Exploring Export Driven Growth through Free Trade Agreements

Learning from Pakistan-China Free Trade Agreement

By

Anwar Shah
Shahriyar Mukhtarov
Tehseen Ahmed Qureshi

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Abstract

This research project examines the impact of Pakistan-China free trade agreement (FTA) on export creation and diversion. The analysis covers 83 industries at two-digit HS level. The research finds that post-FTA, total export of China from ten major industries totalled to USD88 billion. While this figure for Pakistan was found to be USD17 billion from ten major industries. The in-depth analysis at industry level shows that the total exports creation of Pakistan with China after FTA is USD6.1 million per annum. This is equal to 0.02 percent of the total average yearly exports of Pakistan. Further, we find that Food and Beverages sector had the highest 72% share in exports creation with China. The findings also show that after-FTA, half of the Pakistani industries in Textiles sector diverted their exports from Most Favoured Nation (MFN) partners towards China. This is in spite of the fact that textiles sector is the largest beneficiary of subsidies in Pakistan. This research also explores the possible factors of poor performance in terms of exports creation by Pakistani industries. The major factor is found to be low level of exportable surplus with Pakistani industries. The paper suggests changes in the subsidy policy from exports diverting industries of Textile and Leather towards exports creating industries of Beverages, Rice, Surgical Instruments and Sports goods. The paper also suggests that potential FTAs between Pakistan and other CAREC countries especially Azerbaijan is possible in those industries, where the production of exportable surplus is relatively higher.

Introduction

Countries in Central Asia Regional Economic Cooperation (CAREC) face many economic challenges including growth and poverty. These challenges can be best met through the integration of regional markets. The major purpose of CAREC is to realize the untapped potential of Central Asian and its neighbouring countries. [1] The major areas of intervention under CAREC program are trade facilitation, trade policy, energy and transport. A primary source for increasing integration and trade between CAREC members is initiation of free trade agreements (FTA). Evidence shows that free trade agreements are beneficial in increasing trade. This is due to lowering of tariff and non-tariff barriers among FTA members.

We know that Pakistan and China, two CAREC member countries, are already enjoying FTA since 2006. In Phase-I of this FTA, Pakistan committed to decrease or abolish tariffs on 6711 goods based on two-digit Harmonized System (HS) commodity specification while China committed to decrease or abolish tariffs on 6418 goods by 2012. In 2019, both countries concluded the second phase of this FTA, under which both countries are expected to decrease tariff on 75% of tariff lines. [2]

The regional integration through new FTAs may not be successful if they are not designed after learning lessons from the previous FTAs. Therefore, this research analyses the past FTAs for possible future guidelines. In particular, we examine the impact of Pakistan-China FTA on the creation of new exports, both for China and Pakistan.

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[1] Central Asia Regional Economic Cooperation (CAREC) Program, Asian Development Bank, https://www.adb.org/countries/subregional-programs/carec

[2] Pak-China Free Trade Agreement In Goods & Investment, Ministry of Commerce, Pakistan, http://www.commerce.gov.pk/about-us/trade-agreements/pak-china-free-trade-agreement-in-goods-investment/

Significance of the Study

Much work has been done in the literature for exploring the impact of FTAs on imports and welfare, but gap prevails in the area of exports creation. This paper estimates the size of new exports created by each industry of Pakistan and China, under two digits HS system. This study is important because it explores the possible factors that resulted in the failure of few industries to create new exports. The identification of such barriers will help in identifying industries that could contribute in enhancing exports if there are future FTAs across CAREC countries. Such identification can support policymakers in CAREC countries for achieving the objective of regional integration.

Based on the analysis of Pakistan-China FTA, the paper examines the possibility of exploring new FTAs among other member countries of CAREC in general and Pakistan and Azerbaijan in particular. This paper also explores the industries where FTA can become mutually beneficial.

In general, the creation of new exports among member countries is a parameter of the success of FTA or preferential trade agreement (PTA). However, in doing such analysis, the performance of exports towards non-FTA or most favoured nation (MFN) partners is ignored.[3] For example, If the increased exports earnings of an industry 'A' in the home country with FTA country 'X' is actually a consequence of lowered exports to non-FTA country 'Y' then the cumulative exports earnings of the home country remain the same. Hence, an FTA or PTA may only be considered successful if it increases the exports of home country with FTA partners without compromising the exports with non-FTA partners. For this the analysis of both exports creation and exports diversion is required. This concept is an augmented version of trade creation and diversion given by Viner (1950).[4] The major value addition of this paper is to estimate the actual number of exports creation and diversion due to FTA instead of finding the average treatment effect of FTAs on the exports. Specifically, the paper focuses on to:

a) Examine Pakistan-China FTA, undertaken in 2006, at industry level and find that how many industries in Pakistan and China became able to create new exports.
b) Find out the industries of Pakistan, who only diverted the exports instead of creating new exports and investigate the factors responsible for such diversion
c) Estimate a difference-in-difference model to understand the impact on exports of both sides, had an FTA not been signed.
d) Explore the possibility of successful FTA between Pakistan and other CAREC countries, in general and with Azerbaijan, in particular.

The study shows that the total exports creation of Pakistan with China after FTA (2007-2018) is USD 6.1 million per annum. This is equal to 0.02 percent of the total average yearly exports of Pakistan. In Pakistan, Food and beverages sector is the main industry in creating exports, while half of the textiles sector performed poorly and did not create any new exports with China. This is in spite of the fact that Textiles sector is the largest beneficiary of subsidies in Pakistan. From China side, electrical machinery, equipment and parts enjoyed highest exports, totalling USD 24 billion for 12 years, while machinery and boilers remained the second with total export of USD 20.8 billion in these 12 years.

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[3] MFN status is when a WTO member country cannot discriminate to any other member country with respect to tariff and non-tariff regulations. The country has to keep its tariff rate and non-tariff regulations same for all MFN countries. Whereas, member countries can engage in further integration and may sign a FTA or PTA. The preferences provided to FTA partners such as elimination of tariff would be limited to the members of that specific FTA and will not be extended towards MFN partners.

[4] Exports creation is the increase in net exports of the home country due to an FTA. Exports diversion is the absence of any increase in net exports of home country due to FTA. Here, the increase in exports due to FTA is offset by the same amount of decrease in exports with non-FTA partners, so net change is zero.

The rest of the study is organized as follow. Section II reviews the existing literature on this issue. Section III narrates the methodology and approach for selection of the data. Section IV interpret the results and discuss the findings. Section V discusses few case studies on the issues of failure of industries to create new exports. The potential opportunities for regional integration with CAREC countries and in particular Azerbaijan are discussed in Section VI. Section VII concludes the study and gives relevant policy implications.

Literature Review

The literature of trade creation and diversion has mainly been concentrated on the association between FTA and impact on imports from the FTA partner and imports from the rest of the world. The major empirical work has been conducted in this area with the help of gravity model approach (Endoh, 2013). The gravity model approach is formed on the assumption that bilateral trade between two partners is directly proportional with the size of their economies and negatively proportional to the distance between the two (Tinbergen, 1962). Whereas Viner (1950) discussed the shift from dependence on uncompetitive high cost domestic producers to low cost producers from FTA partner, along with the impact of trade agreements on the shift of imports from low-cost and competitive partners to high cost and less competitive FTA partner.

The Approach of Gravity Model for Estimating Trade Creation

Trade agreements may not necessarily affect the imports from member and non-member countries. An economy may be significantly better off if an FTA results in increased income and employment in the country. Imports do not significantly increase the income and employment in the county, but exports do (Magee, 2008; Fruend and Orlenas, 2009). The literature on FTA impact of exports has mostly focused on the rise in exports due to FTA but there remains a void in examining the impact of exports to non-member countries after the implementation of FTA. Therefore, the literature on exports side under trade creation and diversion remains very limited.

Fruend and Orlenas (2009) argued on the importance of including exports in the gravity model analysis. They added the exports variable, implying the impact of FTA on exports compared with the exports if the FTA had not taken place. They included a vast sample from 1948 to 2000 with FTAs ranging from NAFTA, AFTA and other agreements of the rich economies. They found that all member countries exported more than they would have in case the FTA had not taken place. However, the results were opposite for the South. The trade agreements of Commonwealth of Independent States, Common Market for Eastern and South Africa and East African Community showed that their member countries would have exported more if FTAs had not been implemented. These results suggest that FTAs have been more successful for the rich club compared with the low-income economies (Alves and Lucas, 2007; Carrere, 2003,).

Sologa and Winters (2000) applied a dummy variable gravity model to estimate the impact of trade agreements on imports and exports of 58 countries with a data ranging from 1980 to 1996. Their results suggest that exports were decreasing in the member countries of European Free Trade Association and AFTA, whereas exports were increasing in the member countries AFTA and LAFTA.

Critique on Econometric Approach in Estimating Trade Creation

The gravity model has a major endogeneity problem resulting from the reverse causality bias. The bias arises from the evidence that economies which are already engaged in high volume are trade are more likely to sign a trade agreement with each other (Bergstrand, 1989; Carrere, 2003). Thus, the error

term is correlated with the dummy variable of FTA, leading towards endogeneity (Magee 2008, Baier and Bergstrand 2007). Another weakness of gravity model remains the assumption that trade and transport costs remain constant across countries. In reality, empirics show that this is not true (Anderson and Wincoop, 2001). Therefore, the traditional econometric approach of gravity model to determine the success of FTA is widely criticized for these weaknesses.

For these reasons, this paper has kept the focus of empirics on the actual magnitude of exports rather than estimating an econometric model. The assessment of exports creation and diversion from gravity model approach may give biased results which may result in poor policy responses. Whereas, suggesting policy implications by keeping in view the actual data is unbiased and vivid.

Methodology

Data for Overall Exports Creation

The data from United Nations Commodity Trade Statistics (UNComtrade) is taken from 2007 to 2018, as Pakistan-China FTA was implemented in 2007. The data of exports at industry level has been taken on the basis of two-digit Harmonized System (HS) commodity classification. At two-digit HS classification, the data is classified into broad industries such as Cotton, Leather, Live Animals etc. There are total 99 commodities at two-digit HS level, however, this research incorporates only those industries which were part of the positive list[5] of Pakistan-China FTA. The analysis for Pakistan exports to China includes 83 industries while China exports to Pakistan include 77 industries.

Data for Analysis of Exports Creation and Diversion

To conduct the exports creation and diversion analysis, we use the data of all 83 industries (part of positive list of Pakistan-China FTA) from 2007 to 2018. Apart from analysing the data of Pakistan exports to China, we analyse the data of Pakistan exports to its top 15 MFN partners[6] for the same years and for the same industries. This is worth mentioning that Pakistan exports to these 15 MFN partners, more than 75 percent of its total exports. The data for exports creation and diversion analysis with respect to MFN partners is mostly limited to 2016 because the exports data for 2017 and 2018 was largely unavailable for many MFN partners at the time of analysis.

Methodology for Analysis of Overall Exports Creation

The analysis of overall exports creation includes the sum of total exports and estimating the annual average growth by industry for each country. This analysis helps in understanding the holistic impact of FTA on the exports of each partner.

Methodology for Analysis of In-Depth Exports Creation and Diversion

The in-depth exports creation and diversion analysis is performed to understand the impact of FTA not only on the exports with FTA partner but also with non-FTA partners. In the in-depth analysis, we will be looking at the net change in exports instead of sum in exports. This is because net change presents a better finding on how much 'more' exports were added after the FTA, compared with

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[5] Positive list is defined as the list of those commodities which enjoy relief on tariff under the FTA.
[6] The MFN partners included for the comparison are Australia, Belgium, France, Germany, Italy, Kenya, Kingdom of Saudi Arab, Netherlands, South Korea, Spain, Turkey, United Arab Emirates, United Kingdom, United States of America and Vietnam

'business as usual' exports. This analysis is only performed for Pakistan as the analysis for China is beyond the scope of current work.

The methodology for estimating the new exports created and diverted after the FTA is taken from United Nations Economic and Social Commission for Asia and Pacific (UNESCAP). This methodology includes calculating the change in exports with the FTA partner i.e. China and each MFN partner in absolute number. The methodology is further explained in Eq (1).

$$\sum_{i=1}^{99} \Delta Exports_{i\,FTA} + \sum_{i=1}^{99} \Delta Exports_{i\,MFN} = Total\ Net\ Change \dots \quad (1)$$

Where,

$\Delta Exports_{i\,FTA}$= Sum of change in exports for all the years in commodity i with FTA partners (a)
$\Delta Exports_{i\,MFN}$ = Sum of change in exports for all the years in commodity i with MFN partners (b)
Total Net Change = Difference between (a) and (b)

If the total net change comes out to be positive for industry i with the $\Delta Exports_{i\,FTA}$ also being positive then this will be treated as *export creation*. This is because a positive net change shows rise in the exports with FTA partner even if there was decrease in exports to the MFN partners. Whereas, if the total net change comes to be negative for industry i and $\Delta Exports_{i\,FTA}$ is also positive then this will be treated as exports diversion. This is because the increase in exports with FTA partner was substituted by the decrease in exports with MFN partners. Whereas, if the $\Delta Exports_{i\,FTA}$ sign comes out to be negative then this would imply that FTA even failed to increase the exports of the particular industry to the FTA partner. This anomaly could be due to various factors such as unavailability of surplus output to export and/or declining demand of the commodity in the partner's market.

Results

This section discusses the results. The first section gives a review of the major industries benefitting from the Pakistan-China FTA. The next section provides detail of the export's creation and diversion.

Overall Exports Creation: Major Beneficiary Industries of China

Figure 3 shows the sum of exports from China to Pakistan for all the years after implementation of FTA i.e. 2007 to 2018. These results depict those industries which recorded the highest exports during this period. Electrical machinery, equipment and parts recorded highest exports, totalling USD24 billion in the 12 years' period. The major products under this category include broadcasting equipment, semi-conductors and generators. The next major beneficiary industry is Machinery and Boilers which record exports of USD20.8 billion in the 12 years' period. The major exported items under this category include air pumps, stone processing machines, air conditioners and other heating equipment.

The other industries which recorded highest number of exports included Man Made Filaments, Organic Chemicals, Footwear, Plastics, Iron and Steel, Copper, Fertilizers and Vehicles. In total, exports of these ten commodities equalled to USD88 billion in the post-FTA period. This is about 61 percent of the China's total exports to Pakistan under Pakistan-China FTA in the 12 years. Hence, these few commodities have been the major beneficiaries of the Pakistan-China FTA from the Chinese perspective.

Figure 1 Sum of Exports from China to Pakistan (2007-2018)

(USD millions)

Electrical machinery and equipments 24,419	Machinery and Boilers 20,828	Man-made filaments 9,282 / Iron or steel 7,203	Organic chemicals 5,789 / Iron or Steel Articles 4,772 / Plastics and articles 4,406	Man Made Staple Fibres 4,985 / Fertilizers 3,517 / Vehicles 3,044	
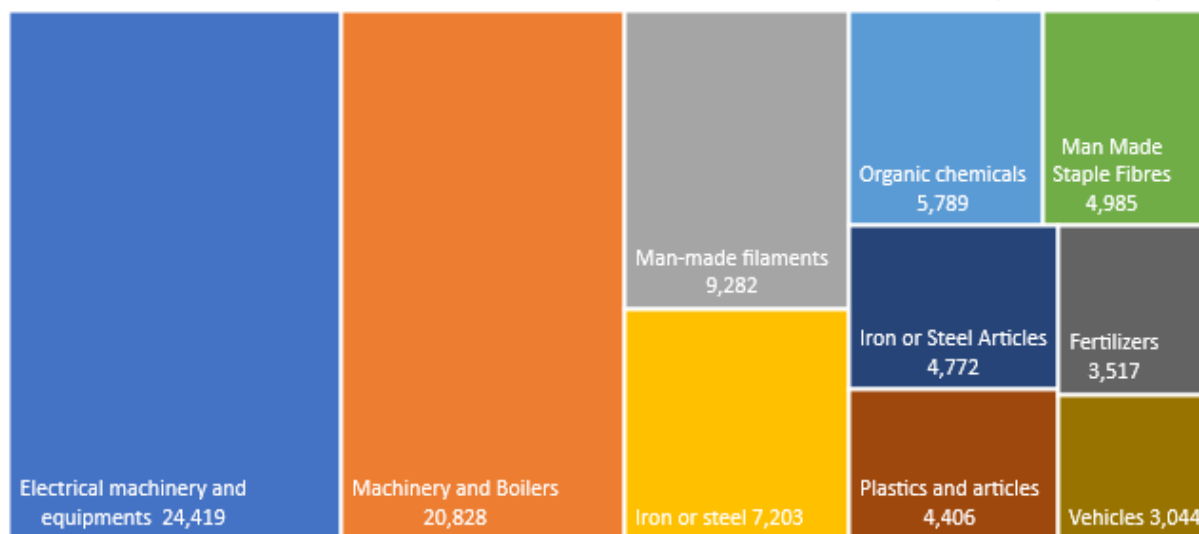
The above estimation has one caveat i.e. it will mainly highlight those industries which were already enjoying comparative advantage even before the FTA. The reason is that they are the major exports of China to world. However, it is interesting to look at those commodities which generally do not take account for a significant share in total global exports but witnessed a noticeable jump in exports to Pakistan after the FTA.

Figure 4 highlights 23 industries of China, which recorded highest annual average growth from 2007 to 2018. Interestingly, the major two industries which held a significant share in total exports i.e. Electrical Machinery and Boilers and Machinery, are also the top two commodities with highest average growth i.e. 330 percent and 289 percent respectively. However, some industries with relatively minor share in total exports were also amongst the one with average growth rate of more than 200 percent, such as Rubber, Fertilizers, Cotton, Leather, Surgical Instruments and Silk etc. Therefore, majority industries of China are found to benefit from the FTA as not only the absolute amount of exports increased significantly but also the average growth rate in major as well as minor exports was overwhelming.

Figure 4 Exports from China to Pakistan with Highest Annual Growth (%)
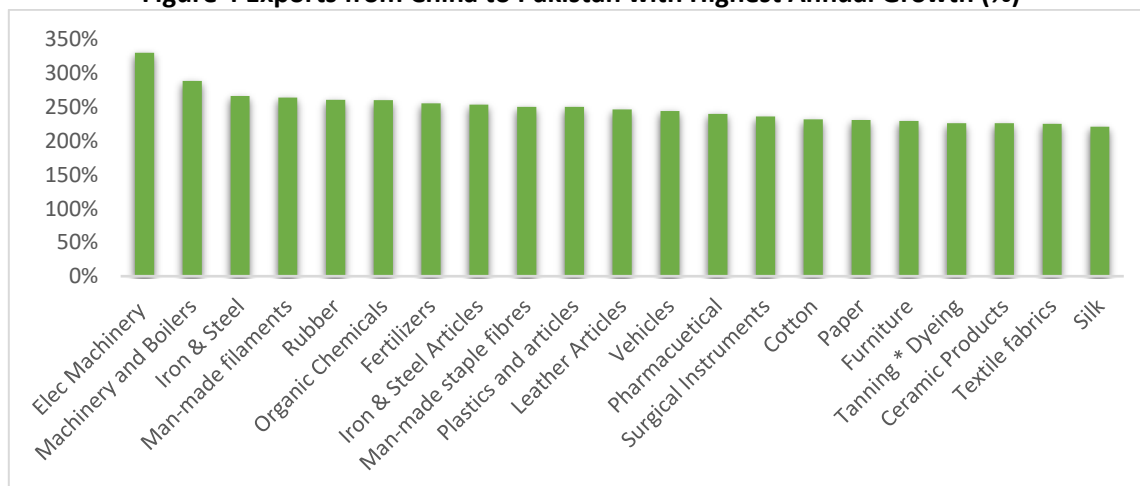
Overall Exports Creation: Major Exports Creating Industries of Pakistan

The major industrial beneficiaries of FTA from Pakistan are shown in Figure 5. The figure shows the major ten industries which recorded highest sum of exports during the 12 years of post-FTA. Cotton takes an overwhelming share of 73 percent out of these ten commodities. This implies that exports of Pakistan are concentrated in very few industries. Pakistan exported USD12 billion worth of Cotton to China in 12 years. This was followed by Ores and Slag with USD 1.2 billion and Rice and Cereals with USD 1.19 billion. These results imply that there exists a huge gap between the exports of highest industries and second highest industries. Similarly, the other major exports are Rubber, Fish, Copper, Textile Articles, Beverages, Fruits and Apparel Knitted.

Contrary to China, Pakistan exported mostly low value added, primary commodities to China and thus, the total value of exports remain significantly lower than that of China. The cumulative post-FTA sum of exports of these ten industries amount to USD17 billion. This sum is equal to 81 percent of the total exports of Pakistan under Pakistan-China FTA. Thus, there exists a need of exports diversification to gain higher benefit from this opportunity.

Figure 2 Sum of Exported Commodities from Pakistan to China (2007-2018)

(USD millions)

Source: Authors' estimations

Further, Figure 6 shows the highest annual average growth rates for exports from Pakistan to China. It is pertinent to note here that Beverages, although having a small share in absolute exports, had the highest average growth rate of 600 percent. This implies that this industry is a major beneficiary of the FTA. Moreover, Salt and Sulphur, Food industry residues, Surgical instruments and Sugar and confectionaries had over 200 percent annual growth during the FTA period. These industries were also amongst those commodities which have a relatively minor share in total exports of Pakistan.

Figure 6 Exports from Pakistan to China with Highest Annual Growth (%)
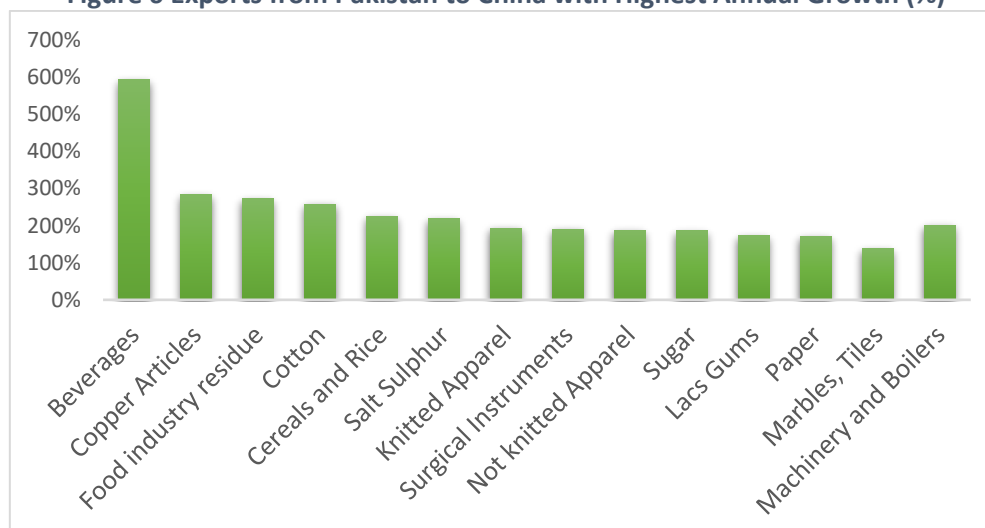
Source: Authors' estimations

Exports Creating and Diverting Industries of Pakistan

The findings regarding exports creating and exports diverting industries are provided by four broad sectors i.e. Minerals and Metals sector, Textiles sector, Food and Beverages sector and Electrical and Mechanical Equipment sector. The Change in Exports with China column represents the net change in exports with China after the implementation of the Pakistan-China FTA. Similarly, the column of Change in Exports with 15 MFN Partners show the net change in exports with major MFN partners (with whom no FTA was in effect) in the same period.

Minerals and Metals Sector

Table 1 (see Annexure A) shows the exports creating industries of Minerals and Metals sector. It is found that out of 20 industries in this sector, only seven industries were able to create new exports after the Pakistan-China FTA. The industries with significant new exports are found to be Salt, Sulphur, Earth and Stone, followed by Articles of Iron and Steel. The major commodity under Salt and Sulphur exports is the Cement. The total new exports created by Minerals and Metals sector is estimated to be USD4.1 million in 12 years. Whereas the total new exports created with the MFN partners was USD90.7 million in the same time period. Overall, the total exports created by this sector in 12 years amounts to 0.45 percent of the total annual average Pakistan exports.[7] Hence this sector shows very minimal contribution towards the exports earnings of Pakistan.

Table 2 (see Annexure A) shows the industries which diverted exports instead of creating new exports in the Minerals and Metals sector. The exports diversion is visible as the net change in exports was negative either with China or with the 15 MFN partners. This reflects that when the exports with China increased after the FTA, the increase may have to be compensated by decrease in exports with MFN partners. A primary reason for this may be that these industries may not have optimal surplus to fulfil the increased demand from FTA country, while maintaining the existing level of exports with MFN partners. Hence, as FTA ought to be longer term agreement, exports may opt for shifting their major chunk of exports from MFN partners towards FTA partner i.e. China in this case.

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[7] Pakistan total annual average exports from 2007-2016 amount to USD 21.9 billion.

Whereas, the industries with negative net change in exports even after the implementation of FTA, may be the ones who may have shifted their exports to some other FTA partner (such as Sri Lanka, India etc) because they may be gaining higher benefit in that. Lastly, industries with negative net change in exports with both China and the MFN partners may be primarily those with very less surplus to export to any country. While another assumption could be that there exists no more market demand or the partner's market is captured by goods from some other countries.

In any of the above three cases, a common finding is these diverting industries failed to exploit the benefit of FTA and were unable to increase the income of Pakistan. In Minerals and Metals sector, the highest exports diversion was found to be in the industries of Mineral Fuels, Organic Chemicals and Precious Stones and Metals.

Overall, in this sector, 65 percent of industries are exports diverting, implying that Minerals and Metals sector was not amongst the major beneficiary of Pakistan-China FTA.

Textiles Sector

Table 3 (see Annexure A) shows the exports creating industries of Pakistan in the Textiles sector. The paper found that out of total 20 industries in Textile sector, 11 are found to be exports creating. This shows that majority of the Textile sector benefitted from the Pakistan-China FTA. The significant creation of exports was found in Not Knitted Textile Articles, Made Up Textile Articles and Knitted Textile Articles. The total exports creation with China was USD6.6 million during this 12-years periods. Whereas exports creation with MFN partners was estimated to be USD2.8 billion. This represents around 13 percent of the Pakistan total annual average exports during this period. It also pertinent to note here that Textile is the single largest exports sector of Pakistan with a share of 60 percent in the total annual exports[8].

Textile sector is the highest subsidized export sector of Pakistan, while other major subsidized sectors include Sugar, Leather, Surgical Instruments, Carpets and Sports Goods. The total annual subsides given to these five sectors equal to USD725 million annually (Qarni, 2018). Whereas the cash subsidy given to Textile Sector exclusively amounts to USD260 million annually, about 36 percent of the total annual subsidies. Moreover, the government of Pakistan provides cash subsidy equal to seven percent of the exports to the Knitted Apparels industry, six percent to the Made-up Articles, four percent to the Yarn and Fabric while five percent to the Processed Fabric. Further, these industries are also benefitted with subsidized energy tariff.[9] However, in the presence of significant subsidies granted from the taxpayer's money, about half of the Textile sector's industries have failed to create new exports. A detailed look in the exports creating industries of Textile sector shows that even from these 11 industries, only the Knitted Apparel, Not Knitted Apparel, Made-up Textile Articles are the only three industries with significant exports creation.

Table 4 (see Annexure A) shows the exports diverting industries of Textile sector. This paper found that 45 percent of the industries in this sector are exports diverting. Moreover, the second largest export commodity of Pakistan i.e. Cotton, with a share of 14 percent in total exports, is also found to be exports diverting. As seen in the table, around USD45 million of exports were created with China after the FTA, however, at the same time USD136 million of exports fell with MFN partners. Moreover, the other two major subsidized industries i.e. Carpets and Raw Hides and Leather are also found to be significantly exports diverting. Both the industries are found to be decreasing exports with China as

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[8] Pakistan Economic Survey 2019, Ministry of Finance, Government of Pakistan
[9] Khan, Z. (2018). PM to announce export package worth Rs70bn today. DAWN. Available online at https://www.dawn.com/news/1307426

well as MFN partners, implying that exports witnessed a continuous decline in these two industries for the whole time period.

Food and Beverages Sector

Table 5 (see Annexure A) shows the exports creating industries in Food & Beverages sector. The results show that this sector has the relatively highest number of exports creating industries i.e. 14 out of 18 industries or 77 percent of the industries in Food & Beverages sector have created new exports. The results imply that this sector has been the top performing sector after Pakistan-China FTA and has performed significantly well with both, FTA as well as MFN partners. The major exports creating industries in this sector include Rice and Cereals, Beverages and Spirits and Coffee and Tea. Rice is the amongst the five largest export commodities with a share of seven percent in Pakistan's total annual exports.

Table 6 (see Annexure A) shows the exports diverting industries of Food & Beverages sector, where only four out of 18 industries are found to be exports diverting. The major poor performers are the Oil Seeds and Vegetable Products, Not Else Specified.

Electrical and Mechanical Equipment Sector

Table 7 (see Annexure A) shows the exports creating industries of Electrical and Mechanical Equipment Sector while Table 8 (see Annex A) shows the exports diverting industries of the same. The estimates show that about 58 percent of the industries in this sector are exports creating while 42 percent are exports diverting. This implies that majority of the industries in this sector have benefitted from the FTA. Moreover, Machinery and Boilers, Surgical Instruments and Toys have created significant new exports, while Fur-Skins and Plastics and Articles diverted highest number of exports. The results imply that two subsidized sectors, i.e. Surgical Instruments and Sports Goods have created significant new exports for Pakistan.

The summary of total exports creation is shown in Table 9 (see Annexure A) and Figure 5. The total exports creation with China after the Pakistan-China FTA amounted to USD61 million or USD6.1 million annually. Whereas the total exports creation with MFN partners accounted for USD3.5 billion or USD354 million annually. The exports creation with China as percentage of average annual exports of Pakistan are estimated to be only 0.02 percent. Similarly, the exports creation with top 15 MFN partners also account to 1.3 percent as percentage of average annual exports of Pakistan. Therefore, the total new exports created by Pakistan annually are around 1.37% of its total exports—a very minimal amount even in the presence of FTAs. However, the positive aspect that emerges from this paper is that about 57 percent of the total industries are found to be exports creating—hence a simple majority is benefitting from the FTA, however, the magnitude of benefit remains relatively very marginal. Moreover, Food and Beverages sector was the major beneficiary as it contributed 72 percent in the new exports created with China.

Figure 3 Summary of Exports Creating and Diverting Industries
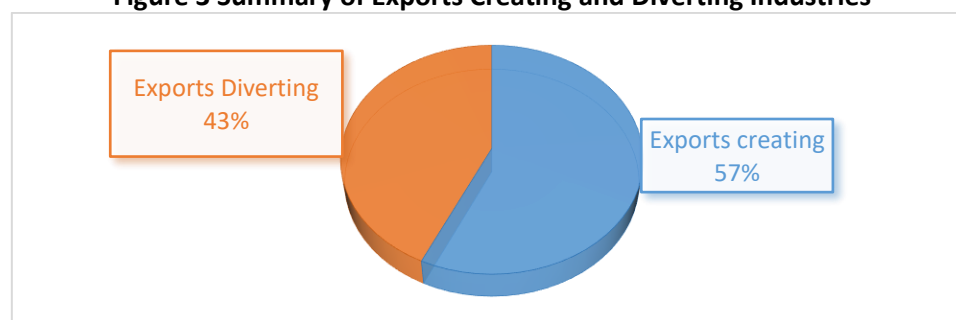
Source: Authors' own estimations

Case Studies for Exploring Factors Responsible for Failure of Export Creation

The case study analysis is performed to understand the reason behind the failure of the major Pakistani industries in creating significant exports after the FTA. These case studies, first, give a response to the general arguments given against the poor performance of Pakistani industries. Then, the case studies show empirically the major factors which are more likely in influencing the poor exports performance of Pakistani industries.

Case Study 1: Exports of Pakistan to the MFN Countries - Impact of Global Recession

The global recession of 2008 was a major factor behind reduced demand in the developed countries especially USA, UK, Germany, France and others as their economies shrank by up to six percent and unemployment rose up to 10 percent[10]. Australia also witnesses a relatively smaller slowdown in their economy. The evidence suggests that the major recessionary period was between 2008 to 2013 while beyond 2013 may be regarded as post-recessionary era. As the timeline of exports creation analysis covered in this study also covers the recessionary era i.e. 2008-2013, it may be a possibility that the exports diversion from MFN partners may be partly explained by the global recession. To look into the validity of this argument, we estimated the average growth in exports in the recessionary as well as post-recessionary phase for the major recession hit economies.

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[10] ONS, (2018). The 2008 recession, Accessed from
https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/the2008recession10yearson/2018-04-30

Figure 4: Growth of Pakistan Exports with Developed Partners (MFN)
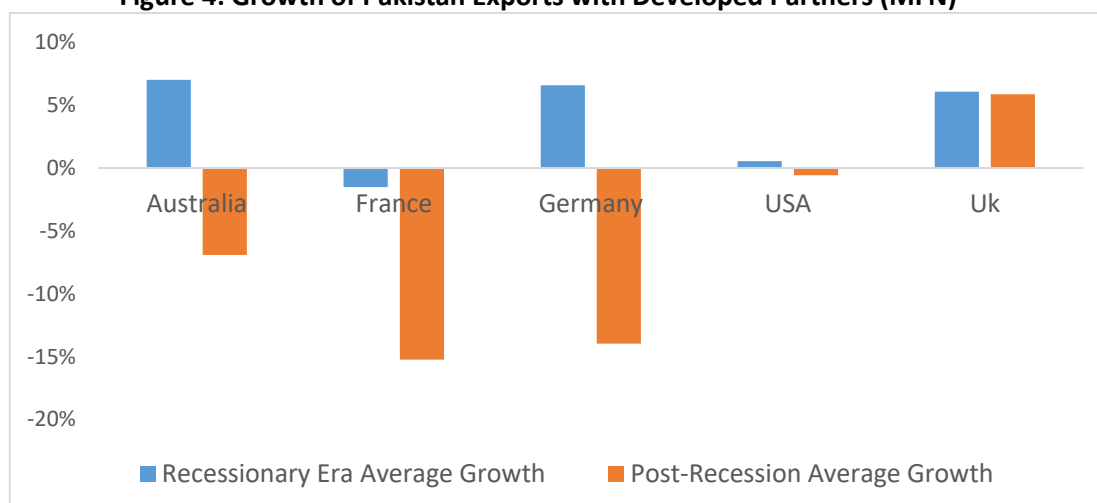
Source: Author's own estimation

The results are shown in Figure 7. The figure shows that the average growth in exports in all the countries was higher in recessionary era as compared to the POST recessionary era (. In fact, the growth in exports with Australia, Germany and USA was positive during the recessionary era but went negative during post-recessionary era. This result leads to the argument that the diversion of exports from MFN partners may not be explained by the fall in global demand.

Case Study 2: Overvalued Exchange Rate and the Exports of Pakistan

Frankel and Taylor (2006) explain that overvalued exchange rate hurts the economy as the exports become uncompetitive in the partner countries. The partner countries then shift towards relatively cheaper goods imported from competitors. Real Effective Exchange Rate (REER) is a measure to estimate the overvaluation of a currency. A REER above 100 shows overvaluation while below 100 shows undervaluation. There is leading anecdotal argument in Pakistan that the very low growth in exports is greatly attributed to the highly overvalued Pakistani Rupees. Due to this argument, Pakistan's currency was depreciated by 20 percent only in 2018[11] and was given the title of Asia's worst performing currency[12].

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[11] Bloomberg, (2019), Pakistan IMF Bailout Package Leads Rupee to Fall, https://www.bloomberg.com/news/articles/2019-05-16/pakistan-s-rupee-weakens-stocks-drop-after-imf-bailout-package
[12] Ibid

Figure 5: Comparison of Overvaluation and Exports of Competitor Asian Economies
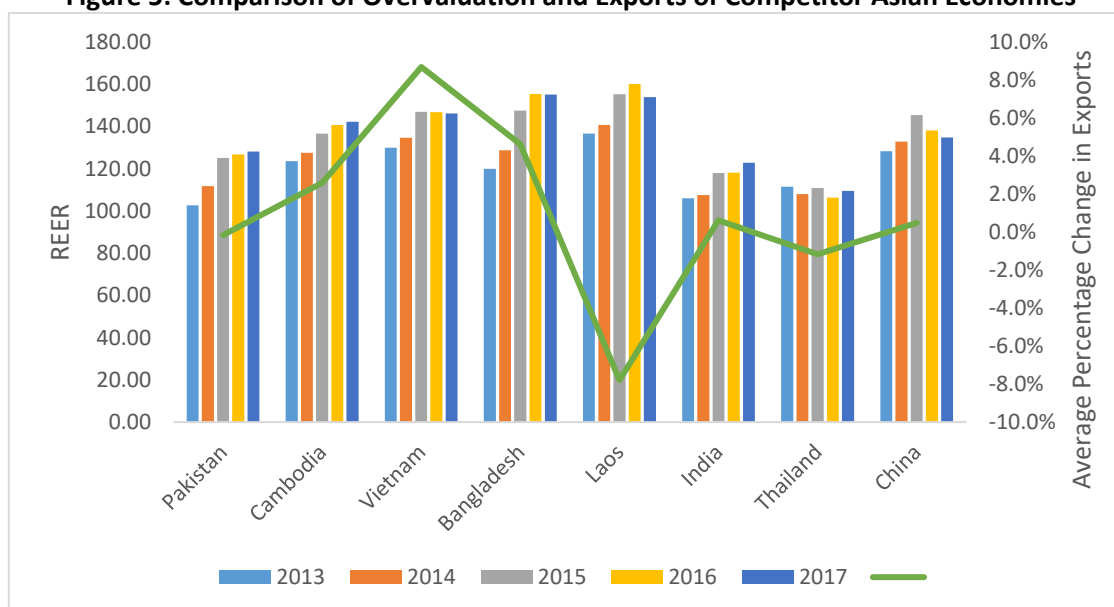
Source: Bruegel REER dataset 2019 and UN COMTRADE data set

As shown in Figure 8, PKR REER remained around 102 to 125 between 2013-2017. In the same time period, the average growth in Pakistan exports was negative 0.2 percent. However, it is interesting to note that the countries with relatively higher REER such as Cambodia, Vietnam, Bangladesh and China recorded much higher growth in exports in the same period. Vietnam and Cambodia recorded growth of exports at 8.7 and 4.6 percent while their REER averaged at 140. China REER was also more than 140, yet its growth in exports was nominally higher than Pakistan. This leads to the argument that the overwhelming shift of responsibility to the overvalued exchange rate by the Government of Pakistan may not be entirely correct. Many competitor countries performed relatively much better even with relatively higher overvaluation. Hence, some other plausible factors are more responsible for the low export's creation by Pakistan. The above argument is imperative to understand because major focus of current trade policy in Pakistan revolves around monetary policy, through regulating the exchange rate movements. Hence, there is a need to focus on other internal factors which could be more responsible for the low exports creation.

Case Study 3: The Exportable Surplus Output of Industries

The theory of international trade suggests that the major factor behind exports is the availability of surplus output. The excess supply of good is exported while lower supply of a good is compensated by importing it. Therefore, for Pakistan's exports to grow, it is important to have surplus output available in the economy. Therefore, we provide case studies of two major exportable industries i.e. Cotton and Rice. Cotton is an export diverting industry while Rice is an export creating industry. The aim is to depict, whether exports creation is possible without excess local output.

Case of Cotton Industry

First, Figure 9 shows the production, domestic consumption and exports in quantity of Cotton in Pakistan from 2010 to 2017. The analysis show that the exports in terms of quantity is consecutively declining and dropped from 16 million bales in 2010 to 2 million in 2017. Whereas, it can be observed that the difference between domestic production and domestic consumption remains very minimal in

all of the years. On average, from 16 million bales of production, about 15 million bales are consumed domestically, leaving only 1 million bales for exports.

Figure 6 Pakistan Domestic Production, Consumption and Exports of Cotton
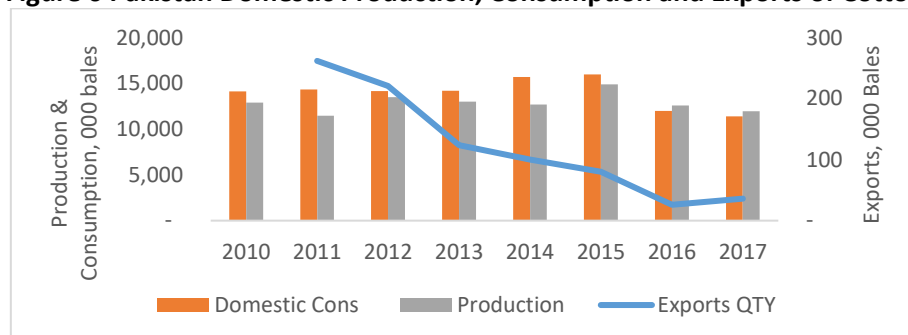
Source: Karachi Cotton Association Pakistan

In other words, about 94 percent of the output is consumed domestically, leaving around only six percent of exportable surplus. It is also pertinent to note here that Pakistan is a net importer of Cotton. Interestingly, the domestic consumption in 2016 and 2017 was even higher than the total production. Thus, the diversion in exports can be explained by the very low level of surplus output left in the economy. Therefore, the analysis leads to the argument that a major factor behind exports diversion in Cotton industry is the continuous decline in the exportable surplus.

Case of Rice Industry

The case of Rice industry is analysed through annual percentage growth from 2013 to 2017 in Figure 9. The analysis show that the growth in quantity of exports follow the exact same pattern as the growth in domestic production. Figure 9 shows that about 46 percent of the produce was domestically consumed while 54 percent was exported in 2017. These numbers depict that Pakistan has been exporting almost half of its total produce, implying that there exists a significant exportable surplus of rice in the country. However, the necessary policy implication comes from Figure 10 that shows the slow growth rate of production relative to higher growth rate of domestic consumption.

Figure 7 Comparison of Pakistan Production, Consumption and Exports of Rice
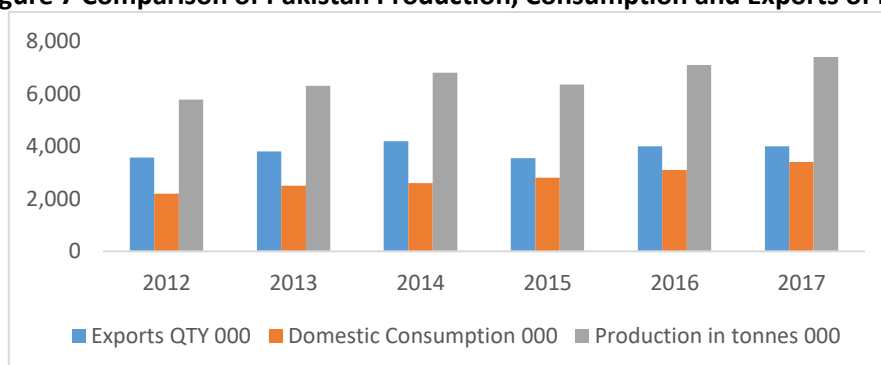
Source: US Department of Agriculture

Figure 10 shows the growth in consumption has remained constant over the years, however, the growth in the production has remained very volatile with significant negative growth rates. The shape of growth in exports is found to be highly associated with growth in production as it follows the similar pattern. Moreover, the average annual growth rate of rice production is estimated to be six percent

while the domestic consumption is growing at nine percent on average. Therefore, the growth in exports remain at relatively low at three percent, as it is outpaced by the growth in consumption. Conclusively, the findings suggest that at the current growth rates, even of an export creating industry like Rice may see decline in exports, if the domestic production capacity is not significantly increased.

Figure 8 Growth in Production, Consumption and Exports of Rice
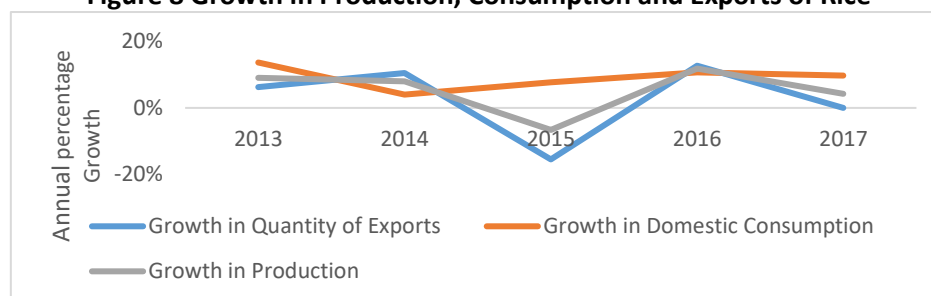
Source: US Department of Agriculture

Potential Industries for Future Integration with CAREC Countries

Pakistan trade with nine countries of CAREC (excluding China) is USD2.4 billion per annum, which is very low. Pakistan enjoys a trade surplus with this region. However, as shown in Figure 11, almost half of the exports to CAREC region comes from Food and Beverages sector i.e. Rice, Sugar and Fruits and Vegetables. As Pakistan is exporting mainly primary low value-added agriculture goods to CAREC countries, the value of exports to nine CAREC countries from Pakistan remained at USD1.8 billion in 2018.

Figure 9 Pakistan Exports to All CAREC Countries--Excluding China (2018)
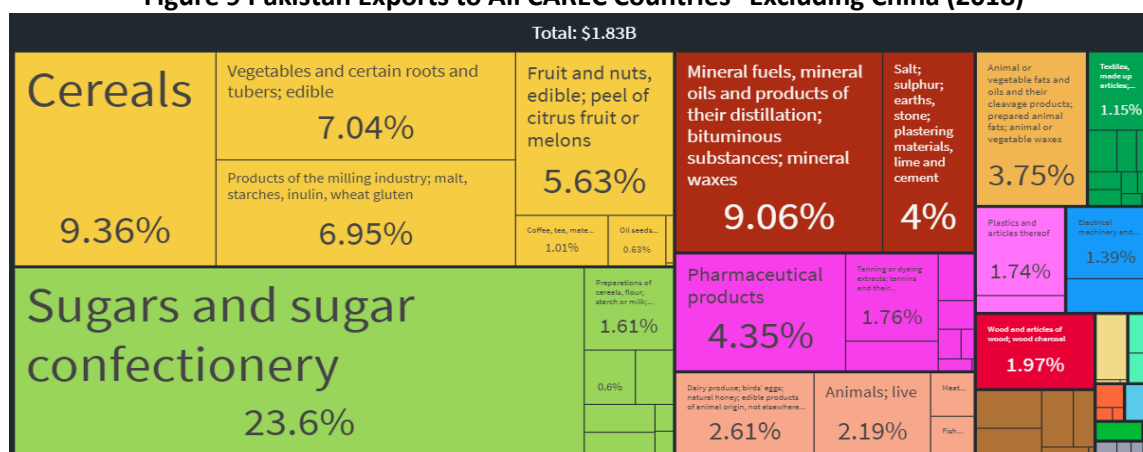
Source: Observation for Economic Complexity

The imports from CAREC region, as shown in Figure 12 are also mainly comprised of Fruits and Vegetables, followed by Minerals and Metals. The imports from nine CAREC countries account for only USD576 million in 2018. The overall trade situation with CAREC shows that Pakistan is mainly exporting commodities which we found to be exports creating. Such as Rice, Sugar, Vegetables, Fruits and Nuts etc. This shows that there is a good potential for bilateral or multilateral trade agreements of Pakistan with other CAREC countries.

If Pakistan enters into FTA with any CAREC country, the most demanded commodities are already those which are found to be exports creating and thus can fulfil the additional market demand created after the FTA. This statement stems from the assumption that exports creating industries have

significant surplus output to fulfil the additional demand. Therefore, negotiating an FTA with CAREC countries and including Food and Beverages sector in the concessional list can be a successful step from Pakistan in achieving exports driven growth. Notwithstanding, policy efforts are still required to boost up the production capacity of exports creating industries as well.

**Figure 10 Pakistan Imports from All CAREC Countries--Excluding China (2018)**
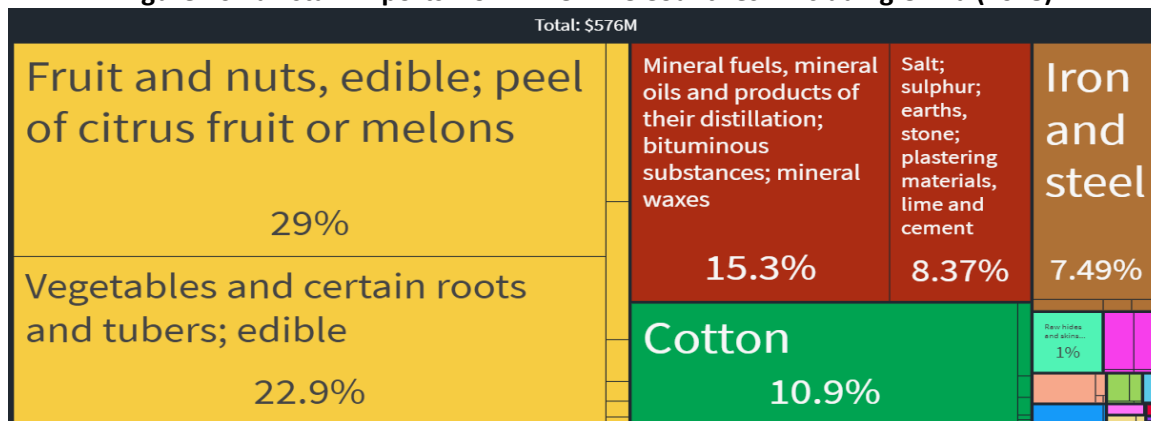
Source: Observation for Economic Complexity

Opportunity for Economic Partnership Agreement (EPA) between Pakistan and Azerbaijan

Initial bilateral trade bonds between Azerbaijan and Pakistan were formed in 1995 by the agreement on cooperation in trade and economic relations. Despite this early economic relationship, the volume of trade between these nations was only USD14 million in 2017[13]. One of the main factors which strictly affects the competitiveness of trade relationship between the countries is non-existence of new trade agreement after the former trade agreement of 1995, expired in 1998. However, being a former USSR country, Turkey and Iran have comparative advantages on trade with Azerbaijan. This is because these countries have binding trade agreements with Azerbaijan and therefore none of them is charged additional import duties, these countries merely pay value added tax (VAT).

In the existing world of regional integration, it is becoming increasingly common to indulge in Economic Partnership Agreement (EPA) instead of only FTA. EPAs also include provisions on investments alongside trade. These treaties also address issues pertaitng to ivnestment liberalization. The purpose of signing EPA can be manifold; such as the desire to create a larger common market, a desire to seek enhanced liberalization, creation of combined market that can compete with regional giants or creating a springboard for exports for combined exports to entire region[14]. In a similar manner, Pakistan and Azerbaijan can enter an EPA for boosting both, investment and trade. Due to the fact that more than 90 percent export of Azerbaijan is from oil and gas[15], there is little opportunity for Azerbaijan to capture the goods market in Pakistan. Thus, an EPA with investment treaties can benefit both countries by mutually exploiting each other resources and sharing the dividends equally. As Pakistan has strategic location, low labour cost and availability of affordable land prices, it drew foreign investors' attention. Beside this, the country's efforts to formulate regional integration with its giant neighbour China (China-Pakistan Economic Agreement (CPEC)) improved the nation's economic prospects. Oil and mineral fuels take more than one fourth of overall imports in Pakistan. Surprisingly, cotton is also one of the most important imported products in the country.

In order to sustain its energy efficiency, Pakistan attempts to explore new suppliers all over the world. As a result of this, it signed Liquid Natural Gas agreement with Qatar in 2016. Furthermore, Iran-Pakistan, Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline and the Central Asia South Asia Electricity Transmission and Trade (CASA-1000) Project will help the country solve energy scarcity issues. [16] However, Pakistan has huge potentially recoverable shale gas reserves. In this sector, Azerbaijan can offer its more than twenty years of expertise in oil and gas exploration. This will be very beneficial for both countries.

According to Strategic Road Map of Azerbaijan, several issues to improve non-oil energy sources were analysed and Azerbaijan succeeded to identify its potential renewable energy sources which are solar energy (more than 115200 MWt / bln. kVts), wind energy (more than 15000 MWt / bln. kVts), bioenergy, geothermal energy and small hydro. Taking into account these high renewable energy potentials, Azerbaijan started to operate new hybrid power plants in Gobustan Experimental Polygon and Training Centre, region hybrid power plant in Samukh Agro-Energy Residential Complex. However, joint projects with Pakistan toward increasing the production of alternative energy sources will cover energy deficiency in Pakistan and oil dependence in Azerbaijan[17].

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[13] United Nations Comtrade Dataset
[14] UNDP, 2005, Investment Provisions in Free Trade Agreements and Investment Treaties. http://www.undp.org/content/dam/rbap/docs/Research%20&%20Publications/poverty/RBAP-PR-2005-Investment-Provisions.pdf
[15] Observatory of Economic Complexity, MIT
[16] Economic Survey of Pakistan 2018, Ministry of Finance
[17] President Office of Azerbaijan, Azerbaijan 2020, Retrieved from https://president.az/files/future_en.pdf

From other perspectives, Azerbaijan economy is highly dependent on oil. Any fluctuations in oil price can easily have detrimental effects on the economy. In order to avoid this problem, the country should improve other sectors which are services, agriculture, tourism, renewable energy and others. By utilizing Pakistan's well-known experience in agriculture sector, (Pakistan has several prestigious universities which are concentrated on agriculture) Azerbaijan can improve its agricultural products. This could be done by opening new branches of Pakistan's agriculture-oriented universities in Azerbaijan.

Although Pakistan has huge advantages in producing agricultural products, cotton is one of the main imports of the country. This is because textile industry has highly improved in Pakistan and local production in the country is not sufficient for covering rising demand of its textile companies. Eventually, the country is in need of importing cotton products. However, Azerbaijan is currently increasing cotton production with the purpose of export. Even if the production cost of this agricultural product (cotton) is comparatively lower in the country, its selling price is also below than other agricultural products. This situation leads to relatively less profit obtained from exporting cotton. Therefore, the cotton should be exported after initial manufacturing process in Azerbaijan. In this case, the selling price could be higher which will generate competitive profits. Also, due to decreasing oil prices which lead to decreasing transportation costs, can have positive effect on both Azerbaijan and Pakistan trade relationship.

Conclusion and Policy Implications

This study shows that post-FTA exports creation of Pakistan with China is USD 6.1 million per annum, which is 0.02 percent of all average yearly exports of Pakistan. The results of the study find that food and beverages sector is a successful industry in creating exports, while half of the Pakistani industries in textiles sector are unable create any new exports with China. This is in spite of the fact that Textiles sector remain the largest beneficiary of subsidies in Pakistan. Based on these findings we can say that free trade agreements are a useful measure to achieve exports driven economic growth. However, FTAs may not always result in higher exports led growth. There is no real gain from the FTA for a country if the increase in exports with FTA partners come at the cost of lowered exports with non-FTA partners.

Pakistan needs reforms related to exports promotion polices as the highly subsidized industries failed to benefit fully from Pakistan-China FTA. One of factors for low exports creation is unavailability of exports surplus with these industries. If CAREC members are willing to negotiate new bilateral or multilateral trade agreements amongst each other, this work recommends that the foremost focus should be given to the exportable surplus of the domestic industries. And negotiations of tariff lines in the FTA should be based on exporting capacity of the industries. The existing trade agreements between the CAREC members may also be re-negotiated on the basis of providing greater market access to exports creating industries and limiting the access of exports diverting industries.

The findings of the paper have the following policy implications for the trade policy of Pakistan.

Policy Implication I: Shift in Prioritization of Subsidies Allocation

High number of subsidies given to Pakistan Textile, Leather and Carpet sectors have not resulted in any significant gain in exports. The results call for action on the policy side as targeted subsidies to exports creating sector may give better result than across the board subsides to all industries in this sector. The exports subsidy policies in CAREC countries may be based on the new exports creation of the industries instead of rewarding subsidies to those industries which have the highest share in exports. Highest share may not necessarily result in continuous increased exports.

Policy Implication II: Increased Domestic Surplus Can Be the Answer to Export Problems

As the domestic consumption for many industries is growing at a higher rate than the production, the ratio of surplus outcome may decline significantly in the coming years. Therefore, the focus of the fiscal and trade policy of CAREC countries should be on enhancing the exportable surplus of the domestic industries especially those which are already exports creating but require conducive environment to increase their production. The fiscal policies which may enable the domestic industries in boosting their output include energy tariffs, taxation, vertical and horizontal linkages, subsidies and localization of raw materials.

Policy Implication III: Signing New FTAs within CAREC is Not Enough—Think Beyond

The low number of exports creation by Pakistani industries even with FTAs in place is a question mark for the policymakers. The policy of signing new FTAs with other countries especially CAREC countries may not result in significant creation of exports for Pakistan until and unless the internal obstacles towards boosting exports are addressed efficiently. The foremost policy action should be identifying the obstacles and drafting solutions for removing them before entering into new FTAs. CAREC

countries could enter into EPAs for gaining advantage of their investment expertise and technical knowledge. If FTAs cannot provide short term gain due to low exportable surplus, EPAs between CAREC countries can be initiated so that joint investment may enhance the production capacities and increase the competitiveness of goods.

Policy Implication IV: Exploiting the Competitive Advantage in Agriculture

Food & Beverages remain the best performing sector in terms of largest number of exports creating industries. The majority of the exports emerge from low-value added agriculture and livestock sector. There is an imminent need of shift in export promotion policy, as the exports creating agriculture and livestock sector has largely been ignored by the government of Pakistan. Pakistan can tap this competitive advantage by incentivizing the technological progress in agriculture sector and introducing agriculture branding and marketing for the final goods. This use of branding and marketing can be significantly useful if Food and Beverages sector is included in any future Pak-CAREC FTA.

Policy Implication V: Uplifting the Cottage Industry

The subsidized sectors of Sports Goods and Surgical Instruments have created significant new exports for Pakistan. These two sectors are dominated in the Sialkot city of Pakistan and have the status of cottage Industry. The results call for policy action that cottage industry should be promoted more as they have showed promising results in Pakistan-China FTA. A major breakthrough could be declaring Sialkot Cottage Industry as a special economic zone.

This research is confined to the implications of Pakistan-China FTA, however, there is a need of comprehensive analysis of all FTAs, which should estimate the total exports creation and diversion. Such future research can provide answer of net exports diversion, if any, from one FTA partner to another FTA partner. Moreover, non-tariff measures (NTM) are an important policy aspect and have implications for trade flow even when with zero tariffs i.e. FTA. However, such analysis was not the focus of the current study. Future research can explore the impact of NTMs on the exports of Pakistan and China and how curbing NTM could bring improvement in regional integration.

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Annexes

Table 1 Exports Creating Industries: Minerals and Metals (2007-2018)

(USD Thousands)

HS Code	Product descriptions	Change in Exports with China	Change in Exports with 15 MFN partners	Total Change
35	Albuminoidal substances	139	1,402	1,541
76	Aluminium and articles	4	5,995	5,999
73	Articles of Iron and steel	277	10,308	10,585
28	Inorganic chemicals	172	1,798	1,970
78	Lead and articles	31	223	255
25	Salt; sulphur; earths and stone	3,489	71,038	74,528
	Sum	**4,114**	**90,765**	**94,880**

Source: Authors' own estimations

Table 2 Exports Diverting Industries: Minerals and Metals (2007-2018)

(USD Thousands)

HS Code	Product descriptions	Change in Exports with China	Change in Exports with 15 MFN partners	Total Change
69	Ceramic products	-12	6,731	6,718
74	Copper and articles thereof	13,063	-341	12,722
72	Iron and steel	-140	19,126	18,986
13	Lac; gums, resins	492	-11,503	-11,010
11	Malts & Starches	-129	-4,045	-4,175
27	Mineral fuels	433	-197,408	-196,975
83	Misc. articles of base metal	-15	4,340	4,325
38	Miscellaneous chemical products	-5	12,315	12,310
26	Ores, slag and ash	-1,892	4,285	2,392
29	Organic chemicals	-533	-11,736	-12,270
81	Other base metals	-65	3,503	3,437
71	Precious Metals & Stones	109	-35,962	-35,852
68	Stone, plaster	19	-1,684	-1,665

Source: Authors' own estimations

Table 3 Exports Creating Industries: Textiles Sector (2007-2018)

(USD Thousands)

HS Code	Product descriptions	Change in Exports with China	Change in Exports with 15 MFN partners	Total Change
42	Articles of leather	225	88,165	88,391
64	Footwear	8	44,718	44,726
65	Headgear	0.9	7,198	7,199
61	Knitted apparel and clothing accessories	2,743	556,203	558,946
59	Laminated textile fabrics	39	3,245	3,285
63	Made up textile articles	1,608	851,651	853,260
62	Not Knitted apparel and clothing accessories	1,885	1,233,700	1,235,585
32	Tanning or dyeing extracts	39	4,732	4,772
32	Tanning or dyeing extracts	39	4,732	4,772

56	Wadding	0.22	3,747	3,747
51	Wool	19	3,401	3,421
	Sum	**6,610,347**	**2,801,498**	**2,808,108**

Source: Authors' own estimations

Table 4 Exports Diverting Industries: Textiles Sector (2007-2018)

(USD Thousands)

HS Code	Product descriptions	Change in Exports with China	Change in Exports with 15 MFN partners	Total Change
57	Carpets	-(0.3)	-146,495	-146,495
52	Cotton	45,093	-136,987	-91,893
60	Knitted or crocheted fabrics	-16	2,739	2,722
60	Knitted or crocheted fabrics	-16	2,739	2,722
54	Man-made filaments,	-116	-19,160	-19,277
55	Man-made staple fibres	320	-122,251	-121,931
41	Raw Hides and Leather	-286	-33,278	-33,565
53	Vegetable textile fibres	-11	-10,985	-10,996
58	Woven fabrics	-26	-23,961	-23,988

Source: Authors' own estimations

Table 5 Exports Creating Industries: Food & Beverages Sector (2007-2018)

(USD Thousands)

HS Code	Product descriptions	Change in Exports with China	Change in Exports with 15 MFN partners	Total Change
15	Animal or vegetable fats and oils	7	1,330	1,337
22	Beverages, spirits and vinegar	14,813	88,138	102,952
10	Rice and Cereals	14,635	103,476	118,112
9	Coffee, tea, mate and spices	9	54,695	54,704
8	Edible fruit and nuts	993	52,668	53,661
7	Edible vegetables	4	31,848	31,852
3	Fish	5,595	45,213	50,80
6	Live trees and other plants	4	3,698	3,703
21	Miscellaneous edible preparations	2	8,425	8,428
19	Preparations of cereals, flour, starch or milk;	4,507	17,099	21,606
20	Preparations of vegetables, fruit, nuts	382	18,274	18,656
5	Products of Animals N.E.S	400	388	788
23	Residues and waste from the food industries;	2,502	8,453	10,956
17	Sugars and sugar confectionery	188	30,993	31,181
	Sum	**44,043**	**461,006**	**505,049**

Source: Authors' own estimations

Table 6 Exports Diverting Industries: Food & Beverages Sector (2007-2018)

(USD Thousands)

HS Code	Product descriptions	Change in Exports with China	Change in Exports with 15 MFN partners	Total Change
4	Dairy produce	-5	13,043	13,038
33	Essential oils	-5	8,771	8,766
12	Oil seeds and fruit	-142	17,882	17,739
14	Vegetable products nes	-101	1,379	1,277

Source: Authors' own estimations

Table 7 Exports Creating Industries: Electrical and Mechanical Equipment (2007-2018)

(USD Thousands)

HS Code	Product descriptions	Change in Exports with China	Change in Exports with 15 MFN partners	Total Change
88	Aircraft, spacecraft, and parts	14	3,487	3,501
82	Cutlery	299	8,738	9,037
94	Furniture	63	3,262	3,326
46	Manufactures of straw	1	3,264	3,265
96	Miscellaneous manufactured articles	46	1,982	2,029
92	Musical instruments	0.19	2,836	2,837
84	Machinery and boilers	3,243	2,389	5,633
90	Optical and Surgical instruments	2,101	80,262	82,364
34	Soap	3	4,345	4,348
95	Sports Goods and Toys	440	56,184	56,625
44	Wood and articles of wood	7	6,939	6,946
48	Wood Pulp	303	14,867	15,170
	Sum	**6,529**	**192,260**	**198,790**

Source: Authors' own estimations

Table 8 Exports Diverting Industries: Electrical and Mechanical Equipment (2007-2018)

(USD Thousands)

HS Code	Product descriptions	Change in Exports with China	Change in Exports with 15 MFN partners	Total Change
85	Electrical machinery and equipment	397	-8,179	-7,781
43	Fur skins	22	-23,298	-23,276
70	Glass and glassware	-17	2,019	2,002
30	Pharmaceutical products	-6	13,697	13,691
39	Plastics and articles thereof	-687	89,476	88,788
40	Rubber and articles thereof	-4	15,155	15,151
87	Vehicles	19	-1,661	-1,642
97	Works of art	0.26	-11,950	-11,949

Source: Authors' own estimations

Table 9 Total Exports Creation of Pakistani Industries (2007-2018)

(USD Thousands)

Industry	Exports Creation with China	Exports Creation with 15 MFN Partners
Electrical and Mechanical Equipment	6,529	192,260
Food and Beverages	44,712	461,006
Textiles	6,610	2,801,498
Minerals and Metals	4,114	90,765
Total Exports Creation	61,967	3,545,53
Total Annual Creation	5,163	295,460
Average Pakistan Exports 2007-2018	$22,486,512	$22,486,512
Exports Creation as % of Average Annual Exports	0.02%	1.31%

Source: Authors' own estimations

Table 10 Difference-in-Difference Results

	Log of Pakistan Exports to China
Time*Treatment	0.39*
	(0.23)
Treatment	0.08
	(0.19)
Time	0.21***
	(0.05)

Source: Authors' own estimations