

Exploring Potential and Perils of Pak-China Bilateral Free Trade Agreement: Trade Creation and Trade Diversion Approach

Mirajul Haq

Assistant Professor, International Institute of Islamic Economics (IIIE), International Islamic University Islamabad, E.mail: <u>haqmirajeco@gmail.com</u>

Javeria Saeed

M.Phil Scholar, International Institute of Islamic Economics (IIIE), International Islamic University Islamabad, E.mail: jaweriasaeed27@gmail.com

Muhammad Akram

Assistant Professor, International Institute of Islamic Economics (IIIE), International Islamic University Islamabad, E.mail: <u>muhammad.akram@iiu.edu.pk</u>

- Reciprocal trade agreements between two or more nations are known as *Regional Trade Agreements* (RTAs)------ Comprises into Five Categories-----Preferential Trade Agreements (PTAs), Free Trade Agreements (FTAs), Customs Unions (CUs), Common Markets (CMs), and Economic Unions (EUs).
 - Rapid growth since early 1990s.
- ➡ In 1980 only 15 agreements were in-forced, whereas at the end of 2017, 457 RTAs are listed with WTO around the globe
- RTAs hold a legal status under the article XXIV of GATT (1994) ------ in order to develop liberalize trade within a certain geographical area and tense up economic ties among the member countries.
- Though, the upsurge of regionalism around the globe has brought the attention of economists and policy makers towards the cost-benefit analysis of RTAs.

Two Contrast Views

The proponent of regionalism maintained the claim that RTAs are always proving beneficial for member countries,

- The most feasible way to resolve and discuss regional issues that are out of domain in multilateral agenda.
- Enhances global competitiveness of participants by providing access to international market.
- RTAs enhance growth process of members' countries through the stimulation of foreign direct investment and technological diffusion.
- Pessimistic view claim that regionalism should put both member and non-member countries at a disadvantage.
 - RTAs become more harmful when they are carried as a substitute of multilateralism. In such case, RTAs depress multilateral liberalization as a result the array of global trade gets distort.

- In Asia the rapid development of RTAs started from the early 1990s and almost one third of the world RTAs are inforce in Asia.
 - Pakistan and China started negotiation on FTA on 24th November 2006 that enters into force in July 2007. Pakistan is the foremost country to enter into an FTA with China in South Asia.
- As usual the prime objective of Pakistan, China FTA (PCFTA) is to strengthen and to expand trade volume between the two member countries.
- PCFTA has implemented in Two Phases, in Phase-1 Pakistan and China were agreed on 30 percent reduction of tariff on products for the period of 2007 to 2011, whereas in the Second Phase, both countries agreed on the reduction of tariff up to 90 percent.
 - In addition, Pakistan agreed to provide tariff concession on raw and semifinal products whereas china was agreed to provide tariff concession on final products.
- Regardless that Pakistan and China have advantage of close relationship, geographical proximity and road connectivity, though the economic relation of both countries remains far below their potential.

- Despite the fact that FTA was signed between the two countries in 2006, yet Pakistan is just a marginal contributor in terms of China's overall trade.
- Pakistan has so far left out to grow a sizeable volume of its bilateral trade with china-----China's worldwide imports have pass through \$1trillion ------ Pakistan holds a slight share in it. Pakistan exports to China are up until now of just 1 billion dollar (UN COMTRADE 2016).
- Apart from trade volume that has not been significantly improved, Pakistan trade balance with China has been distorted. This study is devoted to examine rigorously the potential and perils of Pakistan, China FTA (PCFTA)
- Specifically the study aims to identify goods in which Pakistan has trade potential with China, and in the same way to identify the goods in which China has trade potential
- To meet this objective we calculated Balassa (1965) relative comparative advantage (RCA) index for 99 commodities group classified by SITC at 2 digit code.
- Moreover, to explore cost and benefit of PCFTA for member countries (Pakistan, China) trade creation and trade diversion approach is employed.
- In this association, we follow Kandogan (2005) gravity model and henceforth the trade creation and diversion of FTA are estimated for overall imports and for each commodity group classified by SITC-2 using data set of 20 major trading partners of Pakistan.

Different approaches to analyze Cost and Benefits of PCFTA

- Revealed Comparative Advantage (RCA)
- Gravity Model.
- Trade Creation (TC), Trade Diversion (TD)

a. Revealed Comparative Advantage

The one feasible way to measure the comparative advantage or disadvantage of a country in a particular traded good is RCA developed by Balassa (1965)-----mainly based on the comparative advantage doctrine of classical economists (Ricardo 1817; Heckscher 1919; and Ohlin 1933).

Keeping in view the classical theoretical underpinning Balassa (1965) developed the following index of revealed comparative advantage.

$$RCA_{ij} = \frac{(X_{ij})}{(X_i)} \div \frac{(X_{wj})}{(X_w)}$$

(1)

- Where RCA_{ij} is revealed comparative advantage of ith country for good *j*. X_{ij} is ith country's exports of commodity *j*, X_i is total exports of country i, while X_{wj} is world exports of commodity *j*, and X_w is world's total exports.
- Follow Balassa (1965) RCA index, we calculated RCA indices of Pakistan and China for both primary and manufactured product for 99 commodities group at the level of SITC 2-digit code covering the period from 1990-2015.
- Generally the value of RCA is stated with <, > 1. The value of (RCA > 1) (RCA < 1) indicates country's comparative advantage and disadvantage in particular commodity respectively.</p>

Measurement of Trade Creation and Trade Diversion

- The effects of RTAs could be found through one of commonly used technique trade creation and trade diversion developed by Viner (1950).
- Trade creation (TC) refers to the enlargement of trade and specialization according to comparative advantage that occurs between member countries of trading blocs as a result of the removal of trade barriers.
- Trade diversion (TD), in contrast, occurs when a country shift imports from low cost producing country to high cost producing country with whom the country is in free trade agreement
- In received literature on the subject different methodologies have been used in order to measure TC and TD and hence to calculate the net effects of RTAs for the member countries. In this study we measure the net effects of PCFTA through Gravity Model.

- We follow the Kandogan (2005) fixed effect Gravity Model in order to measure the effects of PCFTA for member countries.
- In order to capture fixed effects we incorporate importer, exporter, commodity and bilateral fixed effects in the model.

The modified Gravity Model takes the following form

 $Ln(M_{ijst}) = \delta_{t} + \partial_{i} + \theta_{j} + \rho_{ij} + \gamma_{s} + \beta_{1} \ln Y_{it} + \beta_{2} \ln Y_{jt} + \beta_{5} \text{Dist}_{ij} + \beta_{7} \text{EXR}_{ijt+} \beta_{8} \text{POP}_{it} + \beta_{9} \text{POP}_{it} + \beta_{10} \text{SIM}_{ijt} + \beta_{11} \text{RF}_{ijt} + \beta_{12} \text{CL}_{ij} + \mu_{ijt}$ (2)

- M_{ijst} are imports of commodity s of i country from j country at time t,
- δ_t denotes year fixed effects, which capture time-varying factors that affect imports of country. ∂_i is importer fixed effect, it captures time-invariant characteristic of importer country. Similarly, exporter fixed effect θ_j captures time-invariant characteristic of exporter country.
- ρ_{ij} is bilateral interaction fixed effect, which captures time-invariant bilateral pair country characteristics that
 effect trade between importer and exporter, γ_s captures commodity group specific characteristics that influence
 the trade flows of that particular commodity group.
- Y_{it} and Y_{jt} are real GDP of importer and exporter country respectively. Dist_{ij} denotes distance between country i and j. EXR_{ijt} is exchange rate of importer country i and exporter country j at time t. POP_{it}, POP_{jt} represent population (proxy of market size) of country i and j at time t respectively.
- SIM_{ijt} and RF_{ijt}denotes similarity index and relative factors endowments of trading partners respectively at time t. CL_{ij} is dummy variable of common language, if country i and j share a common language than assigned a value of 1 and 0 otherwise, whereas µ_{ijt} is an error term.

Following the Kandogan (2005), Similarity Index SIM_{ijt} is calculated, which measures similarity of the economic size (in terms of GDP) of country *i* and *j* at period t. SIM_{ijt} index is calculated to find that how much the partners countries are similar in economic size.

$$SIM_{ijt} = \ln \left[1 - \left(\frac{Y_{it}}{Y_{it} + Y_{jt}} \right)^2 - \left(\frac{Y_{jt}}{Y_{it} + Y_{jt}} \right)^2 \right]$$
(3)

- Equation (3) shows that terms in brackets take the value of 0.5 when the two trading countries are of equal economic size and
 value decreases as countries diverge in size. Relative Factor Endowment RF_{ijt} estimates the distance between trading partners in
 terms of their relative factor endowments.
- Follow Kandogan (2005), RF_{ijt} is calculated with the following formula.

$$RF_{ijt} = \left| ln \left[\frac{K_{it}}{L_{it}} \right] - ln \left[\frac{K_{jt}}{L_{jt}} \right] \right|$$
(4)

Where K_{it} capital stock and L_{it} shows labor force of the importer country *i* at time *t*, similarly, K_{jt} capital stock and L_{jt} shows labor force of the exporter country *j* at time *t*. The measure takes the value of zero when importer *i* and exporter *j* have same factors endowment ratios, and increase with increase in differences.

Trade Creation and Trade Diversion

To find trade creation and diversion, regression errors \vec{e}_{ijt} of empirical model (Eq. 2) is estimated for pre and post is estimated. For trade creation we calculate average errors for member countries for pre- and post-PCFTA periods and take difference of average errors. Hence, TC is calculated as follows;

 $TC = \varepsilon_{ijt}$ after the PCFTA for members $-\varepsilon_{ijt}$ before the PCFTA for members (5)

- The value of TC greater than zero(TC > 0) indicates that due to agreement trade among member countries have increased. Define it as an alternative TC value greater than zero shows trade creation among member countries.
- For trade diversion we take the difference of the average errors pre and post-PCFTA for non-member countries. Follow Kandogan (2005) TD is calculated as follows;

 $TD = \varepsilon_{ijt}$ after the PCFTA for non – members – ε_{ijt} before the PCFTA for non – members (6)

The value of TD is less than zero (TD < 0) indicates that as a result of agreement, trade of member countries with non-members countries have decreased. To estimate the net impact of PCFTA we simply take the difference of the TC and TD which we calculated using estimated values of eq. (5) and eq. (6). Following Kandogan (2005) mathematically, net effect is estimated as follows;

$$NET = TC - TD$$

(7)

 We repeat this process and have measured TC and TD for each commodity group. The empirical model (Eq.2) is estimated with Pooled Ordinary Least Square estimated technique.

Sample Size, Data and Data Sources

- We consider 20 major trading partners of Pakistan for our analysis considering imports and exports volumes in the latest fiscal year (2015-16).
- Annual data of Pakistan and China for primary product categories and manufactured product categories of 99 commodities at the level of code SITC 2-digit covering time span for 1990-2015 is considered.
- Data on bilateral imports and bilateral exports of Pakistan and China have been taken from UNCOMTRADE 2016 and for GDP, foreign exchange rate; labor force, population and exchange rates for Pakistan and China including 20 major trading partners of Pakistan are drawn out from WDI.
- Data on geographical distance (km) between Islamabad (the capital of Pakistan) and the capital cities of the trading partners and common words are taken from Centre d'Etudes Prospective et d'Information International (CEPII) online.

Findings

Results of Revealed Comparative Advantage (RCA) Analysis

Table 1: RCA of Food and Live Animals

Year	Pakistan	China
1990	0.09	59.71
1991	0.83	41.16
1992	0.63	2.83
1993	0.35	102.57
1995	10.35	9.91
1996	9.75	226.05
1997	4.76	436.23
1998	4.86	14.66
1999	9.69	15.10
2000	6.87	915.64
2001	3.85	28.95
2002	4.35	28.41
2003	7.54	12.53
2004	11.24	10.83
2005	7.83	34.80
2006	9.48	14.49
2007	6.56	14.06
2008	5.79	12.26
2009	4.60	15.58
2010	4.47	17.28
2011	2.87	20.19
2012	3.16	28.08
2013	1.22	17.07
2014	3.28	21.02
2015	3.58	19.99

	Table 2: RCA of Beverages and Tobacco	
Year	Pakistan	China
1990		
1991		
1992		0.27
1993		0.03
1995	6.79	0.03
1996		0.03
1997		0.04
1998		0.01
1999		0.02
2000		0.02
2001		
2002		
2003	24.95	7.04
2004	16.17	10.89
2005	8.80	174.45
2006	16.23	10.21
2007	27.73	5.74
2008	24.28	5.13
2009	11.50	8.39
2010	15.92	9.23
2011	12.44	6.86
2012	6.09	5.81
2013	3.17	6.57
2014	14.32	5.72
2015	4.40	3.91

Data Source: Authors' own calculation using data set of UN COMTRADE 2016.

	Table 3: RCA of Crude Materials, Inedible, Except Fuel	
Year	Pakistan	China
1990	74.66	6.14
1991	9.60	18.09
1992	72.50	0.02
1993	35.15	3.60
1995	32.66	3.03
1996	38.48	2.53
1997	30.16	2.63
1998	32.46	3.92
1999	41.66	9.93
2000	21.32	4.40
2001	40.19	4.98
2002	24.59	28.52
2003	53.81	18.64
2004	37.08	17.10
2005	50.58	34.12
2006	48.79	14.91
2007	42.31	11.43
2008	37.37	12.08
2009	26.50	12.36
2010	27.17	10.57
2011	28.28	10.08
2012	15.38	9.66
2013	7.65	9.86
2014	19.64	8.45
2015	17.07	8.29

Data Source: Authors' own calculation using data set of UN COMTRADE 2016

Т	able 4: RCA of Mineral Fuels, Lubricants and Related Mat	terials
Year	Pakistan	China
1990	35.41	0.17
1991	9.87	0.23
1992	15.82	0.06
1993	77.42	3.03
1995	37.80	2.95
1996	12.21	1.44
1997	6.29	3.74
1998	3.12	3.53
1999	1.47	5.02
2000	0.03	3.56
2001	1.13	3.55
2002	7.79	2.78
2003	9.79	36.87
2004	1.29	38.27
2005	2.25	80.93
2006	3.14	22.58
2007	1.90	36.45
2008	1.50	24.62
2009	2.15	23.98
2010	2.12	28.15
2011	0.94	34.16
2012	0.54	32.74
2013	1.33	30.88
2014	1.36	31.36
2015	35.41	25.68

Table 5: RCA of Animal and Vegetable Oils, Fats and Waxes

Year	Pakistan	China
1990		12.93
1991	·····	22.19
1992		0.04
1993		0.30
1995		0.34
1996		0.18
1997		0.23
1998		0.23
1999		0.15
2000		0.05
2001	0.06	0.04
2002	3.23	0.13
2003	4.16	19.22
2004	5.67	47.22
2005	3.57	16.72
2006	3.98	8.73
2007	10.97	9.64
2008	18.66	11.26
2009	3.65	14.12
2010	3.99	12.19
2011	2.01	11.02
2012	0.76	11.71
2013	3.42	13.34
2014	3.88	12.46
2015	0.06	12.73

	Table 6: RCA of Chemicals and Related Products	
Year	Pakistan	China
1990	2.81	24.89
1991	0.28	33.67
1992	19.31	0.66
1993	0.08	73.29
1995	0.46	95.11
1996	0.38	113.56
1997	0.68	94.96
1998	27.86	158.37
1999	29.77	152.15
2000	41.66	124.62
2001	34.56	113.28
2002	4.29	113.94
2003	4.10	11.58
2004	6.23	10.01
2005	7.89	31.21
2006	6.12	16.12
2007	6.03	17.67
2008	6.16	16.34
2009	4.51	20.82
2010	5.05	26.78
2011	4.93	29.05
2012	2.45	24.06
2013	4.72	24.66
2014	5.05	23.16
2015	2.81	21.12

	Table 7: RCA of Manufactured Goods	
Year	Pakistan	China
1990	1.52	20.57
1991	1.81	18.88
1992	2.08	0.25
1993	2.09	19.24
1995	2.76	23.78
1996	6.09	26.27
1997	9.57	24.42
1998	3.44	28.03
1999	3.69	36.16
2000	5.03	38.80
2001	8.95	44.98
2002	4.06	53.42
2003	0.75	8.29
2004	3.25	8.69
2005	3.07	21.88
2006	4.58	7.73
2007	1.86	8.64
2008	3.04	8.13
2009	8.10	5.36
2010	2.50	4.69
2011	4.58	4.89
2012	2.83	4.13
2013	1.66	3.88
2014	2.59	3.98
2015	1.30	3.96

Data source: Authors' own calculation using data set of UN COMTRADE 2016.

Table 8: RCA of Machinery and Transport Equipme

Year	Pakistan	China
1990	13.17	24.72
1991	1.34	30.85
1992	110.53	2.28
1993	9.06	201.53
1995	7.89	82.48
1996	11.18	195.99
1997	47.96	97.08
1998	15.06	92.34
1999	33.12	123.49
2000	1.81	138.46
2001	58.88	222.12
2002	1.34	271.74
2003	0.31	20.18
2004	0.28	9.87
2005	14.62	21.71
2006	10.67	6.81
2007	6.74	7.91
2008	22.74	8.39
2009	12.21	9.17
2010	10.63	7.23
2011	10.37	6.02
2012	3.69	7.80
 2013	1.43	8.08
2014	3.54	7.09
2015	/ 10	0 75

	Table 9: RCA of Miscellaneous Manufactured Article	
Year	Pakistan	China
1990	1.72	4.75
1991	0.24	11.46
1992	3.34	0.057
1993	0.09	13.59
1995	0.07	10.74
1996	0.25	12.72
1997	13.04	7.39
1998	0.22	7.18
1999	0.12	7.74
2000	1.02	9.33
2001	0.27	12.65
2002	0.21	16.98
2003	2.03	13.11
2004	2.56	8.52
2005	3.54	20.04
2006	18.24	6.80
2007	27.32	5.87
2008	7.05	4.85
2009	5.96	6.05
2010	16.03	6.67
2011	4.75	5.12
2012	6.12	7.39
2013	5.37	7.19
2014	4.75	9.31
2015	3.07	6.29

	Table 10: RCA of Commodities and Transactions	
Year	Pakistan	China
1990	6.65	0.08
1991	3.72	1.94
1992	1.69	0.04
1993	1.00	1.03
1995	0.47	4.05
1996	0.14	15.81
1997	3.69	26.99
1998	0.04	0.51
1999	6.19	10.76
2000	0.35	24.97
2001	2.12	20.85
2002	0.22	25.99
2003	0.59	19.85
2004	2.57	31.26
2005	0.59	20.72
2006	0.76	14.78
2007	0.74	14.29
2008	1.66	9.97
2009	0.49	23.95
2010	0.73	20.19
2011	9.00	22.24
2012	0.55	16.07
2013	0.29	26.60
2014	0.73	13.39
2015	0.59	9.65

Empirical Results of Gravity Model and Measurement of TC and TD

Variables		Pre-PCFTA		Post-PCFTA
1V		1.2471***		0.8712 ***
logY _{it}	(0.000)		(0.000)	
la -V		1.2879 ***		1.1603***
logr _{jt}	(0.000)			(0.000)
Dist		-0.0067 ***		-0.0032 **
Dist _{ij}	(0.000)			(0.021)
logDOD		0.8546***		0.8141***
logror _{it}	(0.000)			(0.000)
logDOD		-0.7203 ***		-0.5997***
logPOP _{jt}	(0.000)			(0.000)
EVD		-0.0098 ***		-0.0090***
EXR _{ijt}	(0.000)		(0.000)	
CIM		0.3913***		0.3028***
SIM _{ijt}	(0.000)		(0.000)	
DE		0.6472***		0.4603 ***
Kr _{ijt}	(0.000)		(0.000)	
CL _{ij}	0.6309***			0.4613 ***
	(0.000)		(0.000)	
No. Obs.	500		500	

Table 11: Estimated Results of Gravity Model (Dependent Variable is Total Imports of Pakistan)

Note: * p < 0.1, ** p < 0.05, *** p < 0.01

Table 12: Estimated Results of Gravity Model (Dependent Variable: Commodity Level Imports of the Pakistan)									
SITC-0	SITC-1	SITC-2	SITC-3	SITC-4	SITC-5	SITC-6	SITC-7	SITC-8	SITC-9
0.649***	2.980***	1.029**	1.760**	0.387**	1.567***	1.291***	1.461***	2.700***	1.583***
(0.000)	(0.001)	(0.120)	(0.031)	(0.041)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
0.198***	3.4455***	0.266***	0.567***	0.942***	1.249***	1.587***	2.697***	2.825***	2.894***
(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
-0.030**	-0.012***	-	-0.001***	-	-0.002***	-0.003***	-0.006**	-0.004**	-0.014**
(0.040)	(0.000)	(0.000)	(0.000)	(0.000)	(0.011)	(0.001)	(0.032)	(0.022)	(0.031)
0.653***	0.414*	0.438***	0.055***	0.817***	0.279***	0.171***	0.251***	0.7723***	0.365***
(0.000)	(0.140)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
-0.314***	-0.443***	-0.225*	-0.8440***	-0.522***	-0.145*	-0.640***	-0.938***	-0.126***	-0.357***
(0.000)	(0.000)	(0.072)	(0.011)	(0.015)	(0.070)	(0.000)	(0.000)	(0.000)	(0.000)
-0.009***	-0.010***	-0.004***	- 0.014***	- 0.004***	- 0.004***	- 0.010***	-0.016***	-0.013***	-0.016***
(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
0.383***	0.014*	0 275***	0.733***	1.031***	0.798***	0.743***	0.010***	0.265*	0.168**
(0.000)	(0.090)	(0.000)	(0.000)	(0.000)	(0.140)	(0.000)	(0.000)	(0.090)	(0.040)
-0.023	0.550***	0.182	1.375**	0.338***	0.139***	0.492***	1.391***	0.780***	0.882***
(0.291)	(0.000)	(0.317)	(0.051)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
1.625***	0.848***	0.898***	2.147***	0.402*	0.443***	0.003*	0.618***	0.276*	1.031***
(0.000)	(0.000)	(0.00)	(0.00)	(0.07)	(0.00)	(0.09)	(0.00)	(0.06)	(0.00)
2382	400	2509	593	745	2716	2795	2789	2175	430
	Table 12: Es SITC-0 0.649*** (0.000) 0.198*** (0.000) -0.030** (0.040) 0.653*** (0.000) -0.314*** (0.000) -0.314*** (0.000) -0.009*** (0.000) 0.383*** (0.000) -0.023 (0.291) 1.625*** (0.000) 2382	Table 12: Estimated Res SITC-0 SITC-1 0.649*** 2.980*** (0.000) (0.001) 0.198*** 3.4455*** (0.000) (0.000) 0.030** -0.012*** (0.040) (0.000) 0.653*** 0.414* (0.000) (0.140) -0.314*** -0.443*** (0.000) (0.000) -0.009*** -0.010*** (0.000) (0.000) -0.383*** 0.014* (0.000) (0.000) -0.023 0.550*** (0.291) (0.000) 1.625*** 0.848*** (0.000) (0.000)	Table 12: Estimated Results of GravitSITC-0SITC-1SITC-2 0.649^{***} 2.980^{***} 1.029^{**} (0.000) (0.001) (0.120) 0.198^{***} 3.4455^{***} 0.266^{***} (0.000) (0.000) (0.000) 0.198^{***} 3.4455^{***} 0.266^{***} (0.000) (0.000) (0.000) 0.030^{**} -0.012^{***} 0.052^{***} (0.040) (0.000) (0.000) 0.653^{***} 0.414^{*} 0.438^{***} (0.000) (0.140) (0.000) 0.653^{***} -0.443^{***} -0.225^{**} (0.000) (0.000) (0.072) -0.010^{***} -0.004^{***} (0.000) (0.000) (0.000) 0.383^{***} 0.014^{*} (0.000) (0.090) (0.000) -0.023 0.550^{***} 0.182 (0.291) (0.000) (0.317) 1.625^{***} 0.848^{***} 0.898^{***} (0.000) (0.000) (0.00)	Table 12: Estimated Results of Gravity Model (Dep SITC-0SITC-0SITC-1SITC-2SITC-3 0.649^{***} 2.980^{***} 1.029^{**} 1.760^{**} (0.000) (0.001) (0.120) (0.031) 0.198^{***} 3.4455^{***} 0.266^{***} 0.567^{***} (0.000) (0.000) (0.000) (0.000) 0.030^{**} -0.012^{***} -0.001^{***} (0.040) (0.000) (0.000) (0.000) 0.653^{***} 0.414^{*} 0.438^{***} 0.055^{***} (0.000) (0.140) (0.000) (0.000) 0.653^{***} 0.414^{*} 0.438^{***} 0.055^{***} (0.000) (0.140) (0.000) (0.000) 0.314^{***} -0.443^{***} -0.225^{*} -0.8440^{***} (0.000) (0.000) (0.000) (0.000) 0.383^{***} 0.014^{*} -0.004^{***} -0.014^{***} (0.000) (0.000) (0.000) (0.000) 0.383^{***} 0.014^{*} 0.275^{***} (0.000) 0.023 0.550^{***} 0.182 1.375^{**} (0.291) (0.000) (0.317) (0.051) 1.625^{***} 0.848^{***} 0.898^{***} 2.147^{***} (0.000) (0.000) (0.00) (0.00)	Table 12: Estimated Results of Gravity Model (Dependent Varial SITC-0 SITC-1 SITC-2 SITC-3 SITC-4 0.649*** 2.980*** 1.029** 1.760** 0.387** (0.000) (0.001) (0.120) (0.031) (0.041) 0.198*** 3.4455*** 0.266*** 0.567*** 0.942*** (0.000) (0.000) (0.000) (0.000) (0.000) .0030** -0.012*** -0.001*** (0.000) 0.007*** (0.040) (0.000) (0.000) (0.000) (0.000) 0.007*** .0.040) (0.000) (0.000) (0.000) (0.000) (0.000) 0.653*** 0.414* 0.438*** 0.055*** 0.817*** (0.000) (0.140) (0.000) (0.000) (0.000) -0.014*** -0.443*** -0.225* -0.8440*** -0.522*** (0.000) (0.000) (0.000) (0.000) (0.000) -0.009*** -0.014*** -0.004*** -0.004*** (0.000) (0.000) (0.000) (0.000) (0.000	Table 12: Estimated Results of Gravity Model (Dependent Variable: Common SiTC-0 SITC-1 SITC-2 SITC-3 SITC-4 SITC-5 0.649*** 2.980*** 1.029** 1.760** 0.387** 1.567*** (0.000) (0.001) (0.120) (0.031) (0.041) (0.000) 0.198*** 3.4455*** 0.266*** 0.567*** 0.942*** 1.249*** (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) -0.030** -0.012*** -0.001*** 0.007*** 0.002*** (0.001) (0.040) (0.000) (0.000) (0.000) (0.001) (0.011) 0.653*** 0.414* 0.438*** 0.055*** 0.817*** 0.279*** (0.000) (0.140) (0.000) (0.000) (0.000) (0.000) (0.000) -0.314*** -0.443*** -0.225* -0.8440*** -0.004*** -0.004*** (0.000) (0.000) (0.000) (0.000) (0.000)	Table 12: Estimated Results of Gravity Model (Dependent Variable: Commotive Level In SITC-0 SITC-1 SITC-2 SITC-3 SITC-4 SITC-5 SITC-6 0.649*** 2.980*** 1.029** 1.760** 0.387** 1.567*** 1.291*** (0.000) (0.011) (0.120) (0.031) (0.041) (0.000) (0.000) 0.198*** 3.4455*** 0.266*** 0.567*** 0.942*** 1.249**** 1.587*** (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) -0.030** -0.012*** -0.001*** -0.001*** -0.002*** -0.003*** (0.040) (0.000) (0.000) (0.000) (0.001) (0.011) (0.011) 0.653*** 0.414* 0.438*** 0.055*** 0.817*** 0.279*** 0.171*** (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) 0.000 -0.014*** -0.443*** -0.225* -0.8440**	Table 12: Estimated Results of Gravity Model (Dependent Variable: Commodity Level Imports of the SITC-0 SITC-0 SITC-1 SITC-2 SITC-3 SITC-4 SITC-5 SITC-6 SITC-7 0.649*** 2.980*** 1.029** 1.760** 0.387** 1.567*** 1.291*** 1.461*** (0.000) (0.001) (0.120) (0.031) (0.041) (0.000) (0.000) (0.000) 0.198*** 3.4455*** 0.266*** 0.567*** 0.942*** 1.249*** 1.587*** 2.697*** (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.001) (0.001) (0.002) (0.001) (0.000) (0.001) (0.001)	Table 12: Estimated Results of Gravity Model (Dependent Variable): Commonity Level Imports of the Pakistan) SITC-0 SITC-1 SITC-2 SITC-3 SITC-3 SITC-4 SITC-5 SITC-6 SITC-7 SITC-7 0.649*** 2.980*** 1.029** 1.760** 0.387** 1.567*** 1.291*** 1.461*** 2.700*** (0.000) (0.001) (0.120) (0.031) (0.041) (0.000) (0.001) (0.001) (0.002) (0.001) (0.011) (0.011) (0.001) (0.022) (0.021) 0.653*** 0.414* 0.438*** 0.055*** 0.817*** 0.279*** 0.171*** 0.251*** 0.7723*** (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000)

Note: *P<0.1, **P<0.05, ***P<0.01

Table 13: Trade Creation	and Trade Diversion Effects of	f PCFTA in Pakistan for Total and	d Commodity Level Imports
Imports	ТС	TD	Net
Total	382.45	1102.83	-720.38
SITC-0	293.53	709.38	-415.85
SITC-1	395.75	1148.67	-752.92
SITC-2	129.28	357.97	-228.69
SITC-3	-12.97	83.92	-96.89
SITC-4	251.98	941.42	-689.44
SITC-5	428.59	1286.95	-858.36
SITC-6	494.64	1406.03	-911.39
SITC-7	597.52	1820.41	-1222.89
SITC-8	821.53	2327.76	-1506.23
SITC-9	317.45	-953.22	326.98

Conclusion

- The results of RCA index reveal that China owns an advantage in producing of capital intensive goods, whereas, Pakistan has RCA in the production of primary and semi manufactured goods. Pakistan has an increasing trend of comparative advantage in Beverages and Tobacco, Crude Materials, Inedible except Fuel.
- China exhibits very strong comparative advantage over the whole period under investigation relative to Pakistan in the exports of Food and Live Animals, Chemicals and Related Products, Manufactured Goods, Machinery and Transport Equipment, Miscellaneous Manufactured Article, Commodities and Transactions.
- Our findings also indicate that overall PCFTA leads to trade creation.
- PCFTA formation enhances trade with member countries as well as with non-member countries in general
- However, in case of different commodity groups our finding shows that except SITC-3 in all commodity groups PCFTA leads to trade creation among the member countries along with increasing the trade with non-member countries.
- Our finding also point out that PCFTA diverts trade from non-member to member countries only in case of SITC-9 commodity group. So, in nutshell we can say that PCFTA is trade creating free trade area.

THANK YOU for your Patience