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IMPACT OF CPEC ON TRADE STRUCTURE AND REGIONAL COMPETITIVENESS OF PAKISTAN

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Abstract

Pakistan and China are common exporters of various goods and with CPEC the concerns about Pakistan's export structure have risen. Along with its expected benefits, there exist a few threats as well. Threats to Pakistan include losing its exports significantly on account of gaining cost effectiveness by China and crowding out of domestic industries. This research has estimated revealed comparative advantage and growth trends of such common goods to evaluate the impact of CPEC on trade structure of Pakistan. It is found that Pakistan has a comparative advantage in all its major exports over China but the growth in these commodities exports is higher for China. It is also observed that Pakistan is less vulnerable in exports of rice, cotton and textile while is more vulnerable in exports of Knit wear, leather, foot wear, sport and woollen carpets & rugs. Once CPEC is operational, China's cost of production would decline much sharply via time and cost saved by using CPEC route, Consequently Pakistan would possibly be not in position to compete in exports of these commodities. Eventually, Pakistan's exports or even production of these industries would be crowded out especially if the situation remained unconsidered by the government.

Keywords: CPEC, RCA, Regional competitiveness, Trade, Industrial Growth.
JEL Codes: F13, F43, L60

1. Introduction

With the current global integration, the world export patterns are changing fast as a result of reduction in trade barriers and technological advancements. Such change in the international trade leads economies to get prolific gains and enjoy the benefits of comparative advantage. Connectivity is crucial for economic activity and trade to prosper. Apparently, China Pakistan

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Economic Corridor (CPEC) is viewed as a big push to economic development of Pakistan. CPEC is a long route passing probably from various backward areas of relatively less developed provinces of our country. Concentration of economic activities in the concern regions due to improve physical infrastructure and Road connectivity, will expectedly improve socio economic conditions of these regions. Also, the establishment of new industries generate both employment and investment opportunities and consequently facilitate regional development. CPEC not only opens up regional road connectivity but also sea connectivity though Gawadar port. Road connectivity increases accessibility to various regions and market for buyers and sellers. The CPEC will open doors to immense economic opportunities not only to Pakistan but will physically connect China to its markets in Asia, Europe and beyond. Once CPEC is operational, China's cost of production will decline substantially in account of reduce transportation cost and its accessibility to various regions of the world will increase and become more convenient. Almost 80% of the China's oil is currently transported from Strait of Malacca to Shanghai, (distance is almost 16,000 km and takes 2-3 months), with Gwadar becoming operational, the distance would reduce to less than 5,000 km. This will further help china to reduce cost of production. Pakistan and China are common exporters of a number of goods and hence with CPEC the concerns about export structure of Pakistan have risen.

1.1. Beneficiaries of CPEC

China Pakistan Economic Corridor (CPEC) is critically important for both countries, China and Pakistan. Pakistan needs it to overcome its economic, development, social and energy problems. China needs it to expand its periphery of influence, consolidate its global presence and securing future supply routes of energy and trade goods, Ramay (2016).

Pakistan trade structure has long been dependent on low value added export, a narrow export base and consequently a significant trade deficit. The country's competiveness has also been hindered by inadequate infrastructure and rising energy cost. CPEC projects aims to address these challenges. The strategic location of CPEC is crucial, as it is located at the meeting point of Road Belt and Maritime Belt (Sayed, 2019; Shah, 2015). It will provide opportunity to China to establish and strengthen its position in Indian Ocean. It will also help secure the energy route from Middle East and Africa, which is critical for China's future development. Route of energy will also be shortened considerably (Bhattacharjee, 2015). It would also be easy and cost effective for China to reach the Middle East and North African Markets, among others.

About 22% of the total CPEC investment (46 billion) is dedicated to connect Kahgar city of Xinjiang (Province of China) to Gwadar, Pakistan through a road network of about 2000 km in length. This road route is of crucial importance and is one of the two necessary conditions of the corridor. The other is development of port at Gwadar. This surface transport connectivity will benefit China enormously by enhancing the usability of the Silk Route for trade and energy sourcing from Persian Gulf, BMA Capital (2015). This also enables China to accelerate development and improve growth in Xinjiang province where a separatist movement is being faced. For China, CPEC would be a game changer as well to some extent as it would accelerate her trade and make China more cost effective by saving time as well as distance along the risk attached to them. Further, beneficiaries to CPEC would also include Chinese firms and labour as the machinery used in the infrastructure projects would be procured from China along with employing a larger number of Chinese labour on projects as well.

There is a Chinese saying that if you want to be rich, you must first build roads, Hali et al (2015). One belt one road concept was developed by China, as part of its policy "Go Global 2001". Pakistan is one of the beneficiaries of Chinese dream. The corridor is advantageous to both countries as it significantly shortens the length of the trade route from South West China to Middle East, Africa and Europe. A larger chunk of this investment is planned to be heavily concentrated in the energy (54%) followed by coal mining (20%) and road networks (13%). This would help Pakistan to combat with its energy crisis. As estimated by BMA Capital (2015) percentage increase in energy generation would be 90%.

Table 1: Expected Impact on Energy Generation

Impact on Energy Generation	
Total Capacity Additions Under Chinese Investment (MW)	**16,845**
Current Capacity	**22,812**
% Increase	**74%**
Incremental Generation At 70% Utilization (GWh)	**103,294**
Current Generation	**96,122**
Less: Generation On Inefficient Plants(GWh)	**16,737**
Potential Generation After Completion Of Projects(GWh)	**182,678**
% Increase	**90%**

Source: BMA Capital (2015)

Apart from energy generation, CPEC would bring prosperity in Pakistan for many reasons. Pakistan even after almost 70 years of independence could not establish sound connectivity across the country except in Punjab where the infrastructure is relatively much better.

Balochistan is relatively the most backward province of Pakistan. The road connectivity between provinces is weak especially from Punjab and Sindh to Khyber Pakhtunkhwa (KPK) and Balochistan. In other words, half of our country is somewhat disconnected from the other half. Concentration of economic activity in Balochistan and KPK is relative much lower and thus a wave of deprivation has emerged there that might be possible for insurgency especially in Balochistan along with other possible reasons. The CPEC route is determined to pass through Balochistan ending with the establishment of Gwadar port. Road connectivity, establishment of industries and concentration of economic activities in the concern regions will boost both production and trade, generate both employment and investment opportunities and facilitate regional and international trade. The benefits are not just confined in economic terms but in social terms as well. So as a repercussion of CPEC, economic activity will start to grow along the regions on the belt. This urbanization process will change the socio-economic structure of these regions. The living standard in these regions is expected to improve accordingly and more urban regions will be transformed from the rural ground. And if the alignment connects through KPK as well, both of these relatively deprived provinces would become a part of the overall economic activity and national growth. A major benefit of CPEC is establishment of an alternative sea port. Further our bond with China will become stronger facilitating us against our rival countries. Other beneficiaries of CPEC would be the countries who will be benefited by cheaper imports and trade benefits.

Along with the expected benefits from CPEC, there exist a few threats as well. Threats to Pakistan includes debt sustainability, trade imbalances as there is concerns that Pakistan lose its exports significantly on account of gaining cost effectiveness by China, crowding out of its industries, provincial conflicts and regional dominance of Chinese labour in the concerned regions. Stating all these treats does not calls for withdrawing from CPEC but these are identified so that the government should take necessary measures to minimize the damages expected by effective policy measures both for enhancing Pakistan's competitiveness and protecting local industries.

This research aims at estimating and comparing the Balassa indices for revealed comparative advantage in major export commodities of Pakistan (calculated for China as well for comparison) for 21 years from 2003 to 2023. The trends in these commodity wise indices and their export growths are also analysed. Further the gains and threats resulting from CPEC for

both China and Pakistan are discussed with the help of logical justifications and calculations as well.

The rest of the paper is organized as follows. In the next section a selective review of literature is given. A brief introduction to the concept and measurement of revealed comparative advantage is presented in section three. Dynamic growth and revealed comparative advantage analysis for beneficiaries of CPEC, Pakistan and China individually and within a comparative framework is presented in section four. Section five provide conclusions drawn from this research.

2. Review of Literature

The empirical literature comprises of two part. The first part review the studies that examine the cost and benefits associated with CPEC initiatives while the other part provides the review of empirical studies exploring revealed comparative advantage.

Regional Competiveness and CPEC

Numerous studies have looked at how trade and competitiveness are affected by major infrastructure developments. Infrastructure development in underdeveloped nations significantly lowers trade costs and increases export diversification, as shown by Banerjee et al. (2012). In a similar vein, Donaldson (2018) demonstrated how colonial India's railway development greatly increased trade volumes and market integration. These results highlight how initiatives like CPEC have the ability to change the nature of commerce in Pakistan. Khan and Anwar (2019) analysed the effect of transportation development under CPEC projects on export performance of Pakistan and concluded that reduced transit time and cost could improve competiveness. In a similar vein, Akhter et al. (2021) demonstrate how Special Economic Zones (SEZs) promote regional growth and lessen regional inequities. With Balochistan and Khyber Pakhtunkhwa allegedly behind Punjab and Sindh in terms of project allocation and investment, the data showed that the unequal distribution of CPEC projects across provinces has sparked worries about regional disparities. According to Ahmed and Mustafa (2020), Pakistan's economic stability may be jeopardized by the growing debt load linked to CPEC projects. Others, like Raza and Hussain (2021), questioned the opaqueness of contract talks and project funding, claiming that these problems might undermine public confidence and restrict the long-term advantages of CPEC.

The literature lack the comprehensive assessment of the efficiency gained and lower cost of production attained by China under the same initiatives that might challenge the Pakistan's ability to sustain its comparative advantage.

Insights from Revealed Comparative Advantage

Revealed Comparative Advantage index provide information about movement in comparative advantage over the time. With the help of concept of revealed comparative advantage numerous existing studies examine the comparative advantage of a country in trade of different commodities. Most of the studies use the data of export share to describe the revealed comparative advantage in different commodities.

Nawaz and Rukhsana (2013) examined changing revealed comparative advantage of textile and clothing sector of Pakistan pre and post liberalisation. The study found that Pakistan has a relatively greater advantage in the export of textile sector than in clothing sector. It also concluded that during time period 2011-12 relative comparative advantage in both industries deteriorated. Akhtar et al. (2008) studied the changing revealed comparative advantage of Pakistan foot wear industry relative to India and China industries using data from 1996 to 2006. They pointed out that Pakistan's footwear industry moved from comparative disadvantage to comparative advantage, which shows that foot wear industry has immense growth potential and industry could become a source of foreign exchange earnings. Using sample from 2002 to 2009 Sadaf and Mahmood (2013) found that the Leather Industry of Pakistan has a higher comparative advantage over leather industry of India and Bangladesh. Another study that used the revealed comparative approach was done by Hanif and Jafri (2006).They constructed Balassa Revealed Comparative Advantage (BRCA) index for the textile sector of Pakistan to investigate the association between the financial development and international trade competitiveness. The result showed positive relationship between access to external finance and competitiveness of country's textile sector.

By using the index of revealed comparative advantage Yue (2001) demonstrated the fact that China has changed its export pattern to coincide with its comparative advantage. He also showed that the patterns of export among the coastal regions and the interior in China are dissimilar. As per Bano and Scrimgeour (2012) the revealed comparative advantage, measured by Balassa index was constantly rising for New Zealand Kiwifruit industry for time period 1981 to 2011. Richardson and Zhang (1999) carried out the study of over time variation of export patterns for different sectors and region of USA by employing Balassa index. The results

showed that just because of geographical proximity of trading partner and per capita income, export patterns vary across countries and time for different level.

3. Methodology and Data Sources

There are two possible approaches for measuring comparative advantage depending on what the research aims at. If it aimed to compare static theories of international trade then industry shares of GDP or net factor flows are preferably used for calculating comparative advantage. On the contrary, if one wants to explore the effects of commercial policy, transport costs or other shocks on the competitive situation of a set of countries, the usual method has been the gravity model which requires a lot of data. The former resembles concealed comparative advantage (CCA) approach while the later falls in the category of revealed comparative advantage (RCA) approach. With exception to RCA i.e. in the absence of trade costs, the usual measures of comparative advantage derived from production or commodity exports work well to represent a country comparative advantage or disadvantage Moenius (2006). Though, with the introduction of trade costs, RCA gives relatively more accurate measures for comparative advantage across countries. RCA is named so because here the comparative advantage of a country is revealed from the country's observed pattern of trade flows rather than production.
Revealed comparative advantage approach (RCA) uses the trade pattern to identify the commodities, industries or sectors in which an economy has a comparative advantage or disadvantage, by comparing the country of interests' trade profile with the world average. A recent but increasingly popular approach for estimating a measure of Revealed Comparative Advantage RCA was developed by Balassa (1965, 1979), commonly known as Balassa Index for comparative advantage. Balasa was of the view that it is not necessary to observe all ingredients effecting comparative advantage of any country rather one should observe patterns of trade and that is why the Balassa index for RCA consider trade flows of a country for estimating its comparative advantage rather than determining the sources affecting it. The RCA index is defined as the ratio of ratios i.e. the ratio of two shares. The numerator ratio is the ratio of a country's exports of a particular commodity/ industry/ sector to its total exports of all the commodities / industries/ sectors. While the ratio in the denominator is the ratio of all the exports of that particular commodity/industry/ sector by all other countries divided by the total exports of all the commodities / industries / sectors by the world (i.e. all countries). Symbolically Balassa index for comparative advantage for a given commodity *j* in country *i* by this research is calculated as

$$BI_{ij} = \frac{EX_{ij} / EX_{i\sum j}}{EX_{(w-i)j} / EX_{w\sum j}} \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where,

BI_{ij} = Balassa index for RCA in export of country i in commodity j
EX_{ij} = Exports by country i of commodity j.
$EX_{i\sum j}$ = Exports by country i of all the commodities i.e ∑j
$EX_{(w-i)j}$ = Total exports by all countries except country i of commodity j.
$EX_{w\sum j}$ = Total exports by all countries i the world of all the commodities i.e ∑j.

The index has a value between 0 and +∞. If the value is greater than unity, a nation is considered to have a revealed comparative advantage. Anything that skews the trade pattern, such as trade obstacles, has an impact on the index. Based on this index, a nation is considered to be specialised in exporting a certain product if its market share of that product exceeds the average or, conversely, if the product's weight in the nation's exports is more than the product's weight in the exports of the reference region. A country reveals comparative advantages in products for which this indicator is higher than 1, showing that its exports of those products are more than expected on the basis of its importance in total exports of the reference area. Balassa index is famous for the advantages it holds as it is a normalized index for RCA. It requires data which is easily available. Moreover, it is easy to calculate and interpret, as it focuses on exports by a country (Yu et al., 2009).

The current study estimated this index for seven commodities, thirteen years and two countries i.e. China and Pakistan. These indices are compared with respect to CPEC road connectivity and impact of this connectivity on traded competitiveness of the two countries involved in it. Further the decline in cost to export per container per kilometre is calculated for China by using this alternative CPEC route and then expected increase in its exports is estimated using increase in exports for a unit decline in cost to export.

For estimating and comparing commodity-wise export Balassa index of Pakistan and China for the years 2003-2023, the data used was mainly extracted from UN ComTrade Database. The data for cost to export / container was gathered from World Development Indicators and the distance in kilometres for China was taken from BMA Capital (2015) report.

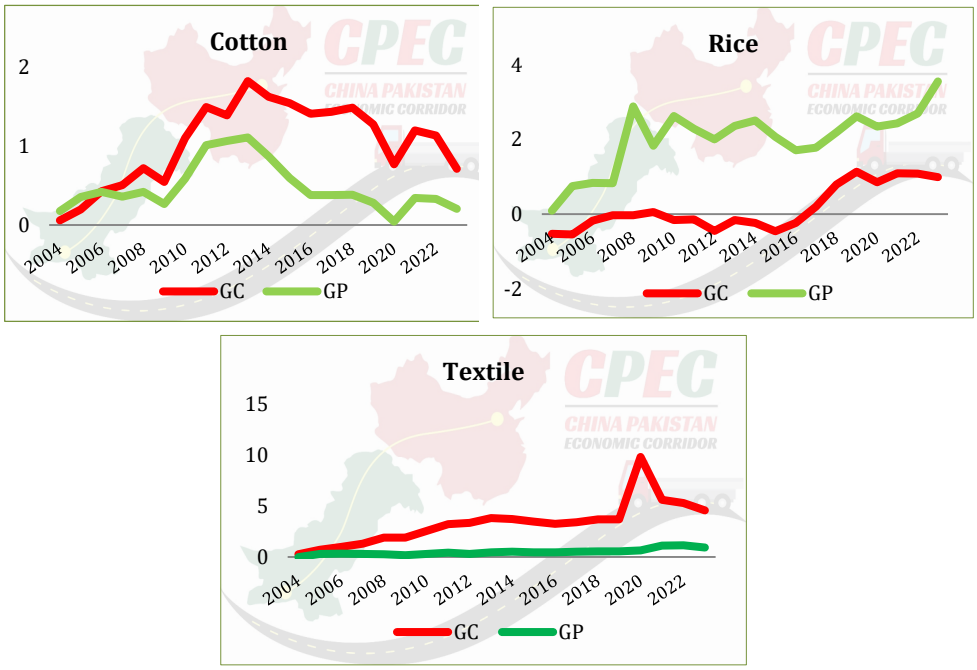
4. Results and Discussions

The comparative analysis comprises of three sections. The first section depicts the growth trends of different commodities in recent years. The next section compares the Balassa index for RCA of China and Pakistan and the last section discusses the expected future gains and threats likely to confront by both CPEC beneficiaries.

4.1. Analysing Pakistan and China's Common Export Commodities Growth Trends

Pakistan is a major exporter of primary commodities. As the current study intend to analyse the impact of one belt one route-CPEC over Pakistan's export competitiveness in the region. Pakistan's major export commodities are selected to be compared with China. The growth trends in these export commodities are compared for the two countries. Growth trends are of immense importance as they reveal where the country is heading to in the long run, what is happening in that particular sector, signals errors or if that sector needs to be taken care for despite their absolute volumes.

Figure-1: Growth Trends for Pakistan & China Export

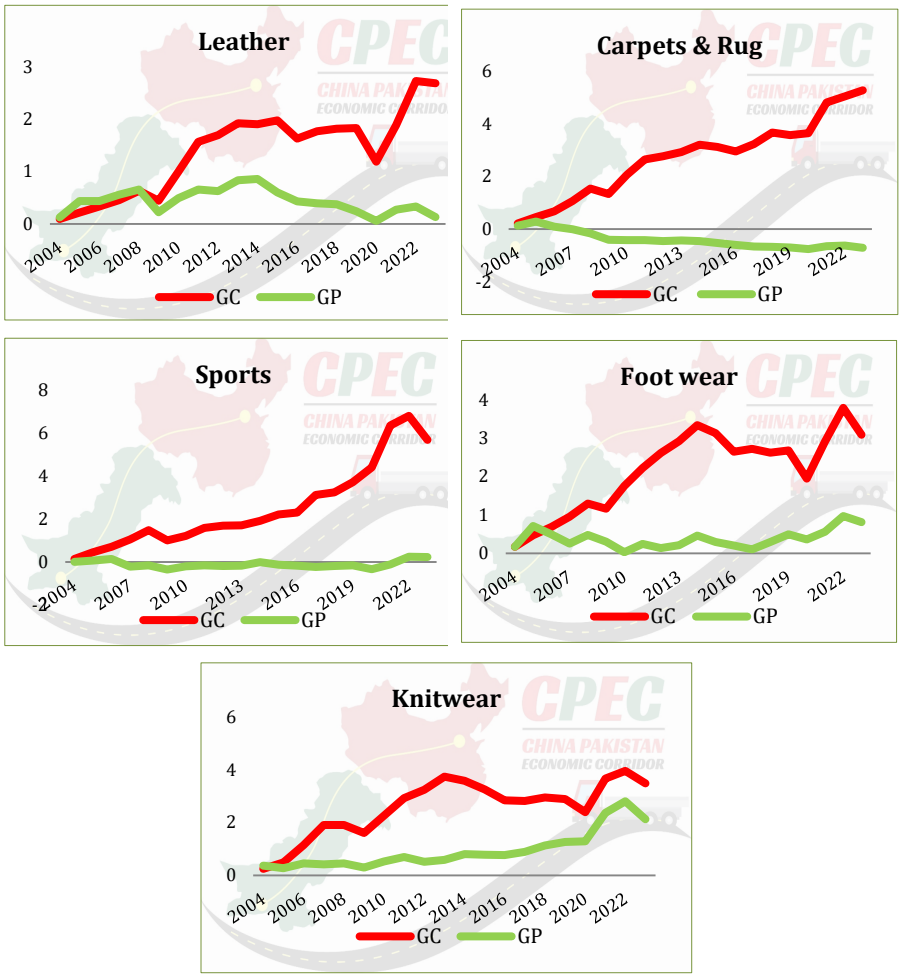


Source: Author's depiction. GC = China's export growth and GP = Pakistan's export growth

As can be seen from the graph above, the growth in cotton export of Pakistan initially was increasing and was higher than in China. Between 2006 and 2023, China's cotton export grows more than that of Pakistan and the gap between the two kept on increasing. Though after 2013, both countries are experiencing a decline in cotton export growth. The same is apparent from above growth trends of textile, for the years under consideration China's growth in exports remained higher than Pakistan and the gap between the two growths increased widely. This may be quite alarming situation for Pakistan because the share of textile in total exports by Pakistan is much higher than that of China. Losing competitiveness over textile exports would worse off Pakistan significantly. As far as rice growth comparison is concerned. Pakistan's export growth is much higher than China's growth for all the years under consideration. This

may indicate the competitiveness of Pakistan in producing high quality rice for which Pakistan is famous for and stand among the top five rice exporters of the world.

Figure-2: Growth Trends for Pakistan & China Export



Source: Author's depiction. GC = China's export growth and GP = Pakistan's export growth

It can be seen that Pakistan is less vulnerable in exports of rice, cotton and textile but in exports of Knit wear, Leather, Foot wear, Sport and Woollen carpets & rugs the exports seems much vulnerable. Specifically, the export growth for leather products of Pakistan was slightly higher than China before 2008. After that the growth declines for both countries. It is noteworthy that China recovers its leather export growth much sharply and persistently in comparison with Pakistan. In fact, Pakistan is facing a decline in leather export growth. The export growths for woollen carpets & rugs of Pakistan and China, moves in the opposite direction. Pakistan is experiencing a continuous decline in its growth while China has a continuous and sharp rise in it. Pakistan's export growth in knit wear industry moves from a region where its growth was relatively higher than China to a region where its growth remained lower than China with persistently expanding growth gap. Finally, Pakistan's sports goods are well recognized in the

world but despite of this recognition sports goods industry in Pakistan is suffering from declines and fluctuations in its growth trend. On the contrary China's export growth for sports goods move upwards except between 2008 to 2009. More or less the same trends in growth are observed for the foot wear industries exports in China and Pakistan.

In conclusion, China's export growth has outpaced the export growth of Pakistan for all of the aforementioned commodities, and the difference has been growing over time. It is also pertinent to take into account that Pakistan exports a comparatively larger share of these commodities than China does, and if Pakistan lose these exports, the country would suffer significantly in the absence of any policy relating export-protection, or growth enhancement.

4.2. Comparing Revealed Comparative Advantage using Balasa Indices

This section presents and compares the estimations of the Balassa Indices for determining China's and Pakistan's revealed comparative advantage. Depending on how volatile or vulnerable Pakistan's comparative advantage is in certain commodities, the indexes for the key exports from Pakistan are divided into two groups. The estimated Balassa indices for those exported goods in which Pakistan is less vulnerable are shown in table 1, while table-2 represents indices for those commodities whose exports are more volatile.

Table 2: Balassa Index for RCA in exports of commodities in which Pakistan is less vulnerable

BALASSA INDEX						
YEAR	**COTTON**		**RICE**		**TEXTILE**	
	PAKISTAN	**CHINA**	**PAKISTAN**	**CHINA**	**PAKISTAN**	**CHINA**
2003	40.498	2.991	59.191	1.247	34.753	3.138
2004	46.003	2.501	57.322	0.417	33.287	3.255
2005	51.772	2.616	77.667	0.305	36.537	3.573
2006	55.933	2.729	86.120	0.495	38.814	3.646
2007	56.414	2.574	72.083	0.417	36.906	3.534
2008	58.718	2.912	100.723	0.255	33.657	4.227
2009	58.545	3.083	71.726	0.288	30.644	4.518
2010	54.015	2.891	88.447	0.199	29.372	4.503
2011	56.497	2.744	66.560	0.171	27.903	4.662
2012	63.628	2.589	62.513	0.101	27.433	4.788
2013	61.898	2.869	67.078	0.140	28.653	4.699
2014	61.876	2.825	69.384	0.117	29.163	4.453
2015	59.932	3.024	77.482	0.095	29.573	4.228
2016	55.825	2.669	68.125	0.120	36.809	4.169
2017	52.238	2.437	60.454	0.165	37.503	4.185
2018	49.578	2.294	66.590	0.233	37.039	4.237
2019	47.988	2.172	80.702	0.293	36.298	4.146

BALASSA INDEX						
YEAR	**COTTON**		**RICE**		**TEXTILE**	
	PAKISTAN	**CHINA**	**PAKISTAN**	**CHINA**	**PAKISTAN**	**CHINA**
2020	46.175	1.731	68.352	0.207	23.726	7.540
2021	43.832	1.573	63.693	0.216	37.168	4.202
2022	43.904	1.508	63.374	0.196	40.033	4.158
2023	51.609	1.557	79.986	0.186	40.504	4.114

Source: Author's calculations using UN Com Trade Data.

As per the Balassa indices, Pakistan had a comparative advantage in exports of primary commodities (cotton and rice) and textile over China. For primary commodities this supremacy of comparative advantage in exports showed an increasing trend while for that in textile was declining over time. Thus, Pakistan has a higher potential to export for these goods. Though, it cannot be side-lined that these primary commodities are subject to natural calamities which in turn affect their production turnovers and depending solely on these commodities could be risky.

Table 3: Balassa Index for RCA in exports of commodities in which Pakistan is more vulnerable

BALASSA INDEX										
YEAR	**LEATHER**		**CARPET**		**KNIT WEAR**		**SPORTS**		**FOOT WEAR**	
	PAKISTAN	**CHINA**	**PAKISTAN**	**CHINA**	**PAKISTAN**	**CHINA**	**PAKISTAN**	**CHINA**	**PAKISTAN**	**CHINA**
2003	8.381	4.336	15.230	1.235	7.227	4.149	3.363	6.111	1.039	5.334
2004	9.128	3.780	16.623	1.210	9.431	4.176	3.323	5.795	1.181	5.128
2005	10.401	3.547	16.336	1.184	7.758	4.276	2.949	5.960	1.477	5.374
2006	10.486	3.241	14.257	1.161	8.359	5.213	3.123	6.022	1.286	5.139
2007	11.020	2.859	12.891	1.223	7.526	5.831	1.912	5.314	1.039	4.898
2008	11.465	3.110	10.715	1.461	7.540	5.448	1.789	5.528	1.120	5.228
2009	9.365	3.221	8.006	1.499	6.751	5.058	1.449	4.804	0.992	5.252
2010	8.948	3.329	6.514	1.539	7.123	5.528	1.766	5.065	0.672	5.550
2011	8.334	3.630	6.024	1.664	6.808	5.764	1.723	5.583	0.693	5.422
2012	8.341	3.532	6.143	1.739	6.492	6.493	1.777	5.756	0.642	5.934
2013	8.694	3.346	6.132	1.611	6.286	6.436	1.846	5.716	0.634	5.580
2014	8.726	3.024	5.772	1.579	7.157	5.563	2.145	5.675	0.706	5.302
2015	7.918	3.180	5.203	1.532	7.597	5.330	1.790	5.970	0.017	5.079
2016	7.914	2.635	4.559	1.316	8.078	4.149	1.821	5.778	0.670	4.011
2017	7.578	2.711	3.745	1.360	8.561	3.947	1.457	6.400	0.599	3.837
2018	7.358	2.647	3.512	1.467	9.453	3.887	1.483	6.033	0.680	3.431
2019	6.394	2.561	3.311	1.452	9.629	3.604	1.440	6.796	0.743	3.265
2020	6.795	2.156	2.807	1.384	11.011	3.120	1.060	6.867	0.790	2.625
2021	6.360	2.282	3.277	1.409	12.289	3.431	1.061	7.603	0.734	3.006
2022	6.036	2.811	3.746	1.603	13.368	3.456	1.497	8.401	0.783	3.083
2023	5.368	2.930	3.053	1.818	12.859	3.764	1.664	7.731	0.923	3.521

Source: Author's calculations using UN Com Trade Data.

Balassa indices for commodities in which Pakistan had a relative vulnerable situation are reported above. Though Pakistan has a relative comparative advantage in these commodities over China but this is for now when CPEC route is not operational and China is using the old route for exporting its goods. Over the years, Balassa indices for Pakistan are subject to fluctuations in leather & knit wear export products with its comparative advantage slightly higher than China in these commodities. For the rest of the commodities the trend in the RCA is rather declining over time already endangering their export potential.

Once CPEC is operational, China's cost of production would decline much sharply both because of much cheaper imported inputs to production especially oil and because of much lower cost to export on account of the expected distance, time and cost saved by using CPEC route in future. With increasing growth gap resulted from much sharper rise in exports growth of China in these commodities and a much lower expected cost of production in future, Pakistan would possibly be not in position to compete in exports of these commodities with China. Eventually, Pakistan's exports or even production of these industries would be crowded out especially if the situation remained unconsidered by the government.

4.3. Expected Gains and Threats to Beneficiaries of CPEC

CPEC is considered as a game changer for both the countries but every coin has another side also. There is always the possibility that the gain to one would be much higher than the other. Likewise, the treats to one could be more in comparison with the other. Hence it's better to evaluate both and eventually design policies to maximize benefits and minimizing the cost attached before confronting it.

A larger chunk of this investment is planned to be heavily concentrated in the energy (54%) followed by coal mining (20%) and road networks (13%). This would help Pakistan to combat with its energy crisis. As estimated by BMA Capital (2015) percentage increase in energy generation would be 90%. Apart from energy generation, CPEC would bring prosperity in Pakistan for many reasons. Pakistan even after almost 70 years of independence could not establish sound connectivity across the country except in Punjab where the infrastructure is relatively much better. Balochistan is relatively the most backward province of Pakistan. The road connectivity between provinces is weak especially from Punjab and Sindh to Khyber Pakhtunkhwa (KPK) and Balochistan. In other words, half of our country is somewhat disconnected from the other half. Concentration of economic activity in Balochistan and KPK is relative much lower and thus a wave of deprivation has emerged there that might be possible

for insurgency especially in Balochistan along with other possible reasons. The CPEC route is determined to pass through Balochistan ending with the establishment of Gwadar port. Road connectivity, establishment of industries and concentration of economic activities in the concern regions will boost both production and trade, generate both employment and investment opportunities and facilitate regional and international trade. The benefits are not just confined in economic terms but in social terms as well. So as a repercussion of CPEC, economic activity will start to grow along the regions on the belt. This urbanization process will change the socio-economic structure of these regions. The living standard in these regions is expected to improve accordingly and more urban regions will be transformed from the rural ground. And if the alignment connects through KPK as well, both of these relatively deprived provinces would become a part of the overall economic activity and national growth. A major benefit of CPEC is establishment of an alternative sea port. Further our bond with China will become stronger facilitating us against our rival countries.

The benefits of CPEC to China are enormous. It strengthens its position in the world economies both economically and politically, open up new markets for trade, enhancing its regional connectivity and lowers its cost of production and trade. Further as the investment under CPEC is to be made on investment modes, returns on this investment for China would be higher as well. Majority of the machinery used for construction would be coming from China along with Chinese labour. Most importantly there would be an alternative route for world trade in addition to the existing one.

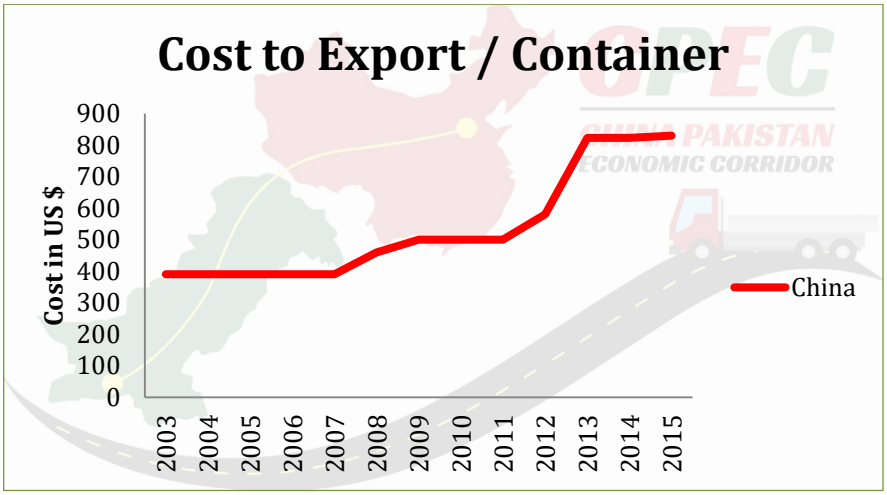
Table 4: Benefits to China in terms of Time and Distance

Benefits to China in term of Time and Distance		
Between Kashgar (4376 Km away from Beijing and the Persian Gulf	***Distance (Km)***	***Time (Days)***
Using CPEC Route	***2500***	***10***
Using Current Route	***13000***	***45***
Saving (Benefits)	***10500***	***35***

Source: BMA Capital (2015) report.

The route China is currently using for exports is 13000 km long and takes 45 days. With CPEC this distance would be decreased to 2500 km and would only take 10 days. Further, China is experiencing a rising trend in its cost to export (per container) values as depicted in the figure below.

Figure 3: Cost to export (per container) for China



Source: Author's depiction using World Development Indicators.

With CPEC becoming operational, this cost would be down by 81% expectedly. The table below summarizes the calculations for this percentage decline in China's cost to export.

Table 5: Expected Decline in Cost to Export 2015

Expected Decline in Cost to Export 2015 Per Container, Per Km		
Description	***Unit***	***Value***
Cost to Export (Per Container)	***US$***	***830***
Current Distance	***Km***	***13000***
Current Cost to Export (Per Container)	***US$/Km***	***0.064***
CPEC Route Distance	***Km***	***2500***
CPEC Cost to Export (Per Container)	***US$/Km***	***160***
Expected Decline in the Cost to Export using CPEC Route	***US$***	***670***
Expected Decline in the Cost to Export using CPEC Route	***%***	***81***

Source: Author's calculations using World Development Indicators and BMA Capital (2015) report.

Currently China's cost to export per container is US $ 830. With CPEC route this cost would be declined by US $ 670 i.e. it would be down to US $ 160 per container. As a result, exports would more likely to be raised. The expected rise in exports is tabulated below.

Table 6: Expected Increase in Volume of Exports (China)

Expected Increase in Volume of Exports (China)		
Description	***Unit***	***Value***
Total Export of all Commodities 2015	***US Billion $***	***2282***
Current cost to Export Per Container	***US $***	***830***
Unit cost of Export	***US Billion $***	***2.75***
Expected Decline in the Cost to Export using CPEC Route	***US $***	***670***
Expected Rise in Export	***US Billion $***	***1841.99***
Expected Rise in Export	***%***	***81***
Expected total future exports	***US Billion $***	***4124***

Source: Author's calculations using World Development Indicators and BMA Capital (2015) report.

China's total exports of all commodities in 2015 were US$ 2282 billion which are expected to be increased to US $ 4124 billion in future when CPEC will be operational. In addition to the immense advantages of CPEC, there are some concerns for both nations as well. Threats to Pakistan includes losing its exports significantly, crowding out of its industries and regional dominance of Chinese labour in the concerned regions. While threats to China would include political instability, insurgent attacks, damages and casualties resulted in such confrontations.

5. Conclusion

CPEC is considered as a game changer for China and Pakistan. The China-Pakistan Economic Corridor (CPEC) holds immense importance for both nations. Pakistan needs it to address its economic and social challenges. China requires it to broaden the sphere of influence, fortify its position internationally, and ensure future supply routes of energy and trade. Ramay (2016). China is a potential exporter to world trade. Once CPEC is operational, China's cost of production will further decline substantially and its accessibility to various regions of the world will increase and become more convenient. Pakistan and China are common exporters of a number of goods and hence with CPEC the concerns about export structure of Pakistan have risen.

In this research an estimation of revealed comparative advantage through Balassa index of such common commodities was performed to evaluate the impact of CPEC on trade structure of Pakistan. It is found that Pakistan has a comparative advantage in all its major exports over China but the growth in these commodities exports is higher for China. It is also observed that Pakistan is less vulnerable in exports of primary commodities (rice and cotton) and textile while is more vulnerable in exports of Knit wear, leather, foot wear, sport and woollen carpets & rugs.

The cost of production in China would drastically decrease if CPEC is operating both because of much cheaper imported inputs to production especially oil and because of much lower cost to export on account of the expected distance, time and cost saved by using CPEC route in future. With increasing growth gap resulted from much sharper rise in exports growth of China in these commodities and a much lower expected cost of production in future, Pakistan would possibly be not in position to compete in exports of these commodities with China. Eventually, Pakistan's exports or even production of these industries would be crowded out especially if the situation remained unconsidered by the government. Stating all these threats does not calls for withdrawing from CPEC but these are identified so that the government should take the required steps to reduce the damages anticipated through effective policy measures both for increasing Pakistan's competitiveness and preserving local businesses.

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