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# Impact of China-Pakistan Economic Corridor (CPEC) on Pakistan's Trade: Empirical Evidence from Gravity Model

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**ABSTRACT**

**Purpose:** The **China–Pakistan Economic Corridor** (CPEC) is an enormous project for both economies. There are much potential remunerations for concerning frugalities in trade and industries of both countries. The study was specifically designed to examine the influence of CPEC on fruits export of Pakistan. The bilateral or regional trade was examined through Gravity approach. Data was taken from 2013 to 2015. Since distance plays a vital role in trade, the outcomes of gravity model are estimated with ordinary least square method. Pakistan China Economic Corridor is a mega project for both economies. It will make Pakistan and China, the major economic players in the region and further enhance economic conditions of both countries. Some of the basic determinations of Pak-China economic corridor are to boost business opportunities, efficient transport routes and expanding regional trade. The export target of Pakistan was $ US 20 billion in 2013-2015. As of April 2015, Pakistan exports stand at $ US 6,178 billion. Pakistan's exports to Asia was amounted to $ US 1,649 billion which was 42 percent of its overall exports and the share of fruit and nuts markets in Pakistan's export was $ US 1,017 billion. The paper analyses the CPEC's impact on exports especially exports from fruit market of Pakistan using Gravity Approach for the evaluation of this bilateral trade. The results show that CPEC reduces the distance and it will be more beneficial for perishable goods trade like fruits.



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## 1. Introduction

Analysis of regional or bilateral trade agreements is an interesting research topic as it may lead concerning countries towards progress in different sectors of their economies. Many countries are experiencing trade liberalization and had made several trade agreements. A large number of countries have preferential trade agreements. The purpose of these agreements is to lead direct and indirect trade

ability (OECD, 2006). Pakistan has export relations with entire world particularly with Asia. The present research aims at analyzing the CPEC's impact on Pakistan's potential fruit trade between South Asian region and Middle East countries through gravity approach. We have analyzed the cross section data of three years from 2013 to 2015. CPEC is an important economic agreement between Pakistan and China. It will function as a primary gateway for trade between China, Africa and the Middle East. It will associate China to the Central Asia, South Asian region and Middle East and its major deep-sea port. China and Pakistan has developed a strong bilateral trade over the years. China is arising partner of Pakistan in both export and import terms. Bilateral trade between the two countries were established in January, 1963 and long term Free Trade Agreement (FTA) was singed on November 24, 2006 (IPCS, 2006). Hypothetical formulation of the study is whether CPEC will improve the Pakistan's competitive position in china and south Asian countries for its fruit market or not.

The purpose of Pak china Free trade agreement was to enhance trade liberalization and create Pakistan's sensitive product (fruits) market and increase its export in China and South Asian countries. For this bilateral trade analysis gravity approach is the precise tool for estimation. A bulk of research paper has used gravity approach for bilateral trade, gravity equation or method can simply determine the trade patterns and the effect of sensitive product export (Otsuki et al 2000).

The idea behind to use gravity model was that it can widely use data of past decades, regional trade pattern separately and also have ability to incorporate the characteristics of different countries' units (Sandberg, 2004). In bilateral trades distance is an important indicator to stimulate trade between countries. Theoretically, it is also an indication that small distance can lead increasing flow of trade (Keith, Head, 2008).

Pakistan and china started its friendly relationship after 1950s but the beginning of smooth relationship among these countries was started after 1960s, Pak-India war and China-India war. At first, Pakistan was reluctant to accept China due to differences between communist and capitalism blocs (Chaudhri, 1987). Relations further enhanced after the two countries signed a trade agreement in 1953 (Dixit, 1987). As the further time passed, china realized the importance of its neighbor country's demographic and economic value. Hence, trade liberalization agreement in the form of Gawader port was signed in 2006 at a cost of $ US 46 billion. There is one Belt, one road initiative. The importance of CPEC to China is reflected by its inclusion as part of China's 13th five-year development plan. This project will increase country's annual economic growth from 2 to 2.5 percent. All the planned projects will eventually link the Gwader, a city of Pakistan situated in southwestern area to China's northwestern autonomous region of Xinjiang via a vast network of highways and railways (United Nations Economic and Social Commission for Asia and the Pacific, 2006).

There are there major trade routes, central, southern and northern which connect china to other countries. Pakistan is the vital partner of China because it links china with central, South Asian region, and Middle East (Pakistan vision vol, 16). The economic part of CPEC is to integrate the regional through, bilateral trade, free trade agreements, and increase trade flow between referring countries, Infrastructure development, business opportunities, efficient transport routes, expanding regional trade and raising per capita income. In short CPEC is a game changer or the name of economic stability for concerning units.

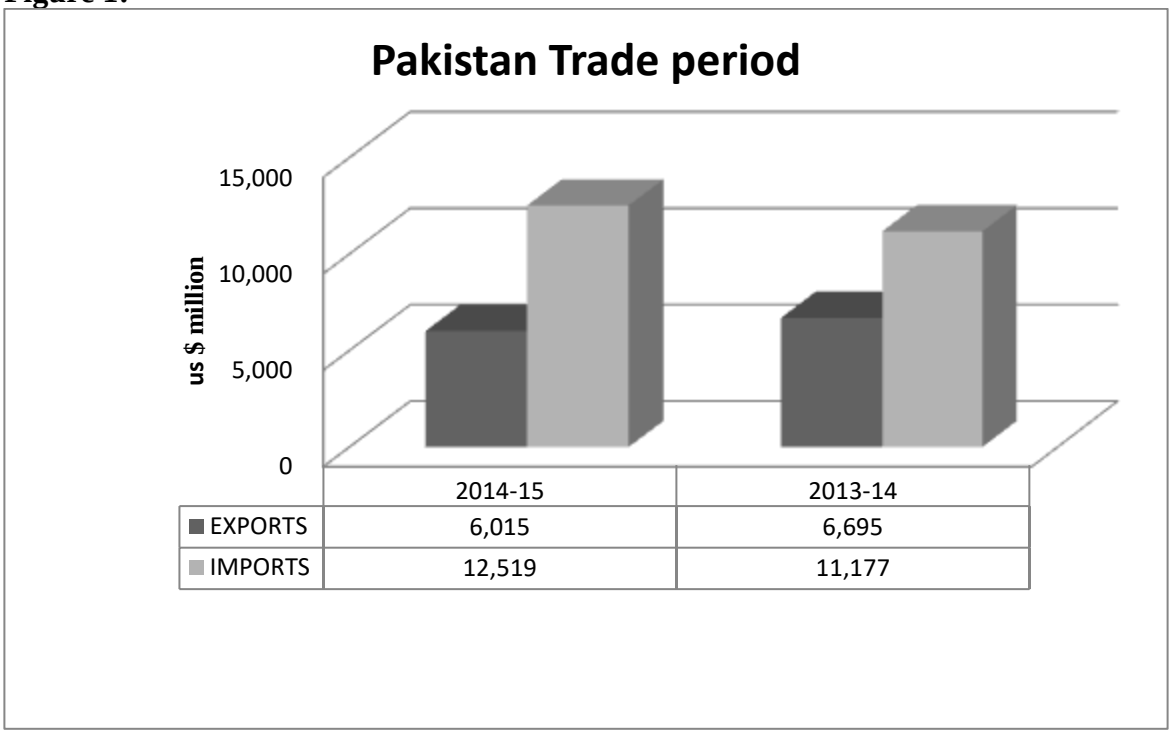
As far as bilateral trade in agriculture sector have slow pace. Pakistan is agrarian country and horticulture is an important sector of agriculture. The sustainable development program of Pakistan foresees to pursue the progressive liberalization of trade in agriculture. However, selected time will be chosen for selected aim systemically and ways will be adopted gradually to achieve agrarian goals (Government of Pakistan, 2006). Consequently, the CPEC route will have preferred challenges on agrarian trade.

## 2. Trade between Pakistan and CPEC concerning countries

CPEC basic agenda is to promote trade liberalization through these routes. China Pakistan economic corridor tends to be product specialization in bilateral trade. In fact Pakistan is the major partner of this corridor so it is a region which has direct impact. In case of fruit trade or especially on export side, the regions like Far East, Middle East and Central Asian States of Former Soviet Union are the major markets of Pakistani fruits. Even though a great scope is always there for export to more developed countries like Japan, Canada and Europe. Fruits are more risky to produce than other crops. The variability in yield of fruits is 2-3 times more than that in rice yield (Ranaweera and De Silva 2000). However, in case of perishable goods such as fruits and vegetables, regional trade appears to be quite more sensitive. Pakistan produces high quality oranges and mangoes exports to USA, UK and China. Pakistan is the 4th largest mangos and 11$^{th}$ largest orange producer i.e. Chounsa, Malta and Kenoes are product of Pakistan. Pakistan is 2nd largest exporter of rice to china and also gains sizeable share in the halal food market in china. Pakistan china imports of agriculture product increased worth $430 million and Pakistan exports of food such as fruits along with vegetable increased worth $320 million in 2013-14 (Govt. of Pakistan 2014).

Pakistan's exports are estimated at about 69.2 billion rupees, which has roughly about 8 percent of agricultural value added in the year. Pakistan earned 5.4 billion rupees from fruit exports during 2014-2015, representing nearly 11 percent of total amount earned from the export of all raw agricultural commodities.

**Figure 1:**

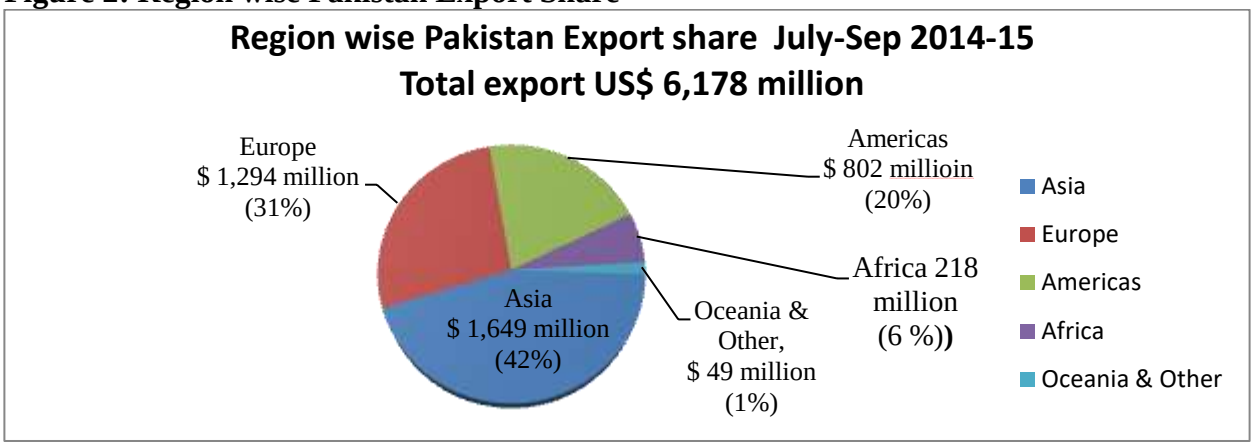



**Source- state Bank of Pakistan.**

During the year 2010-15, Pakistan exported 262 thousand metric tons of fruit valued at Rs. 5.394 billion. The citrus, mangoes, dates, and grapes accounted for 30 percent, 23 percent, 22 percent and 01 percent respectively in terms of foreign exchange earnings (Pakistan Economic Survey). In figure 1 describe the Pakistan's exports and imports in period 2013 -2015, which shows a slightly increasing trend in export. On the other hand import ratio has sharp increase as compared to export. It means that there is absence of attention in export sector.

Pakistan export is based on different subdivision of economy. The food and agro sector has the second dominating rate in total export of Pakistan as shown in table 1.

**Figure 2: Region wise Pakistan Export Share**




Although yearly average change has low-slung respectively. But increasing trend in these sectors indicates that there are inordinate potential to enhance export.

**Table 1: division or sector wise export rate of pakistan during 2013-2015**

| Division-wise Export Analysis (JULY-AUGUST 2014-15 and 2013-14: Value in US $ million) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| COMMODITY SECTORS | | SEPTEMBER | | | JULY-SEPTEMBER | | | |
| | | 2014 | 2013 | % Change | 2014-15 | 2013-14 | % Change | |
| GRAND TOTAL | | 2,181 | 2,617 | -16.67 | 6,015 | 6,695 | -10.15 | |
| A | TEXTILE & GARMENTS CATEGORY | 1,255 | 1270 | -1.16 | 3,417 | 3,559 | -3.99 | |
| B | AGRO & FOOD | 335 | 340 | -1.23 | 904 | 1,017 | -11.16 | |
| C | MINERAL & METAL | 130 | 407 | -67.95 | 330 | 591 | -44.18 | |
| D | ENGINEERING GOODS & OTHER MANFURES | 211 | 347 | -39.21 | 650 | 822 | -20.84 | |
| E | OTHER SECTORS | 249 | 254 | -2.12 | 714 | 706 | 1.06 | |

**Source:** Direction of trade statistics and economic survey of Pakistan, 2015.

Pakistan's export expands to all over the world but Asia is the major export region for Pakistan. As shown

in figure 2, Pakistan bilateral trade in export side linked with Asia, Europe, America and Africa is 42 percent, 31 percent, 20 percent and 6 percent respectively. The figure 2 shows that Asia is the major region for Pakistan's exports.

**Table 3: Pakistan exports share in ASIAN countries**.

| SBP EXPORTS RECEIPTS BY TOP ASIAN COUNTRIES (Thousand $) | | | | |
|---|---|---|---|---|
| Rank | Asian Countries | JULY-SEPTEMBER | | |
| | | 2014-15 | 2013-14 | % Change |
| | **Total** | 2,588,204 | 2,767,147 | -6.5 |
| 1 | China | 543,596 | 701,434 | -22.5 |
| 2 | Afghanistan | 397,345 | 249,605 | 59.2 |
| 3 | U. A. E | 338,526 | 416,628 | -18.7 |
| 4 | Bangladesh | 175,731 | 185,991 | -5.5 |
| 5 | Singapore | 152,046 | 89,300 | 70.3 |
| 6 | Saudi Arabia | 115,589 | 117,109 | -1.3 |
| 7 | Hong Kong | 113,764 | 126,478 | -10.1 |
| 8 | South Korea | 104,434 | 112,103 | -6.8 |
| 9 | India | 100,887 | 89,068 | 13.3 |
| 10 | Turkey | 87,720 | 99,153 | -11.5 |

**Source:** State Bank of Pakistan 2015.

According to the State Bank of Pakistan (2015), Asia is major export shareholder of Pakistan, central and southern countries also have leading exports value. Within Pakistan's agriculture, the horticulture is an important sector, production of fruits is 6.2 metric tons, production of vegetables 5.0 metric tons, production of citrus is 2.0 metric tons, mangoes' production is 1.0 metric tons, dates' produce is 0.63 metric tons and apples 0.4 metric tons. Total values of exports of fruits and vegetables is $ US 120435000 and quantity is 471693 tons and 70 percent of Pakistan's fruits export is toward Middle East and central Asia (Ministry of Food, 2015). History shows that Pakistan has a number of international trade agreements in order to boost up worldwide trade. Table 3 shows the impact of free trade agreements on Pakistan trade. We find that after the starting of free trade agreements with concerning countries Pakistan's export as well as trade balance has a snowballing reaction.

**Table 3: Overview of Pakistan's Free Trade Agreements**

| Country | Year Implemented | Pakistan's Exports in year of implementation | Pakistan's Trade Balance in year of implementation | Pakistan's Exports in 2014 | Pakistan's Trade Balance in 2014 |
|---|---|---|---|---|---|
| Sri Lanka | 2005 | $0.154**B** | $0.094**B** | $0.301**B** | $0.217**B** |
| China | 2006 | $0.507**B** | $(2.408)**B** | $2.253**B** | $(7.336)**B** |
| Malaysia | 2008 | $0.138**B** | $(1.556)**B** | $0.234**B** | $(1.046)**B** |
| Indonesia | 2013 | $0.144**B** | $(1.064)**B** | $0.138**B** | $(1.969)**B** |
| Mauritius | 2007 | $0.036**B** | $0.035**B** | $0.028**B** | $0.006**B** |

Source: World Bank of Pakistan.

## 3. Data and Methodology

Basically gravity model of international trade, forecasts the bilateral trade. The bilateral trade is based on economic size and distance between two selected areas or units. The economic size is normally captured with GDP measures. In international trade the derivation of gravity model analysis is normally the attribute of Tinbergen (1962) and Pöyhönen (1963). On the other hand, the gravity model of migration in urban geography is specifically used to predict the degree of interaction between two places (Rodrigue et al., 2009). Such model has also been applied to other bilateral data as migration, traffic, remittances and foreign direct investment. It can also be used to test the effectiveness of trade agreements, organizations and to evaluate the impact of treaties and alliances on trade (Head and Mayer. 2014). The basic impression derived from this model is bilateral trade from one country to another. In this model the dependent variable is based on factors that capture the propensity of a country to import , potential of a country's export (good and services) and also any other forces that either appeal or hinder bilateral trade. The following equation arrangement is going to express the gravity equation of international trade as;

$$\ln Xijt = \beta 0 + \beta 1 \ln (Dij) + \beta 2 \ln(Yit) + \beta 3 \ln(Yjt) + \beta 4 \ln(Yit/Nit) + \beta 5 \ln(Yjt/Njt) + \beta 6 \ln(Qit/Nit) + \beta 7 \ln(Qjt/Njt) + \gamma W + uijt \quad \text{(model developed by authors)}$$

Where,
**Xij:** is the bilateral exports from country i to country j in period t.
**Yit:** is the GDP of the exporter (country i) in time t.
**Yit/Nit:** is the GDP per capita of the exporter in time t
**Yjt:** is the GDP of the importer (country j) in time t.
**Yjt/Njt:** is the GDP per capita of the importer in time t
**Qit/Nit:** is the production per capita of the exporter in time t
**Qjt/Njt:** is the production per capita of the importer in time t
**Dij:** is the bilateral distance between the two capital´s countries
**W:** is a vector of variables capturing any resistance to trade or binary variables to control the participation in any trade agreement.
**uij:** normally distributed error component capturing any random influence

According to the model formulation, the gravity model shows relationship between two countries and movements in trade depend on several economic indicators and geographical indicators. In practical or applied form of work, the model can be extended by including some variables for justification for language relationships, tariffs, contiguity, access to sea, colonial history, and exchange rate regimes (Anderson and van Wincoop, 2003).

For our model specification, some essential variables that encounter the required study units are included. So we are going to include production per capita as a core variable. Our concern of study focuses on fruit, vegetable and citric market (horticulture trade). It is evident that traditional gravity variables (as discus above) shows statistically significant results on agricultural or horticultural trade. It is also evident that

gravity model has clear influencing impact because of associated trade agreements (Baier and Bergstrand, 2009).

**4. Theoretical Frame Work**

Including variables, GDP for both exporting and importing country, GDP per capita and distance have some theoretical justifications. According to that, theoretically the effect of the distance between countries (β1) must be negative and statistically significant. The distance between the countries has great impact on trade because the countries that are closely situated will focus on more trade to each other.

The coefficient of countries GDP (β2 and β3) on agriculture trade will have the statistically significant impact. Mostly poor countries have the specialization on agriculture export that leads to negative sign of β4. It is also in advance that rich countries do more exports rather than poor countries because of infrastructural facilities, technical dimension and development. All this shows that the value of coefficient estimate for GDP per capita of the exporters (β4) may have negatively or positively sign depending on whether the country exports less when it is relatively rich (absorption effect) or whether a richer country may exports more than a poorer country by taking advantage of developed tools (technical, infrastructure etc.). Similar reasons will approach the ambiguous signs for the coefficients of GDP per capita for the importers (β5). Above justification can be particularly imposed on agricultural trade or fruits and vegetable trade. So in the simple technique we are introducing the production per capita of fruits and vegetables for the exporting and the importing countries (β6 and β7). Thus expected values of per capita production show that there will be positive sign for fruit and vegetable exporter country and negative sign for importer country (Martinez-Zarzoso and Nowak, 2003).

Some notes of caution must be needed when specific sectors are selected such as fruit and vegetable market, representation of gravity model and bilateral agreements. It is the beauty of gravity model that it can capture the effects of trade barriers like tariff and non-tariff. The coefficient of the binary variables and size of the trade can be reviewed to the implementation of (FTA) free trade agreements It also provide statistical significance test for trade preferences on bilateral fruit and vegetable (horticulture) trade between the two countries (Nilsson,2002).

A bulk of research material illustrates the above theoretically specification of coefficients estimate that can be stimulations for export and import preferences. In our study we are going to elaborate the effect and influence through the variable of associated agreements, plans and organization on fruit and vegetable (citric market) trade.

Above mention framework was constructed to elaborate bilateral trade flows between the two countries (Pakistan and china because of CPEC). The trade preference flows between these countries are justified with variables that explain the potential demand of importing country (AISA, Middle East) and potential supply from exporting country (Pakistan).

The following gravity approach model has ability to evaluate the separate trade effect on separate products (Fruit) and different level of production with associated agreements (free trade agreement). Our selected model referred to South and Far East Asia countries (China, UAE, Saudi Arabia, Singapore) as the importer country and Pakistan as fruit exporter country.

The bilateral trade data is obtained from State Bank of Pakistan in $ US million. Here share of fruit export trade is separately explained as a special concern.

Distance between these exporter and importer countries is in kilometers (It is evident that distance will be directly impacted and minimized because of CPEC).Taking into account the consumption and production across the exporting and importing countries will be spared. Production variables are obtained from

Agricultural Statistics of Pakistan 2013-2015. GDP and GDP per capita data is computed from World Bank data table. Few dummy variables are included in our gravity model that will represent bilateral trade more precisely. These dummies are follows,

**Table 4: OLS estimated coefficient for fresh fruits**

| Variables | 2013 | 2014 | 2015 |
|---|---|---|---|
| Distance | -1.55*** | -1.83 *** | -1.82*** |
| GDP importing countries | 1.06** | 0.97*** | 1.04*** |
| GDP exporting countries | 1.39*** | 1.33** | 1.15*** |
| IB/pop import | -0.46 | -1.00* | -0.94* |
| PIB/pop export | -1.20* | -1.09* | -1.00 |
| Production per capita export | 1.31*** | 1.71** | 1.41** |
| Production per capita import | -0.19 | -0.47* | -0.35* |
| CHIEXP | -5.22** | -5.99** | -3.22** |
| UAEEXP | -3.22** | -2.79*** | -2.63** |
| SINEXP | -4.82*** | 4.67*** | 4.32*** |
| PAKFLW | -1.45*** | -0.64** | -0.72** |
| CPEC | 2.54** | 2.86*** | 2.73*** |
| $R^2$ | 0.67 | 0.71 | 0.72 |

**Note: ***, **, * denote 1%, 5% and 10% significance level**

Finally, our gravity model has a number of dummy variables that represents:
CHIEXP: is equal to 1 if china and Afghanistan is import country, and 0 otherwise.
UAEEXP: is equal to 1 if UAE and Saudi Arabia is importer country and 0 otherwise.
SINEXP: is equal to 1 if Singapore is import country, and 0 otherwise.
PAKFLW: is equal to 1 for flows originating at this country and 0 otherwise.
CPEC: is equal to 1 if importer countries are associated with "CPEC" and 0 otherwise.

## 4. Results and Discussion

The estimated results of gravity model are presented in table 4 (fruit export, OLS result). Coefficient values in the results are based on the period from 2013-2015. Dummy variables are based on expected control group of importer countries, exporter trade inflow and CPEC agreement. $R^2$ value of estimated model is good that tends to be good fit approach of explanatory variables.

Explanation of estimated parameters signs and values of table 4 is given below. As mentioned above in The control group is defined by CPEC related ASIA countries, so the gravity model should capture the trade disadvantages of not being part of CPEC trade flow.

Theoretical justification, elasticity of GDP for both exporter and importer countries are positive but parameter value of exporter is slightly greater then importer, it means trade flow is positively associated

with exporting infrastructural variables. Coefficients of GDP per capita are showing the non-significant negative result. In theoretical point of view, Pakistan is a poor agrarian country and there is lack of interest in agricultural advancement in the sense of specialization and importer countries tends to show modernity in diet patterns.

Production per capita has negative parameter for importers and positive for exporter. Its leads the positive production flow for that product. The negative sign of importer shows that there is less attention of domestic production as compared to the other variables that affect the demand of fruits. Parameter of Distance has negative sign but significant value. Negative sign make a sense that unpreserved goods like fruits are related with transportation cost. As distance will be reduced through technological changes and trade agreements (CPEC) it will have more significant value in trade flow. In our model including dummies are explaining importer countries group (control group), exporter trade flow (Pakistan) and countries associated with China Pak economic corridor. A significant result is computed in case of ASIA importing countries (control group) but parameter's different expressions are for trade patterns, cultural values and taste habits.

The coefficient of the dummy variable of CPEC associated countries shows the positive sign. It means that any country that is connected with this corridor will lead to great potential of trade flow. It can also be justified with perishable goods trade because of lesser distance between exporter and importer. CPEC has contributed to increase the horticulture export to the ASIA as well as other related or linked countries. Results suggest that CPEC will integrate the Asian countries with all over the world and become the gate way for regional trade flow.

## 5. Conclusions and Policy Suggestions

This study is based on horticulture trade (particularly fruits) between Pakistan and Asian countries, with focus on possible influence of CPEC on bilateral trade. We find that fruits are perishable goods and have sensitive approach toward integration of Pakistan and Asia countries. Pakistan's export of fruits have great significant. On the other hand, gravity approach indicates that in the presence of infrastructural instrument like CPEC the regional trade flow can be enhanced. The empirical analysis carried out through the use of a gravity approach suggests that horticultural trade flows are well explained by the distance, the size of the economies, and the production per capita of the involved countries. These results are quite as expected from economic theory. It is also evident that distance plays a vital role to stimulate trade. Results suggest that export with nearer regions has significant impact on GDP production and per capita rate. Results shows that CPEC will reduce the distance and it will be more beneficial for perishable goods trade like fruits. With the help of gravity approach present study concluded that CPEC has great effect on Pakistan's fruit exports.

## References

Abid, M., & Ashfaq, A. (2015). CPEC: Challenges and opportunities for Pakistan. *Journal of Pakistan Vision*, *16*(2), 142-169.

Anderson, J. E., & Van Wincoop, E. (2003). Gravity with gravitas: a solution to the border puzzle. *The American economic review*, *93*(1), 170-192.

Baier, S. L., & Bergstrand, J. H. (2007). Do free trade agreements actually increase members' international trade?. *Journal of international Economics*, *71*(1), 72-95.

Chaudhri, M. A. (1986). Strategic and Military Dimensions in Pakistan-China Relations. *Pakistan Horizon*, *39*(4), 15-28.

Dixit, A. (1987). Sino-Paki Relations and Their Implications for India. *Strategic Analysis*, *11*(9), 1067-1080.

Garcia-Alvarez-Coque, J. M., & Martí-Selva, M. L. (2006). A gravity approach to assess the effects of Association Agreements on Euromediterranean trade of fruits and vegetables.

Indicators, O. E. C. D. (2007). Education at a Glance 2007. *Table B1. 1b, www. oecd.*

*org/dataoecd/36/4/40701218. pdf*, 187.

Kayani, F., Ahmed, M., Shah, T. A., & Kayani, U. N. (2013). China-Pakistan Economic Relations: Lessons for Pakistan.

Martínez-Zarzoso, I., & Nowak-Lehmann, F. (2003). Augmented gravity model: An empirical application to Mercosur-European Union trade flows. *Journal of applied economics*, *6*(2), 291-316.

Nilsson, L., & Matsson, N. (2009). Truths and myths about the openness of EU trade policy and the use of EU trade preferences. *Brussels, European Commission Directorate General for Trade Working Paper–2009*.

Tinbergen, J. (1962). Shaping the World Economy The Twentieth Century Fund. *New York*.

Zhao, W., Van Antwerp, S., Lim, J., & Chow, N. United Nations Economic and Social Commission for Asia and the Pacific.