.11 E(b)	0.5	-0.45 W(b)	0.04	0.58 E(a)
520942 Pak	7.98	7.53 (CP)	21.24	22.51 (CP)	74.36	34.51 (CP)	119.97	19.29 (CP)
520942 Turk	9.29	0.32 (CP)	10.11	0.53 (CP)	11.18	0.54 (CP)	11.27	0.11 (CP)
520831 Pak	3.93	52.49 (CP)	104.59	62.87 (CP)	265.74	-22.21 (T)	154.74	-57.34 (T)
520831 Jap	0.73	0.06 E(a)	0.67	-0.19 W(b)	0.40	0.002 E(b)	0.29	0.1 E(b)
611090 Pak	0.32	1.29 (CP)	4.32	1.22 (CP)	10.12	5.89 (CP)	37.13	53.02 (CP)
611090 Italy	1.32	-0.14 (T)	1.37	0.13 (CP)	1.66	0.13 (CP)	2.7	1.01 (CP)
630231 Pak	269.71	-64.91 (T)	194.33	-37.95 (T)	140.26	-1.53 (T)	167.05	15.19 (CP)
630231 Italy	0.58	0.03 E(a)	0.61	-0.06 W(a)	0.56	0.05 E(a)	0.61	0.08 E(a)
740319 Pak	–	–	0.1	-0.06 W(b)	2.27	1.65 (CP)	1.83	5.01 (CP)
740319 S.A	0.11	0.32 E(b)	0.22	-0.17 W(b)	0.00	0.04 E(b)	2.84	3.54 (CP)
740321 Pak	1.09	0.09 (CP)	2.55	-2.08 W(b)	3.57	-2.69 W(a)	3.01	4.80 (CP)
740321 ROK	2.97	0.38 (CP)	3.2	0.08 (CP)	3.81	-0.37 (T)	2.87	-0.91 (T)
901580 Pak	0.07	-0.07 W(b)	0.38	0.02 E(b)	0.82	0.31 (CP)	0.9	5.46 (CP)
901580 USA	2.45	0.22 (CP)	2.78	0.24 (CP)	3.05	0.11 (CP)	2.8	-0.19 (T)
901890 Pak	4.5	-0.26 (T)	5.28	-0.46 (T)	4.68	0.25 (CP)	5.26	0.51 (CP)
901890 USA	2.59	0.25 (CP)	3	0.03 (CP)	3.07	-0.11 (T)	2.84	-0.04 (T)
950662 Pak	134.28	26.16 (CP)	133.08	-44.81 (T)	86.75	-4.84 (T)	92.78	6.44 (CP)
950662 Thai	7.77	-1.20 (T)	6.01	-0.92 (T)	4.96	0.17 (CP)	4.46	0.17 (CP)

Source: International Trade Center (ITC), and calculations by the authors.

As the table shows, the products that managed to gain a competitive position in 2017 are: 130232 (Mucilages and thickeners), 220710 (Undenatured ethyl alcohol), 230120 (Flours, meals and pellets of fish), 250100 (Salts, incl. table salt and denatured salt), 520919 (Woven fabrics of cotton), 520942 (Denim), 611090 (Jerseys, pullovers, cardigans), 630231 (Bedlinen of cotton), 740319 (Copper, refined, unwrought), 740321 (Copper-zinc base alloys), 901580 (Instruments for geodesy, topography, hydrography) 901890 (Medical and surgical instruments), and 950662 (Inflatable balls). From the table 5 it becomes evident that the number of competitively positioned products has increased over time. On the other hand, unfortunately, the number of threatened products has also witnessed a rise with time, but the emerging and weakly positioned product lines, of both Tier A and B, have decreased during the same period.

For the competing countries out of the 18 HS 6-digit level product lines, 8 of them in 2003 have RCA indices that are greater than unity and increasing, as observed from figure 4.8, placing them in the category of "Competitively Positioned Product Group". A number which rose to 9 in 2017, whilst the number of Threatened Product lines fell by 1 and became 4.

4.6.2 Threatened Product lines

In the case of the "Threatened Product" group, for Pakistan, there are 4 product lines out of 18 that were threatened in 2003, a ratio which increased to 5 in 2017. These products exhibit a revealed comparative advantage but have experienced a declining share in world markets during the period of 2003-2017. It is important to note that the product 251512 (Marble and travertine) was competitively positioned in 2003 but due to decline of the share in the world market it became a threatened product in 2017. The competitor for Pakistan in this product line stands to be Turkey, which maintained its competitive position that it had during the beginning of the period, in 2003.

The product line 261000 (Chromium ores and concentrates) remained threatened throughout the period, but on the other hand the competition, South Africa, maintained its competitive position throughout. The product line 520911 (Plain woven fabrics of cotton > 200 g/m²) was competitive in 2003 but due to the decline of its share in international market, turned threatened in 2017, while the competitor, Italy, remained competitive throughout this time. This is an alarming situation for Pakistan as it is a major export earner and there is dire need to improve it, hence special attention is required to counter these developments that have led 520911 to become threatened.

The product line 520831 (Plain woven fabrics of cotton ≤ 100 g/m²) was competitive in 2003 but became threatened in 2017, but the competition, Japan also saw a decline in its relative

competitiveness as it regressed from a position in the category of Emerging Tier A in 2003 and turned to Emerging Tier B, albeit resting at a better position in comparison 2017.

4.6.3 Emerging Product lines: Tier A

The "Emerging Product Group" is sub-divided into two groups to draw a distinction between two types of product lines: Tier A and Tier B. For Pakistan there was no product line in this category for the time period. But the competing countries had two products lying in this category, which eventually rose to 3 in 2017.

4.6.4 Emerging Product lines: Tier B

For Pakistan there are only 2 product lines included in the FTA that have shown continuous improvement. In 2006, no product was a part of this category, but in 2009 both gained a relative degree of advantage to become a part of the Emerging Product category, and in 2017, both gained a competitive position, leaving the emerging product column empty. On the other hand, for the competing countries, 3 products were lying in this category in 2006, which reduced to just 2 by 2017.

In 2009, one of the products that lay in this category was 230120 (Flours, meals and pellets of fish), which managed to shift to a competitive position in 2017. The competitor for this product was Peru, which was in a threatened position in 2009, but shifted to a competitive position in 2017. The other product line 901580 (Instruments used in geodesy, topography, hydrography), which lies in this category in 2009 but transformed into a competitively positioned product by 2017, the competition, in the form of the USA, was competitive in 2009 but regressed to a threatened position by 2017, which was great for Pakistan as a major competitor losing its international share signals an opportunity to boost one's own advantageous position.

4.6.5 Weakly Positioned Products: Tier A

Weakly Positioned products are categorized into sub groups of Tier A and Tier B. The RCA indices of Tier A product lines are less than unity but greater than 0.5 and thus have experienced negative growth. For Pakistan in 2006 there was only 1 product that lay in this category and in 2009 there were 2, but owing to improvement in their comparative advantages these product lines shifted to a more competitive position which left no product remaining in this category by the end of the period. For the competitors there was no product in this category in 2006, but one managed to enter this category in 2009 but then again departed by 2017.

4.6.6 Weakly positioned Products: Tier B

For Pakistan, in 2006 there were only three products that were a part of this category, but with time the number fell to zero by 2017. These are the product lines which are losing their comparative advantage and a decrease in number of these products is beneficial for Pakistan. But at the same time the competing countries have no products that lie in these categories, even though 3 products did regress to it for a short period in 2009, the figure ultimately fell back to 0 by 2017. This meant increased competition for Pakistani products in the Chinese markets which means that Pakistan needs to make efforts to make their products more competitive, despite an already non-existent tariff.

4.7 Current and Potential Exports of products not under FTA

From Table 6, there are a total of 10 products that possess a strong comparative advantage and a significantly high export potential. The most notable of these products that are facing higher or equal tariffs from the competing countries, but have a high export potential are: 030339 (Frozen flat fish), 100630 (Semi-milled or wholly milled rice), 100640 (Broken rice), 170199 (Cane or beet sugar), 410792 (Grain splits leather), 481159 (Paper and paperboard), 520512 (Single cotton yarn), 610910 (T-shirts and vests), 620342 (Men's or boys' trousers), and 940490 (Articles of bedding). Comparing tariffs with competing countries it is found that these Pakistani exports that boast such a high export potential lose largely because in most cases, higher tariffs are levied upon them making it difficult for them to compete. Very few product lines have been given a tariff that can be considered competitive in terms of those provided to other nations. Thus, a very low export volume is produced in the face of such hindrances, despite so much potential. The sheer magnitude of this can be observed with the case of just two products, 100630 and 100640. These two products, if they manage to utilize their export potential, can add an additional 1.4B\$ in export earnings, which is essentially double the total current export of Pakistan to China. The hindrance in this case is an enormous tariff of 65% whilst the competition, Vietnam and Thailand, are provided with and tariffs they facing, are 28%. Even without an absolute exemption, a competitive level of 28% would still increase the current exports by a huge margin.

4.8 Current and Potential Exports of products under FTA

The product lines that are exported under the FTA do not possess significant current or potential export volumes, barring a few. There are 3 product lines that are an exception to this; 520919 (Woven fabrics of cotton), 520942 (Denim), and 901890 (Medical and surgical instruments). These product lines wield high export potentials of \$60.3M, \$153.99M, and \$344.7M, respectively.

Table 6. Current and Potential Exports of 6-digit HS Code Products not under FTA: Pakistan and its Competitors (\$ million)

HS Code	Current Export (2017)	Potential Export (2017)	Tariff (2016)	HS Code	Current Export (2017)	Potential Export (2017)	Tariff (2016)
030339 Pak	18.3	138.7	8	410712 Pak	15.1	99.3	4
030339 USA	127.5	32.2	10	410712 Italy	105.0	444.8	7
040120 Pak	0.0	29.4	12	410792 Pak	2.0	48.7	5
040120 Ger	115.1	786.9	15	410792 Italy	20.7	351.8	5
081340 Pak	16.2	11.7	24	481159 Pak	0.2	80.9	8
081340 Thai	94.3	2.0	0	481159 USA	22.1	197.6	8
100630 Pak	79.5	1381.1	65	520512 Pak	624.0	187.9	4
100630 Viet	914.4	546.2	28	520512 Viet	896.4	136.5	0
100640 Pak	16.1	1444.5	65	520511 Pak	74.7	17.9	4
100640 Thai	410.8	1049.7	28	520511 Viet	68.7	1.2	0
120740 Pak	3.2	40.3	5	520522 Pak	31.0	66.1	4
120740 Ethi	203.0	185.7	0	520522 India	72.4	250.2	4
110100 Pak	0.0	50.8	65	570110 Pak	0.2	5.9	13
110100 Ukra	23.2	27.5	65	570110 India	2.4	3.7	14
170199 Pak	3.1	242.6	50	610910 Pak	4.4	19.3	9
170199 ROK	91.8	75.4	50	610910 Bang	82.0	347.1	0
240120 Pak	0.0	26.4	10	620342 Pak	0.7	349.6	8
240120 Zim	558.7	447.4	10	620342 Bang	99.9	250.4	2
271019 Pak	3.5	139.4	4	640399 Pak	0.0	69.0	5
271019 Sing	4317.9	5999.9	1	640399 Viet	184.1	715.9	0
620332 Pak	0.1	25.7	13	821420 Pak	0.4	7.4	16
620332 Italy	2.6	46.4	16	821420 ROK	2.2	5.5	11
391590 Pak	14.1	5.5	5	940490 Pak	0.1	79.5	20
391590 H.K	401.9	17.7	0	940490 Thai	27.7	34.7	0
				731029 Pak	0.1	13.7	14
				731029 USA	1.3	12.4	18

Source: International Trade Center (ITC), and calculations by the authors.

The products 901580 (Instruments for geodesy, topography, hydrography) and 901890 (Medical and surgical instruments) are facing competition from USA and have an export potential of \$10M and \$344.7M, but despite facing a lower tariff, the exports volumes are much less than those of the USA as shown in table 7. It is further revealed that China is charging almost zero tariffs from the competing countries, due to which Pakistan's export volume does not see the sort of increase as the net benefit through the competitive edge is negated by the provision of similar benefits to the competing countries. On the other hand, there are also a few product lines for competitors that are facing higher tariffs than Pakistan: 130232 (Mucilages and thickeners), 251512 (Marble and travertine), 520511 (Single cotton

yarn), 520942 (Denim), 520831 (Plain woven fabrics of cotton), 611090 (Jerseys, pullovers, cardigans), and 901580 (Instruments used in geodesy, topography, and hydrography). Despite facing tariffs, the export volumes for competing countries are much higher than those of Pakistan. This could be a result of the low exportable surpluses or lower quality products in Pakistan.

Table 7. Current and Potential Exports of 6-digit HS Code Products under FTA: Pakistan and its Competitors (\$ million)

HS Code	Current Export (2017)	Potential Export (2017)	Tariff (2016)	HS Code	Current Export (2017)	Potential Export (2017)	Tariff (2016)
130232 Pak	12.0	23.1	0	520942 Pak	2.9	154.0	0
130232 India	34.9	0.2	10	520942 Turk	11.1	145.8	10
220710 Pak	8.3	1.0	0	520831 Pak	3.1	2.2	0
220710 Viet	0.1	0.3	0	520831 Jap	2.0	2.3	10
230120 Pak	16.9	2.9	0	611090 Pak	1.9	12.3	0
230120 Peru	1177.4	297.4	0	611090 Italy	6.7	75.1	14
250100 Pak	4.6	46.0	0	630231 Pak	12.4	9.9	0
250100 India	79.4	95.0	0	630231 Italy	1.4	20.9	14
251512 Pak	21.0	4.1	0	740319 Pak	17.0	0.5	0
251512 Turk	863.8	135.5	4	740319 S.A	25.2	22.1	2
261000 Pak	94.1	10.2	0	740321 Pak	3.8	4.6	0
261000 S.A	1138.4	910.0	0	740321 ROK	32.4	22.3	0
520911 Pak	7.5	7.8	0	901580 Pak	23.7	10.1	0
520911 Italy	0.3	3.6	11	901580 USA	101.9	876.4	3
520912 Pak	41.5	15.9	0	901890 Pak	15.8	344.7	0
520912 Viet	13.9	4.6	0	901890 USA	806.3	1656.5	3
520919 Pak	9.9	60.3	0	950662 Pak	7.2	14.4	0
520919 Viet	1.3	0.2	0	950662 Thai	6.4	15.2	0

Source: International Trade Center (ITC), and calculations by the authors.

Table 8 shows a comparison between top product lines under the categories of FTA and non-FTA. The top three non-FTA product lines possess a cumulative current value of exports at \$719 million while their potential exports stand at a massive sum of \$3 billion, which if utilized, through lowered restrictions by inclusion into the FTA, would essentially triple Pakistan's trade to China. On the other hand, the cumulative current exports for the top three products under the FTA stand at a meagre \$113 million whilst their potential exports stand at \$509 Million, which is a relatively unimpressive figure especially considering the advantage they possess not facing a tariff.

Table 8. Products Boasting Highest Current/Potential Exports

Non-FTA Products				FTA Products			
HS Code	Name	Current Exports (2017)\$M	Potential Exports (2017)\$M	HS Code	Name	Current Exports (2017)\$M	Potential Exports (2017)\$M
529512	Single Cotton yarn of uncombed fibers	623.96	187.91	901890	Medical Instruments	15.83	344.73
100630	Semi or Wholly Milled Rice	79.45	1381.1	261000	Chromium Ores	94.09	10.2
100640	Broken Rice	16.05	1444.5	520942	Denim	2.88	153.99

Source: International Trade Center (ITC), and calculations by the author.

Pakistan has been given tariff free access to Chinese market in 313 products according to Phase-2 negotiation of the CPFTA. This is good news for Pakistan, but this study shows that China is also giving duty free access to other competing countries in the same products that leads to tough competition in the Chinese market. The products on which Pakistan have huge export potential to China and have high RCA haven't been included among these 313 products. As shown in Table 8 these are the products this study recommended on which Pakistan have high export potential to china, but these products have not been included in the Phase-2 of the FTA. Milled and Broken rice having significant export potential to China worth about \$2.8 billion are still excluded from the FTA. The study has recommended products that should be given duty free access to China in order accrue maximum benefits from this CPFTA and transform it into an impressively lucrative venture in Pakistan's favor.

5. Conclusion

Pakistan has been suffering from a trade deficit against China for a long time, a situation that has only caught pace since the establishment of the FTA between the two countries, as the imports for Pakistan have risen exponentially whilst the exports growth has remained relatively unremarkable. An exceedingly inappropriate export list under the CPFTA has been one of the major reasons causing the growth of trade balance in favor of China. This means that those goods wherein Pakistan possesses a comparative advantage have been tactfully eliminated from the tariff exemptions, whilst the products that hold no such advantage have been made a part of the list of exemptions.

Even if Pakistan does find itself pushing volumes into China, the problem persists with the low value addition and quality of the exports, which does not make for great exports earnings as opposed to the imports of finished goods, such as heavy machinery. Trade liberalization has also been found to exert pressure as competition increases with lower cost international producers joining in the market. In

some cases, the costs are so low that even the application of a certain degree of tariffs does not inhibit their competitiveness. So, ultimately the high cost producers are shunned from the market.

The results have found that the RCA of the products in which Pakistan faces tariffs, and are not the part of FTA, has improved over time. In 2003, there were only a few products that had a Strong Comparative Advantage, but the proportion increased significantly in 2017. The reason for this increase in the proportion of products possessing a Strong Comparative Advantage is because as these industries were not provided additional market access they had to evolve to remain in the market and consequently transformed themselves from a position of an Extremely Weak Comparative Advantage, ascending to attain a position of Strong Comparative Advantage. Though, this result does portray an image of confidence and revolutionary transition, but in the equation of a global context it is not as promising as it may initially seem. Since Pakistan competes against the entire globe to attain a market share in the relevant products, the fact that those competitors also find themselves gaining a similar advantage with an increasing number of products landing in the premise of a Strong Comparative Advantage, with a simultaneously falling category of Weak Comparative Advantage, does not allow room to benefit much through these gains; especially since the competition is provided with lower tariffs, giving them an ultimate edge. This poses a serious threat towards Pakistan's ambitions of boosting their export earnings. Additionally, in the case of the products that do not suffer from inhibiting tariffs, there has also been considerable improvement in the number of products having a Strong Comparative Advantage; witnessing an increase from a meager 8 products in 2003, to 17 in 2017. This goes to show that with the establishment of the FTA the comparative advantage of the products improved, but at the same time the RCA of the competitors also improved and hence exerted more competitive pressure on Pakistani products in the Chinese market. Leaving little opportunity for Pakistan to make any significant gains.

As the RCA of the products that are not a part of the FTA has improved over time, the competitiveness of the products has also witnessed great improvement as the number of products that were Competitively Positioned increased during the period 2003-2017. Some of the products that were threatened in 2003 turned competitive in 2017, representing an improvement in their RCA. On the other hand, there are some products that were Competitively Positioned in 2003 but regressed to a Threatened Position by 2017. These products include: 081340 (Dried peaches, pears, and other fruit), 100640 (Broken rice), 110100 (Wheat or meslin flour), 410792 (Grain splits leather), 520512 (Cotton yarn uncombed fiber), and 570100 (Carpets and other textile floor coverings). Amongst these, the most notable are (100640, 520512) as they represent an alarming situation for Pakistan as these are the major export earners for Pakistan that have become threatened. A reason for the falling position of the product

line 520512, representing the cotton industry, is the focus on the growth of the political crop that is sugar cane. Farmers divert their resources from cotton fields to the production of sugar cane, resulting in the falling exports as well as RCA of the cotton-based product lines. This can be witnessed by the declining production as well as area for cotton while the opposite trend witnessed by sugarcane. The area of cotton declined from 2,806,000 hectares in 2013, to 2,489,000 hectares in 2017, whilst its production fell from 12,769,000 bales to 10,671,000 bales in the same period. Sugar cane, on the other hand saw its area expand from 1,173,000 hectares to 1,218,000 as its production rose from 67,460,000 tons to 75,482,000 tons in the same period (Pakistan Economic Survey, 2018).

The products that are exported to China under the FTA show a similar picture as the number of Competitively Positioned products rose over time, but due to a simultaneous improvement in the positions of competing countries these products came under severe competitive pressure. There is an unexpected result that indicates some products which are under the FTA but have seen their position shift from competitive to threatened, a sign that is dangerous for any country, but more so for one that is already suffering from a crushing trade deficit. These products are: 251512 (Marble and travertine), 261000 (Chromium ores), 520911 (Plain woven fabrics of cotton > 200 g/m²), and 520831 (Plain woven fabrics of cotton <= 100 g/m²). The most notable among these are (520911, 520831) considering their significance as major export earners for Pakistan.

The most interesting point drawn from this analysis is that most of the products the study incorporates, which are not a part of the FTA, Pakistan is facing tariffs much higher than the competing countries. On the other hand, for the products that are included under the FTA, China has also provided tariff exemptions to the competing countries. Interestingly so, the products under the FTA that do possess comparative advantage boast unremarkable figures for their current and potential exports. These figures are even lower than of those that are not even provided tariff exemptions. This is observed by comparing the top products in the categories of FTA and non-FTA. This in addition to the fact that post FTA, products that were not being imported by Pakistan began to flood in, threatening an already vulnerable domestic industry proves that the FTA is essentially biased towards China as the products that Pakistan can gain from are excluded from the list of exemptions.

5.1 Policy Recommendations

Some of the products that possess a Strong Comparative Advantage and are facing higher tariffs than the competing countries carry a significant export potential. If tariffs are removed for these products through FTA negotiations, the export of Pakistan to China can significantly increase by a degree of the export potential carried per product. Almost the entirety of the product lines covered

under the study are low value added and labor-intensive products, which may be another cause of the low export value, indicating a need to lean towards a more value added and refined approach.

The products included under the FTA hold no significant export potential and the main reason for this is that China has already signed an FTA with many countries and is importing from those countries, especially ASEAN. This leaves little room for Pakistan to benefit from the exemptions or deductions considering that its competitors get the same or even greater benefits. It is also imperative that Pakistan goes through a rigorous process of renegotiations to reallocate the products and form a list that gives at least an equivalent amount of benefit to Pakistan. Some of the major export earning products have shifted to a Threatened Position which requires considerable attention because if due regard is not paid, the competition shall sweep away Pakistan's share in the not so distant future owing to their ever-increasing comparative advantage and persisting competitive positions resulting in a further fall in exports. This would make it difficult for Pakistan to compete against the already established players in the market. There are products on which Pakistan is facing higher tariffs than other competing countries, despite its higher RCA. These products also have a Strong Comparative Advantage and carry significant Export Potential. To accrue maximum benefit from their positions it is pertinent that the products should be included in the FTA or their tariffs should be at least reduced equivalent to the competition.

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Appendix A: Product names

HS Code	Product Category	HS Code	Product Category
30339	Frozen flat fish "Pleuronectidae, Bothidae, Cynoglossidae, Soleidae, Scophthalmidae and Citharidae" . . .	130232	Mucilages and thickeners, derived from locust beans, locust bean seeds or guar seeds, whether . . .
40120	Milk and cream of a fat content by weight of > 1% but <= 6%, not concentrated nor containing . . .	220710	Undenatured ethyl alcohol, of actual alcoholic strength of >= 80%
81340	Dried peaches, pears, papaws "papayas", tamarinds and other edible fruits (excluding nuts, . . .	230120	Flours, meals and pellets of fish or crustaceans, molluscs or other aquatic invertebrates, . . .
100630	Semi-milled or wholly milled rice, whether or not polished or glazed	251512	Marble and travertine, merely cut, by sawing or otherwise, into blocks or slabs of a square . . .
100640	Broken rice	261000	Chromium ores and concentrates
110100	Wheat or meslin flour	520912	Woven fabrics of cotton, containing >= 85% cotton by weight and weighing > 200 g/m ² , in three-thread . . .
120740	Sesamum seeds, whether or not broken	520919	Woven fabrics of cotton, containing >= 85% cotton by weight and weighing > 200 g/m ² , unbleached . . .
170199	Cane or beet sugar and chemically pure sucrose, in solid form (excluding cane and beet sugar . . .	520942	Denim, containing >= 85% cotton by weight and weighing > 200 g/m ² , made of yarn of different . . .
240120	Tobacco, partly or wholly stemmed or stripped, otherwise unmanufactured	520831	Plain woven fabrics of cotton, containing >= 85% cotton by weight and weighing <= 100 g/m ² , . . .
271019	Medium oils and preparations, of petroleum or bituminous minerals, not containing biodiesel, . . .	611090	Jerseys, pullovers, cardigans, waistcoats and similar articles, of textile materials, knitted . . .
620332	Men's or boys' jackets and blazers of cotton (excluding knitted or crocheted, and wind-jackets . . .	630231	Bedlinen of cotton (excluding printed, knitted or crocheted)
391590	Waste, parings and scrap of plastics (excluding that of polymers of ethylene, styrene and vinyl . . .	740319	Copper, refined, unwrought (excluding copper in the form of billets, wire-bars, cathodes and . . .
410712	Grain splits leather "incl. parchment-dressed leather", of the whole hides and skins of bovine . . .	740321	Copper-zinc base alloys "brass" unwrought
410792	Grain splits leather "incl. parchment-dressed leather", of the portions, strips or sheets of . . .	901580	Instruments and appliances used in geodesy, topography, hydrography, oceanography, hydrology, . . .
481159	Paper and paperboard, surface-coloured, surface-decorated or printed, coated, impregnated or . . .	901890	Instruments and appliances used in medical, surgical or veterinary sciences, n.e.s.
520512	Single cotton yarn, of uncombed fibres, containing >= 85% cotton by weight and with a linear . . .	950662	Inflatable balls

520511	Single cotton yarn, of uncombed fibres, containing $\geq 85\%$ cotton by weight and with a linear. . .	520911	Plain woven fabrics of cotton, containing $\geq 85\%$ cotton by weight and weighing $> 200 \text{ g/m}^2$, . . .
520522	Single cotton yarn, of combed fibres, containing $\geq 85\%$ cotton by weight and with a linear. . .	250100	Salts, incl. table salt and denatured salt, and pure sodium chloride, whether or not in aqueous . . .
570110	Carpets and other textile floor coverings, of wool or fine animal hair, knotted, whether or . . .	610910	T-shirts, singlets and other vests of cotton, knitted or crocheted
620342	Men's or boys' trousers, bib and brace overalls, breeches and shorts, of cotton (excluding. . .	640399	Footwear with outer soles of rubber, plastics or composition leather, with uppers of leather. . .
821420	Manicure or pedicure sets and instruments, incl. nail files, of base metal (excluding ordinary. . .	940490	Articles of bedding and similar furnishing, fitted with springs or stuffed or internally filled . . .
731029	Tanks, casks, drums, cans, boxes and similar containers, of iron or steel, for any material,		

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