WILL CHINESE INVESTMENT BOOST PAKISTAN'S ECONOMIC GROWTH?

A Case Study of China Pakistan Economic Corridor (CPEC)

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Abstract

Currently, China Pakistan Economic Corridor (CPEC) is playing a significant role to boost growth and development in Pakistan. This research study aims to examine and assess the macroeconomic impacts of CPEC. Both nations have shared years long of friendship but this agreement has become the game changer of the era. While Pakistan provides access to China to its warm waters, the latter is investing heavily in infrastructure and energy sector development. Numerous job opportunities have been generated to eliminate poverty. Moreover, export growth is likely to rise under various sub-projects to overcome the country's trade deficit. The study observes the changing trends of foreign direct investment (FDI), GDP growth, Job growth and trade openness of Pakistan before and after the CPEC agreement was signed. Lastly, an external debt sustainability analysis has been done to assess the implications of CPEC loan based projects. The study concludes by assessing both positive and negative aspects of agreement and ends with policy recommendations to overcome any gaps at an early stage of the project.

Key words: CPEC, BRI, economic growth, debt sustainability

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List of Abbreviations

ASEAN – Association of South East Asian Nations

BRI – Belt and Road Initiative

CPEC – China Pakistan Economic Corridor

CPFTA – China Pakistan Free Trade Agreement

FDI – Foreign Direct Investment

FY – Fiscal Year

GDP – Gross Domestic Product

ILO – International Labor Organization

IMF - International Monetary Fund

MSR – Maritime Silk Road

NAVTTC – National Vocational and Technical Training Commission

SEZ – Special Economic Zones

SREB – Silk Road Economic Belt

UNCTAD – United Nations Conference on Trade and Development

WIR – World Investment Report

Introduction

China Pakistan Economic Corridor (CPEC) is a strategic gambit and a cooperative arrangement between two neighboring Asian Countries i.e. China and Pakistan. The deal ranges from energy, infrastructural development and trade promotion to agricultural advancement and tourism. It was signed in April, 2015 and since then it has been observed that the economy of Pakistan is experiencing high levels of GDP growth and declining unemployment. The impact of this initiative is experienced from the North to the South of the country. CPEC links Kashgar in China (north of Pakistan) to Gawadar in the South of Pakistan.

Chinese investment in Pakistan and its accelerated completion potential is believed to change the fate of Pakistan. An information website for CPEC (2018) has reported that China alone has 89% of share in Pakistan's FDI inflow. The project timelines are divided into three main categories; the *early harvest* to be completed by 2020, the *mid - term* projects and *long term* projects to be completed by 2025 and 2030, respectively.

The main aim of this research study is to highlight the economic impact of CPEC on the Economy of Pakistan by taking into consideration the following big four macroeconomic indicators: Foreign Direct Investment (FDI), Employment Outlook, Export Growth and the overall economic growth of the country i.e. GDP growth rate.

This paper will further observe the changes in Pakistan's macroeconomic indicators before and after the signing of the CPEC agreement. The economic impact of the initiative is observed through the changing trends of the aforementioned variables.

The question arises: Is CPEC beneficial for the economic growth of Pakistan or is it a debt trap for the nation?

The following Chapter introduces the Pak-China relations and lays foundation for the whole research study by introducing the CPEC initiative in terms of key cooperation areas, timelines, funding sources and the projects goals in accordance with the Pakistan Vision 2025.

Chapter 2 takes into consideration the work of various other authors who have also explored economic impacts of CPEC on Pakistan's Economy and further builds on the purpose of research.

Data collection sources and methodology to prove arguments about the benefits of CPEC are discussed in Chapter 3. It also discusses the limitations of the research scope and study. Chapter 4 provides an overview of past and current trends of FDI in Pakistan.

Chapter 5 elaborates and provides an in-depth analysis CPEC on the aforementioned Pakistan's macroeconomic indicators and confers with statistical evidence from the last 17 years. A comparison of statistical data is made before and after 2015. Sub-sections of this chapter will study Chinese investment and observe its impact on economic growth, job growth and export growth. For the former two variables impact can be clearly seen through statistical data however, for the latter, projections are provided by government and international organizations. Projects are still under construction to support the export growth target. Data is mostly taken from CPEC official Website, Economic Surveys of Ministry of Finance, State Bank of Pakistan, World Bank and Country Report/Projections as published by International Monetary Fund (IMF). A subsection of this chapter also examines the other side of the coin i.e. the growing debt burden for the country.

Chapter 6 discusses the policy recommendations in order to maximize project benefits and minimize risks and threats while Chapter 7 concludes and reiterates the complete research findings.

The study's contribution to the existing literature is that it combines three main macroeconomic indicators (Job growth, export growth and GDP growth) being directly affected by a surge in Chinese Investment. Additionally, the paper also analyses the growing debt burden for the country as well.

1 Background Information

1.1 Brief Historical Overview of Sino-Pak Relations

Soon after the People's Republic of China came into being in October, 1949, Pakistan recognized it as an independent state in January, 1950. The two nations quickly realized that there is no conflict of interest between them and the Sino – Pak relations were established on a very "cordial footing". It did not take long enough for Pakistan to appoint an ambassador to China. Following this appointment, soon trade relations were established and a trade agreement was signed in 1953 (Mahdi, 1986).

However, China and Pakistan experienced limited relations in the "formative years 1950 – 1962" because of the countries' support for different security alliances. Pakistan supported the United States of America while China was an ally of the Soviet Union (Ali, 2017).

China's interest in the industrial development of Pakistan dates back to 1966 when it supplied East Pakistan (now Bangladesh) with a huge amount of electrical equipment. This was followed by machinery and expertise provision to set up a heavy machinery complex in the city of Taxila in the North West and approximately 32 kilometers away from the capital, Islamabad. Bi-lateral relations strengthened even further when the first loan of Rupees 200 million was given to Pakistan on very favorable terms. In 1971, Economic and Technical Cooperation Agreement was signed by both nations.

Additionally, supply of military and nuclear technology from China to Pakistan also dates back to history when the former supported the latter in post Indo-Pak war of 1965. Moreover, China also helped Pakistan to set up its own domestic military industry.

Ali (2017), in his book states that Sino Pak relationship is that of "durability", despite the political and cultural differences both countries have. Economic and political ties have only strengthened since the last 70 years between two countries.

1.2 Current Pak – China Bi - Lateral Relations

The all-weather Pak – China friendship has survived through decades and has been popularly quoted as "higher than the highest mountain, deeper than the deepest sea". However, this slogan has been transformed by a renowned political and economic analyst Andani as, "higher than the highest debt, deeper than the deepest trap".

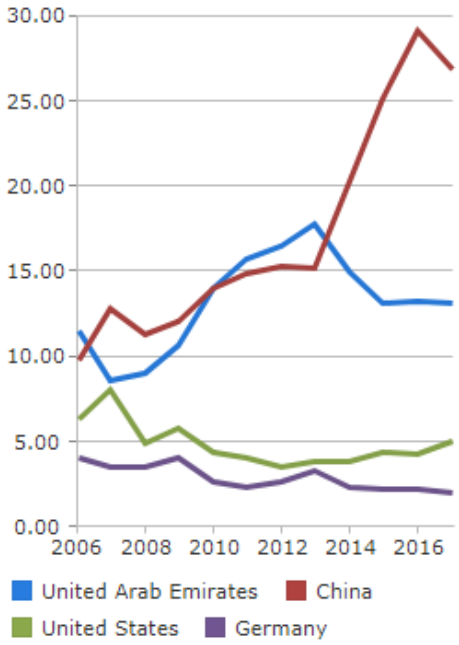
On the other hand, the two nations have further braced the bi-lateral relations by signing the China Pakistan Free Trade Agreement (CPFTA) in 2006 which came into effect in 2007. According to Ministry of Commerce (Government of Pakistan) CPFTA's main objective was to: strengthen mutual friendship, expand and diversify trade between two parties, eliminate trade barriers and facilitate cross border movement, provide fair competition for trade and establish a framework for further bi-lateral economic cooperation to enhance the benefits of the agreement.

Phase one of the agreement allows, "Pakistan to have market access at zero duty on industrial alcohol, cotton fabrics, bed-linen and other home textiles, marble and other tiles, leather articles, sports goods, mangoes, citrus fruit and other fruits and vegetables; iron and steel products and engineering goods. Furthermore, China is expected to lower the tariff almost by 50% on fish and dairy sectors, plastic, rubber and leather products; knitwear and woven garments" (Ministry of Commerce). Phase 2 is recently signed in April, 2019 and aims to further lower tariffs to simplify trade procedures and include a safeguard mechanism for domestic exporters.

Multiple other agreements have been signed between the two parties such as: Memorandum of Understanding (MoUs) on communication, technology, energy, infrastructure, banking, trade facilitation and agreement on support for Gawadar Port (Board of Investment). CPEC is said to be the fate changer of Pakistan's economy as it targets all the main macroeconomic elements that need expert solutions to boost the country's overall growth potential.

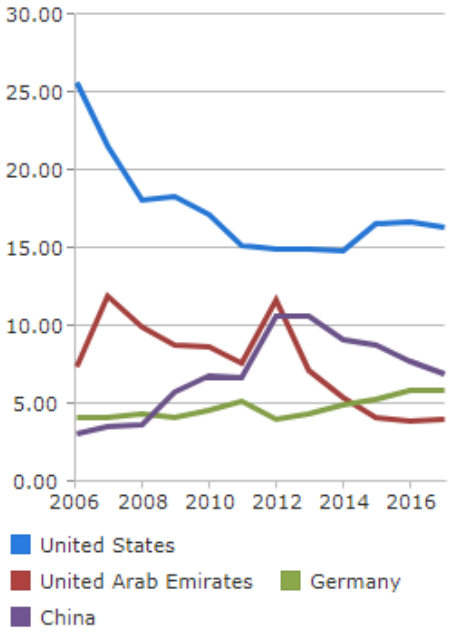
CPEC projects have also widened the trade deficit gap with China, as the share of imports is significantly higher than the export share. World Integrated Trade Solutions (WITS) reports that the import partner share of China has significantly increased from 9.77 % in 2006 to 26.78% in 2017.

Figure 1 Pakistan's Import Partner Share (%) 2006 - 2016



Source: Data taken from World Integrated Trade Solution | Country Profile

Figure 2 Pakistan's Export Partner Share (%) 2006 - 2016



Source: Data taken from World Integrated Trade Solution | Country Profile

The export partner share for China has fairly dropped over the last decade. This imbalance has resulted in an immensely huge trade deficit of $13.88 billion with China out of a total trade deficit of $34.69 billion (Adnan and Kakar, 2017). Figure 1 and 2 above; demonstrate the difference of Pak-China trade as compared to other big partners for the time period 2006 – 2016.

The recent rise in the imports from China (see Figure 1) is attributed to the China Pakistan Economic Corridor (CPEC) which is a flagship project under the Belt and Road Initiative (BRI). Huge amount of capital inflows in the country are resulting in a debt like situation and extreme negative distortion in the current account. There is hope once the projects under CPEC are operational, debt financing will be easier and current account will be in a better position.

The extreme export-import imbalance of Pakistan with China is giving rise to massive current account deficit. Unfortunately, financing of the deficit is usually done through excessive borrowing or depleting the foreign exchange reserves.

1.3 Belt and Road Initiative

Belt and Road Initiative (BRI) is the twenty first century's Silk Road, which is one of the oldest trade routes passing through more than sixty countries. The core idea behind BRI is to connect East Asia, Central Asia, Middle East, Africa and Europe. The gigantic project is a mix of land belt corridor and a maritime road of shipping lanes from South China Sea, South Pacific Ocean to the wider Indian Ocean.

The details of the two major components as given on Belt and Road Portal and Xinhua Net are:

1.3.1 Silk Road Economic Belt (SREB)

SREB comprises of networks of roads, railways and highways. Following six corridors have been announced under this component of BRI:

1. China-Mongolia-Russia Economic Corridor (CMREC)
2. New Eurasian Land Bridge (NELB)
3. The China-Central and West Asia Economic Corridor (CCWAEC)
4. China-Indo-China Peninsula Economic Corridor (CICPEC)
5. The Bangladesh-China-India-Myanmar Economic Corridor (BCIMEC)
6. China Pakistan Economic Corridor (CPEC)

1.3.2 Maritime Silk Road (MSR)

The 21st Century Maritime Silk Road (MSR) connects different countries of Eurasia through different sea ports. Belt and Road Portal states South China Sea will be the beginning point passing through the Strait of Malacca, Andaman Sea, Bay of Bengal, and Arabian Sea, toward Gulf of Oman via Strait of Hormuz and will enter into oil rich region of Persian Gulf. The second route is through the Red Sea, Suez Canal, and Mediterranean Sea into Atlantic Ocean and finally will enter into the Baltic Sea.

The transcontinental cooperation and regional connectivity aims at reducing trade time and cost, improving cross border infrastructure, boosting investment climate and promoting general welfare through creating more employment opportunities, reducing poverty and improving overall economic growth. Moreover, the social and economic development of isolated regions will contribute to the global benefit, this initiative has to offer.

Figure 3 Belt and Road Initiative (BRI) Map

Source: Belt and Road Portal, China's National Development and Reform Commission

Figure 3 shows the land and sea routes of the initiative. However, transport, energy and infrastructure gaps in developing economies are posing a serious threat to BRI. In addition to these threats, fiscal risks of developing and emerging economies add more to the challenges of implementation of the projects. However, these can be managed by complementary reforms and eliminating policy barriers such as border delays, trade barriers and Foreign Direct Investment (FDI) restrictions.

1.4 China Pakistan Economic Corridor (CPEC)

Signed in April 2015, China Pakistan Economic Corridor (CPEC) is a worth $62 billion developmental scheme and a strategic gambit. It is believed due to the 'regional connectivity' characteristic of its, CPEC will not only prove beneficial for Pakistan but also for her

neighboring countries such as Iran, Afghanistan, India and the Central Asian countries through improved rail and road linkages, easy flow of trade and integration of the business community.

CPEC will extend from the Kashgar in Xinjiang, China and link to the Gawadar on the Makran Coast of Baluchistan, Pakistan. (See appendix 1).

This would not be the first time when China supports Pakistan in terms of infrastructure development, monetary benefits or trade related activities. Such activities of linking China to the warm water currents of Pakistan started back in 1959 when the Karakorum Highway construction began (Mahdi, 1986). In 2002, China had already made an attempt to undertake construction on the Gawadar Port which was later completed in 2006. Further expansion of the port was stopped as a consequence of political instability in the country.

It is strongly believed that CPEC is the "Fate Changer" or "Game Changer" for Pakistan's Economy.

1.4.1 Key Cooperation Areas of CPEC (as given on cpec.gov.pk)

i. **Transport and Regional Connectivity** includes improvement through a network of railways, motorways, highways and ports. The highway and motorway will follow two routes i.e. Eastern and Western routes that will connect Karakoram Highway and Gawadar. Total distance from North to South of the country is 2653 kilometers. Existing 1300 km Karakoram Highway and railway tracks would also be improved. Gwadar district would undergo a transformation as the International Airport, Eastbay Express and other local development projects will be close to completion.

ii. **Energy Sector** includes coal, thermal and hydropower plants. It is projected that Pakistan's problem of power outages and load shedding will be solved through the

additional power easing of approximately 10,000 MW. Projects at Port Qasim, Sahiwal, Qadirabad, Muzaffargarh, Rahim Yar Khan and Gwadar would be based on imported coal while the Thar coal fired project will rely on local coal. Sukki Karnai and Kavot will be hubs of hydropower projects. Additionally, solar and wind power projects would work under this portfolio as well.

iii. Upgradation of **Information & Communication Network**. Projects include: Cross Border Optic Fiber, Early Warning System (EWS), Pakistan Meteorological Department, Digital Terrestrial Multimedia Broadcast (DTMB)

iv. Building of Industrial Parks and Special Economic Zones (SEZs).

CPEC intends to improve general public welfare on both sides of the border through promoting bilateral connectivity, construction, exploring bilateral investments and trade. Official CPEC website lists other well-being projects such as, "Agricultural Development, Socio-Economic Development - Poverty Alleviation, Medical Treatment, Education, Water Supply, and Tourism Cooperation & People to People Communication, Cooperation in Livelihood Areas, Financial Cooperation, and Human Resource Development".

It has been estimated by the project experts that the investment venture will take approximately 15-20 years to be fully complete and functional. However, some of the Early Harvest Projects such as energy have already started to benefit the society on a larger scale.

1.4.2 Nine Special Economic Zones (SEZs)

SEZs are established in order to promote growth in a country by providing favorable and flexible economic environment to industries. The following table has been taken from cpec.gov.pk:

Table 1 Special Economic Zones (SEZs)

	9 Special Economic Zones (SEZs)	Industry Focus
1.	Rashakai Economic Zone on M-1, Khyber Pakhtunkhwa	Fruit, food, packaging, textile stitching, knitting
2.	Dhabeji, Thattta, Sindh	Steel industry, chemical industry, cement manufacturing firms and pharmaceuticals
3.	Bostan Industrial Zone, Balochistan	Fruit processing, agriculture machinery, pharmaceuticals, motor bike assembly, chromites, cooking oil, ceramic industry, ice and cold storage, electric appliances and halal food industry
4.	Punjab - China Economic Zone, M-2, District Sheikhupura	Clothing and Apparel Factory, Vertical integrated units for garment manufacturing, commercial washing, dyeing and printing, apparel related machinery manufacturing.
5.	ICT Model Industrial Zone, Islamabad	Feasibility studies for land acquisition and suitable industries are in process
6.	Development of Industrial Park on Pakistan Steel Mills Land at Port Qasim near Karachi	Feasibility studies for land acquisition and suitable industries are in process
7.	Mir Pur Industrial Zone, Azad & Jammu Kashmir	Feasibility studies for land acquisition and suitable industries are in process
8.	Mohmand Marble City, FATA	Marble industry, dimensional stone industry
9.	Moqpondass SEZ, Gilgit-Baltistan	Marble, granite, iron ore processing, fruit processing, steel and leather industry, mineral processing unit.

Source: cpec.gov.pk

Main idea behind SEZs is to promote job growth, export growth and to support entrepreneurial ventures.

1.4.3 Project Timelines

Table 2 CPEC Project Timelines (taken from cpec.gov.pk)

Project	Timeline	Positive Impact/Outcome	Negative Impact/Outcome
Early Harvest or Short Term: • Roads, Railways, • Fibre Optics, • Power Plants, • Gawadar Port etc.	2020	Improved access transportation, communication, jobs/income, trade, business, development partnerships	Environmental degradation, climate change
Medium Term: • Gawadar Port City • Gas Pipelines • Infrastructure • Social Economic Zones (SEZs) development and Industrial cooperation and Relocation • Energy	2025	Transportation, communication, jobs/income, trade, business, development partnerships	Environmental degradation, climate change
Long Term: • Institutional Strengthening • Broader socio-economic development • Strengthen cooperation	2030	Employment, education, health, better living standards, income, gender equality, reduced poverty, strengthened institutions, improved environment	

Source: cpec.gov.pk

Table 2 demonstrates the three main categories the projects have been divided into i.e. the early harvest projects, medium term and the long term. Their positive and negative outcomes have been highlighted in the third column.

CPEC's total budget is $59 billion. Major project wise cost breakdown is given below:

Table 3 CPEC Budget

CPEC Projects and Costs	
Energy	$33 Billion
Infrastructure	$12 Billion
Gawadar	$14 Billion
Total	**$59 Billion**

Source: cpec.gov.pk

1.4.4 CPEC Goals and Pakistan's Vision 2025

CPEC aims to address the major bottlenecks to the Pakistan's economic growth and development by year 2020 (Hussain, 2017). Second major milestone will be achieved in 2025 when the industrial system is close to completion. It is believed that after completion major economic functions will come into play holistically; people's earning capacity will improve significantly and a more balanced approach toward regional economic development will be adopted. Moreover, in addition to CPEC, Pakistan's Vision 2025 is achieved as well.

Pakistan's Vision 2025 includes seven core pillars as follows:

i. Putting people first and developing social and human capital and empowering women
ii. Attaining sustainable, indigenous and inclusive growth
iii. Achieving democratic governance, modernization of public sector and institutional reforms.
iv. Ensuring security of water, energy, food
v. Encouraging private sector led growth and entrepreneurship

vi. Developing a knowledge economy through value addition and competition

vii. Modernizing transport infrastructure and regional connectivity

There are high hopes that together, Pakistan's Vision 2025 and CPEC will improve the economy at a massive scale in the upcoming five to six years. However, CPEC's ultimate goal by 2030 is to entirely accomplish all projects, to put in place the endogenous mechanism for sustainable economic growth and serve as a stimulant for collective Central and South Asian Economic Growth (Hussain, 2017).

1.5 CPEC Financing and Funding Sources

Center of Excellence – CPEC in collaboration with the Ministry of Planning and Development and Pakistan Institute of Development Economics has published a report in 2018. The report clearly states and segregates the type of financing each project receives. Following arguments have been extracted from the report to present a clear idea of Chinese loan based investments and the financing which includes features of FDI.

The report highlights that equipment and services imported from China are shown under the current account, while the corresponding financing item is FDI brought in by the Chinese under the capital and finance account. Hence, no future liabilities arise as far as the balance of payments is concerned.

Energy Projects are basically investments by Chinese Companies under the Independent Power Producer (IPP) mode and in accordance with policy set by the Government of Pakistan. This means that that entity is not a public utility itself but owns the public facility in order to generate electric power for selling it to the utility providers and end users.

Investments done by foreign firms are recorded under the head of FDI. These investors receive a guaranteed 17% rate of return in dollar terms on their equity portion only and not on the entire project cost. Chinese companies take loans from China Development Bank and China Exim Bank which are recorded in their own balance sheet and the servicing of these debts is done by themselves as well; without putting a pressure on Government of Pakistan.

Infrastructure projects are mainly governmental loan-based, amounting US$ 15 billion under concessional agreement of 2.4 % interest on average, including an extended payment period. Usually it is expected of Pakistani Government to pay off loans in 20 – 25 year period. This amount's debt servicing would be solely Pakistan Government's obligation.

Former Governor of the State Bank of Pakistan, Hussain (2018) states that debt servicing payments will increase by US$910 million annually due to CPEC loans (if a 20 year tenor is assumed). Hence, it can be deduced that the additional burden on the external account will not go beyond US$3.5 billion annually which is 7% of Pakistan's FOREX earnings in 2016 (calculations are done without taking GDP growth increment in account).

Gawadar Projects are based on direct investment. Khan (2017), in his article has confirmed that Federal Minister for Ports and Shipping Mir Hasil Bizenjo had told the senate that 91 percent of the income generated by Gawadar project will be taken away by the Chinese officials for the next 40 years. 9 % remains back for Pakistan. *Build-operate and transfer (BOT) model* will be utilized for the next 4 decades. Pakistan will take over the operation of the port along with the infrastructure to be built on it during the period to enhance the port's cargo-handling capacity.

1.6 CPEC and the growing concerns of Chinese counterparts

CPEC – Center of Excellence in their report (2018) posit that China intends to invest more than $1 trillion in 60 countries across the world for six different corridors. While all other countries are welcoming the project with openness and optimism, there have been hints of pessimism in Pakistan expressed through media and social media specifically. Chinese counterparts have expressed concern over this skeptical approach of people and defended their standing by listing down the projects that have or will help the Pakistani economy, massively. Number one among such listings is the energy project (which made up 70% of the initial $35 billion investment) that is helping the Pakistani households and industry simultaneously, consequently resulting in growth of GDP.

Chinese state owned companies have provided loans on concessional terms by the Chinese government owned banks; hence, debt burden on Pakistan's Government is not as much as portrayed in the media. Furthermore, other concerns of the Chinese officials are security risks, red tape and cumbersome decision making protocols in the government sector. Approvals and clearances of processes create delays to implement the project effectively and efficiently. Unreasonable power tariffs are also a major concern for the Chinese Officials.

1.7 CPEC and India's response

Despite its issues of poverty, youth rate rise, lack of good governance and infrastructure, dearth of employment opportunities and urban sprawl; India is considered as an emerging global power. It has the seventh largest GDP in the world with an annual economic growth rate higher than that of China. Indian workforce is forecasted to be one of the biggest in the upcoming decades. Additionally, it has the world's third largest military and is considered as one of the largest buyers of armaments. From US's strategic perspective this is an ideal nation to counter China's

rise in the region. Furthermore, since 2014 when Modi Government held office it had been interested in working with the US leaders for expanding its power in the South Asian region (Bouton, 2017).

According to Shafqat and Shahid (2018) contributors to the 'India and CPEC' topic consist of Pakistanis, Indians and other international contributors. A group of these analysts think that trade ties, people to people linkages and transport connections between India and Pakistan are highly important for resolving conflicts in the South Asian region. However, the CPEC infrastructural development across North-South will further create a distance between two nations as it limits the access of any East-West route for business and trade activity. The group of authors argues that the actual objective behind CPEC is to restrain India. Moreover, huge Chinese investments in Srilanka, Bangladesh and Nepal are said to be the part of larger Chinese conspiracy to 'contain' India. While both nations perceive each other as rival powers with reference to the membership of the UN Security Council, CPEC for India means addition to the rivalry which must be repelled. Therefore, CPEC is more of a threat rather an economic cooperation for India.

Shah (2015) emphasizes that Indian policy analysts are of the view that China, by having stronger bilateral ties with India's small neighboring countries is trying to 'encircle' her under "the string of pearls theory" i.e. China's increasing geopolitical influence in the Indian Ocean.

India-China partnership has now been neutralized as former needs support of the latter on international forums for membership such as UN, ASEAN and Shanghai Cooperation Organization (SCO).

India perceives that CPEC will weaken its power position in the South & Central Asia and Middle Eastern Region. Recently, it has strengthened ties with the Central Asian states for

mineral and natural gas resources but now CPEC has posed a threat to its objectives. It has now approached and signed agreements with Bangladesh, Vietnam, Sri Lanka and Myanmar to meet its energy demands (Downs, 2017).

Len (2017) in his contribution to National Bureau of Asian Research Report argues, India has also invested in Chabahar port in Iran and a rail connection to Afghanistan as an alternative strategy for Gawadar Port and CPEC. India will now be able to transport energy through the Arabian Sea Route. The Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline and the International North-South Transport Corridor are other expansions, outlining India's approach to deal with CPEC challenges by developing road and rail linkages. Moreover, shared electricity prospects among Bangladesh, Bhutan, India, and Nepal are under discussion.

Shafqat and Shahid (2017) suggest that Pakistan and China must reassure India that CPEC can be a supportive project to meet India's growing energy and trade needs. Opposition towards CPEC would only result in widening of the wedge between India and Pakistan, raise conflict and deepen rivalry in the region. It is also important to highlight that Indo-China Trade amounts to US$ 83 billion while the Sino-Pak trade equals only US$ 13 billion. CPEC investment is US$ 63 billion which is less that the Indo-China Trade. Hence, all three nations must strive to achieve regional and economic cooperation and harmony rather than creating geo-political tensions.

2 Literature Review

CPEC - a flagship project under the BRI intends to promote economic growth prospects in Pakistan through increased Foreign Direct Investments, infrastructural development, improved employment opportunities and social sector development projects such as; people to people exchanges, transfer of knowledge in various sectors, establishment of a Social Science Academy and transfer of knowledge through business school consortiums. While the economy of Pakistan is growing rapidly at a rate of 3-4% per annum, through a boost in foreign investment and a huge number of imports, it is also pushing itself further into a twin deficit (current account deficit and fiscal deficit).

FDI is one of the key areas for booming economic growth especially in developing countries. It is not just a source of capital formation but also contributes towards technological transformation, value addition and improves access to international markets. Net foreign investment inflows are needed by any country which faces domestic saving-investment gaps. CPEC early harvest projects have paved the way to attract foreign investment in Pakistan (Rashid et al., 2018).

Atique et al (2004) used the data of Pakistan from 1970 to 2001 and found out that FDI's positive impact on the economic growth is further enhanced under the export promotion regime rather than the import substitution. They suggest that since, Pakistan's economic growth is usually dependent on FDI inflow; such regimes must highly be encouraged.

To study the impact of FDI inflows on increasing exports and economic growth rate of a country Ghazali (2010) conducted an empirical analysis to test causal relationship between FDI inflows, domestic investment and economic growth of Pakistan from 1981 to 2008. The results revealed

that FDI causes an increase in domestic investment leading to a higher economic growth rate. The relation is true vice versa as well.

Javaid (2016) conducted an empirical analysis to investigate the relationship between FDI and growth rate of Pakistan by using time series data for the period 1966 to 2014. After applying ARDL-ECM technique, the results indicated that FDI has a significant and positive impact on growth rate in Pakistan both in short and long run.

Since, CPEC is a driver of foreign investment in Pakistan, Ali and Shah (2017) are strong believers of its positive economic impacts on the country. They anticipate that the project will improve the **living standard and economic conditions** of the local people of Pakistan specifically through provision of energy and employment opportunities. CPEC - also known as the fate changer will improve the economy through enhanced trade activities between both nations.

Measuring the socio economic impacts of CPEC through info structure framework Khan et al., (2017) state that each province experiences different distribution of the projects in terms of numbers, percentage of investment and timelines. It is necessary to measure the impact of the project at every stage of development preferably within 10 kilometers radius and then spillover effects can be taken into consideration. They have suggested that there is a dire need of generating and collating micro level data at district project locality level to serve as a proof of influence and assess the impact of CPEC. Timely information needs to be generated to feed into the info structure design.

Chen et al., (2018) also examine the socio economic impact at local and subnational level and think that CPEC will be a success only if local people of Pakistan are provided opportunities.

CPEC is a major **impetus of growth** in Sindh as plant owners will be given a tax holiday and an additional incentive on hiring local workers.

Tasneem (2018) has studied the implications of CPEC and assessment of Labor Quotients (percentage of total employment in a sector of a city compared to total employment in the same sector of a province) of major cities in the province of Punjab in the telecommunication, energy and communication sector. She concludes that industrial and technology parks along the CPEC route will increase **employment opportunities** via establishment of small and medium enterprises. Cottage industry will flourish and will be able to compete in foreign markets, while entrepreneurial ventures will witness an increasing trend. **Direct employment generation** is a result of labor intensive jobs in road infrastructure projects (Zia and Waqar, 2018). These jobs when offered to the local citizens of Pakistan cause a capacity enhancement in their skills as a by-product.

Haq and Farooq (2016) conducted a provincial and district level analysis to measure the **social welfare** as a result of short and medium term projects of CPEC. Their study reveals impact of the project on three social dimensions i.e. **education, health and housing**. They have forecasted that by 2020 social welfare of Pakistan will experience a growth of 5.21%. Among the provinces, Baluchistan is expected to experience the highest level of growth followed by Sindh, Khyber Pakhtunkhwa (KPK) and Punjab. Districts which are located on the three routes of CPEC show decreasing poverty and unemployment and improved quality of life.

Khan and Ali (2018) found out through a household survey that people enjoy **easier access to public services** such as education, health and child maternal health via the Express Way 35 (E-35) route.

Digging deeper into combined effects of CPEC on economic and **financial sector** Ghani & Sharma (2017) have noticed a positive change in the wealth of shareholders of Pakistani firms. Karachi Stock Exchange (KSE) 100 index was observed during three different events of the CPEC agreement signing. Cumulative average security returns and average security returns showed positive and significant reaction of KSE 100 index when; Chinese Premier visited Pakistan in 2013 regarding Gawadar, Prime Minister of Pakistan visited China regarding CPEC and the final signing of the CPEC agreement between two nations. They conclude that bi lateral agreements have valuable payoffs and attract private and institutional FDIs which may have been reluctant in investing, otherwise.

Wei and Huang (2018) have used a Global Trade Analysis Project Model and found out that improved **transport infrastructure** will benefit trade relations of both countries but, in the longer run Pakistan will experience more positive effects in terms of GDP growth and welfare. They forecast that Pakistan's agricultural exports to China will increase significantly. Export of non-agricultural export will be far lesser than the import of non-agricultural commodities from China.

Ali et al., (2017) analyze **energy optimization** in the wake of CPEC and their core objective is to provide recommendations to Government backed by statistical techniques to optimally utilize energy resources. They also recommend various energy alternatives such as solar panels to small & medium businesses while CPEC energy projects are being materialized.

Also, **Joint ventures** of Chinese firms and Pakistani Businesses will be mutually beneficial for both parties through enhanced markets prospects and economic benefits according to Abbas and Maaz (2018). Special Economic Zones (SEZs) will help Pakistani labor force to benefit from

improved skills, knowledge sharing, technology transfer and spill-over effects of industrialization such as urbanization and trade promotion.

Shah (2017) analyses that the relationship among two neighbors has gone far beyond a diplomatic corridor and China's presence can be seen in multiple sectors of the Pakistan. While both nations anticipate reaping fruits of the CPEC they must also prepare themselves for adverse effects of the gambit. He argues that massive **loan based investments** will leave Pakistan in a debt overhang. On the other hand, China has pledged to invest $35 billion (out of $62 billion) in Energy Sector which is already faced with problems of electricity theft, unpaid bills, line losses and other technical and administrative issues; resulting in circular debt. Previous Governments were never able to deal with it in an effective manner and the current Government has already announced for a financial bailout.

Hurley et al., (2018) also examine the **debt implications** of BRI on vulnerable partners and concluded that 23 countries are under a serious debt distress risk and 8 will suffer the debt sustainability problems. Unfortunately, Pakistan is one of them. Though CPEC reports claim concessional loans at interest rate 2-2.5% but some of the loans given by China Exim Bank have an interest rate as high as 5%. Pakistan has approached Paris Club six times for debt treatments and with the current debt situation it might have to return for a seventh time.

Despite debt sustainability threats, CPEC is taking the friendship of two nations to new heights. There is a hope China's investment in Energy and Infrastructure sector can transform the economy of Pakistan. Pakistan's geo strategic position in the region got strengthened as it serves as a transit point for Eurasia and China has found a secure route to import oil from the Middle East rather than going all the way through the Strait of Malacca (Hamid et al., 2017). **Industrial**

development and urban growth will be an outcome of CPEC. Settlements growth pattern around CPEC routes and Special Economic Zones (SEZs) will increase by 16% by 2030. It is currently 2% (Zahra et al., 2018).

BRI and CPEC are China's intention of promoting its image as a harmonious, modern socialist and neighbor friendly country. Specifically through CPEC it will gain connectivity and economic linkages to other countries as well while for Pakistan CPEC is more of a need of the hour for maintaining a good economic and geo-strategic standing (Toor, 2017). However, to allocate resources efficiently, diverse indigenous settings of developing countries must be taken into consideration (Hassan et al., 2018). Some of the **challenges for optimal utilization** of CPEC projects include: infrastructure mismatch, exclusive economic growth, irrelevant currency conversion exercise, cultural differences, lack of good governance and poor institutional capacity (Arfat, 2018).

Hussain (2018) believes that China's developmental model comprised of a good mix of market mechanism and government control that lifted 700 million people out of poverty in less than twenty five years while it simultaneously made to the list of largest economies and top exporting nations. He posits that the visible hand of the government provided infrastructure, social services and redistribution of gains of growth. The invisible hand of the market helped asset holders to create more jobs and wealth. Being a proponent of CPEC he further suggests that one must not over exaggerate or understate the results of the project. Moreover, relying solely on CPEC for economic growth is not feasible, but strict policy reforms and institutional arrangements must be made to maximize benefits and minimize risks for the economy.

3 Data Collection and Methodology

This exploratory research study is undertaken to examine the macroeconomic impacts of CPEC on Pakistan. Since, CPEC agreement was signed in 2015 and the projects are still under construction, a statistical data analysis for 3 years will not generate any meaningful results. CPEC is an *emerging research topic* hence; **"thick definition"** methodology by Clifford Geertz (1970) has been adopted to lay foundation for future researches based on traditional econometric analytical tools upon availability of more data. Norman Denzin another qualitative research methodologist posits that thick description makes thick interpretation possible. They argue that description must be balanced by "analysis, seeking to establish the significance of actions, behaviors, or events for the participants involved". It is relevant for case study research as it allows the researcher to study the phenomena in depth and analyze beyond surface information by deeply understanding historical matters, context and physical situation. Distinctive features of the case study are assessed by paying attention to issues, dynamics and patterns. Thick description serves as the purpose of building block for constructing further knowledge.

Facts, figures and all essential information for this research have been published by the official governmental websites, think tanks and international organizations. For some cases staff members have collected direct information from the field. Main sources of this research include:

1. Board of Investments, Pakistan
2. CPEC – Center of Excellence
3. International Monetary Fund (IMF)
4. Ministry of Finance - Economic Survey of Pakistan
5. Official CPEC website

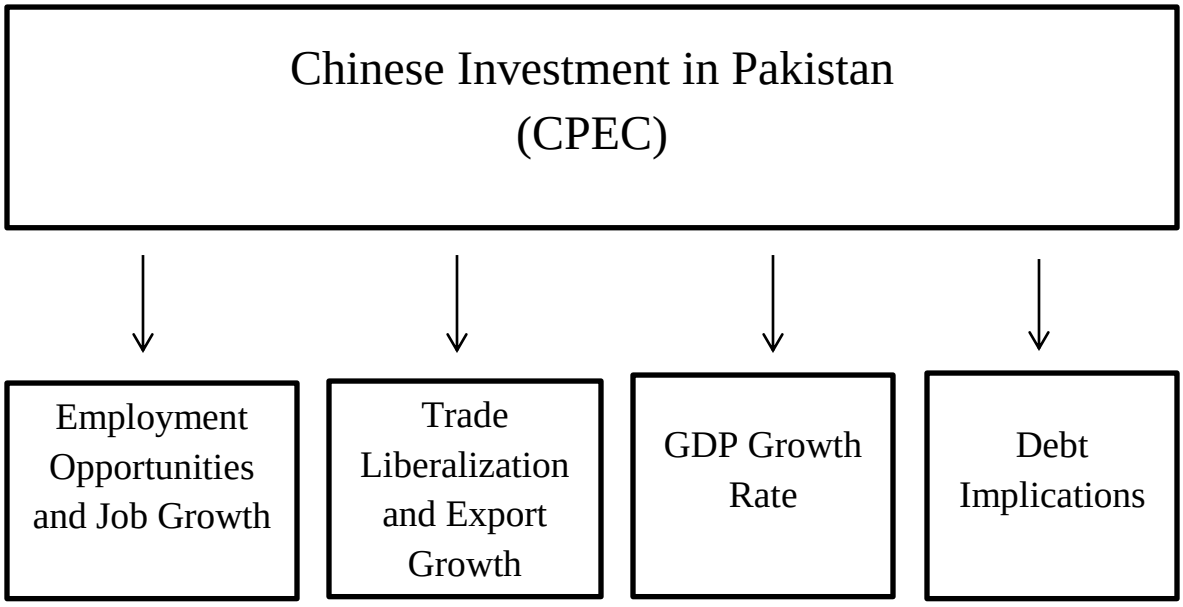
6. State Bank of Pakistan
7. World Bank

The research will observe the past trends in Pakistan since 2000 to 2017 of macroeconomic indicators such as FDI, unemployment, export growth and GDP growth rate, and then observe the quantitative changes in the variables after the CPEC agreement was signed.

CPEC – a Chinese investment inflow to Pakistan and has massively increased the growth rate of the economy, generated employment opportunities and opened the doors for additional trade through various projects at Gawadar Port (details discussed in the following chapter).

Overall the study will assess the changes in the aforementioned variables caused by the heavy foreign investment inflow from China 2015 and onward. Moreover, it will also discuss the debt implications of huge loans taken by Pakistani Government to fund infrastructure projects.

The following flow chart demonstrates the theoretical framework:



Details of the changes in the variables have been discussed in the following chapters. The scope of the research study does not allow us to study the returns of the projects such as railways, highways, energy etc. Additionally, another limitation of the study is a shorter time span which restricts us to run any econometric analysis; however a thick description of the existing literature has been presented.

4 Foreign Direct Investment (FDI) – Globally and in Pakistan

World Investment Report (2007) published by UNCTAD, Foreign Direct Investment (FDI) has been defined as:

"An investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate)".

The investor can significantly influence the management of the FDI enterprise in another economy. The definition further elaborates:

"Flows of FDI comprise capital provided (either directly or through other related enterprises) by a foreign direct investor to an enterprise, or capital received from an investing enterprise by a foreign direct investor. FDI has three components: equity capital, reinvested earnings and intra-company loans".

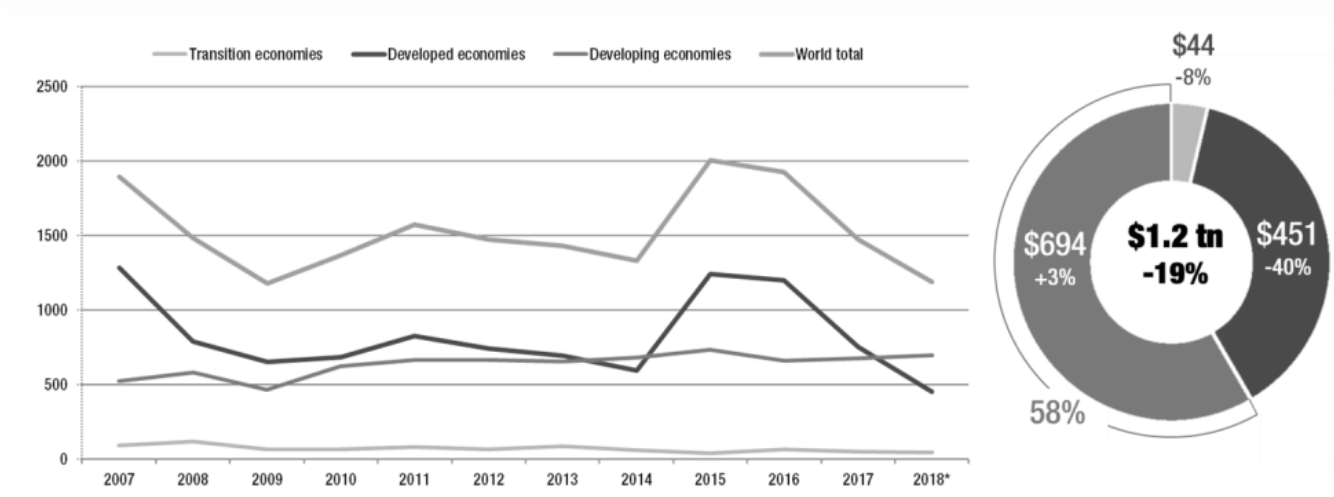
Foreign direct investor's purchase of shares in an enterprise is termed as equity capital. Non-distributed dividends and earnings are termed as reinvested earnings. The third component of FDI definition is; the intra-company loans or debt transactions based on both short and long term lending by direct investors to affiliate enterprises (WIR, 2007).

FDI is of the major macroeconomic component that contributes towards a country's growth and development. It has been an important tool for developing countries to boost economic growth since ages. However, investor confidence must be won through stable political situation and providing the right institutional environment. The effectiveness of FDI inflows is strictly dependent on social and environment conditions (Buckley et al., 2006). Only if the conditions are optimal and investor friendly, results of FDI will be maximized. The direct investor and the

investment entity both work towards a common goal to enhance the results that can be witnessed through economic growth, development and eco-social welfare. The overall objective of attracting foreign investors into one's country is to promote social and economic welfare at large.

It is a win-win game on both ends. The investor wins by "lasting interest" and gaining ownership rights and on the other hand, investing entity has its own motive of promoting economic growth in the country. According to the World Investment Report (2018), 58% of the Foreign Direct Investment (FDI) Inflows are hosted by the developing countries (See Figure 4).

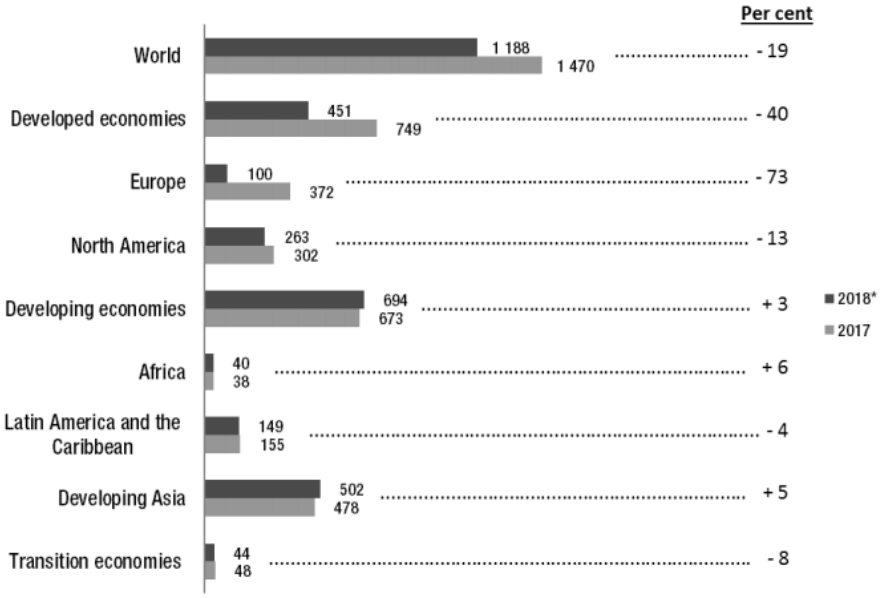
Figure 4 FDI Inflows (Billion USD): Global and by Group of Economies, 2007 - 2018



Source: UNCTAD | World Investment Report (WIR), 2018

UNCTAD has reported that East and South East Asia have been the biggest recipients of FDI. They further elaborate that FDI inflows have increased 5% in the developing Asian region over the last year i.e. 2018 (see figure 5). The following figure 4 highlights the huge amount of FDI flowing into various regions. Developing economies mainly Asia tops the chart with highest FDI inflows.

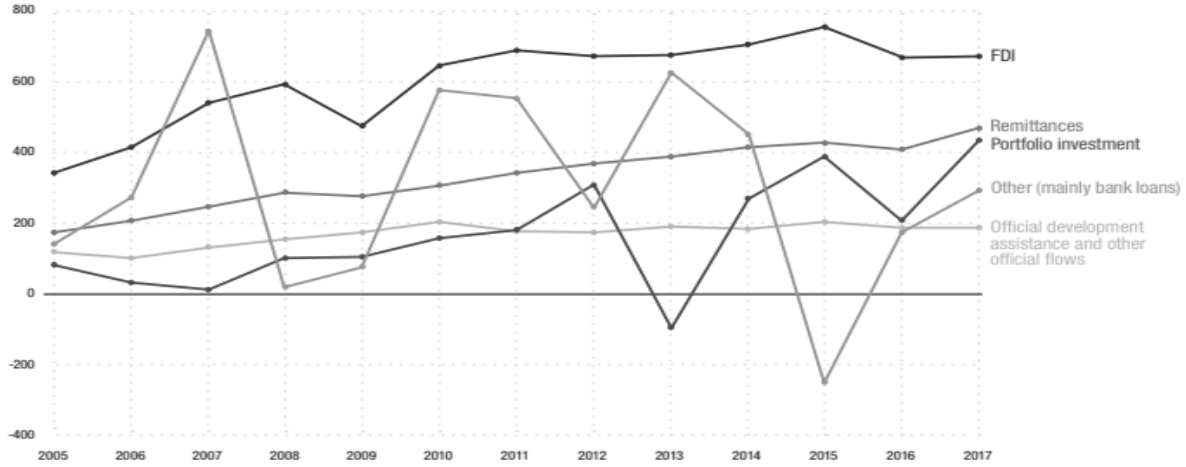
Figure 5 FDI inflows (Billion USD): by Region, 2017 and 2018



Source: UNCTAD | World Investment Report (WIR), 2018

Developing economies mostly rely on FDI because it has become the most stable and resilient financing component amongst the list of other external financing mechanisms such as Portfolio Equity, borrowing and remittances (See Figure 6). UNCTAD has analyzed that from 2013 till 2017 FDI inflows were 39% for developing economies on average.

Figure 6 Sources of External Finance (Billion USD), Developing Economies, 2005 – 2017

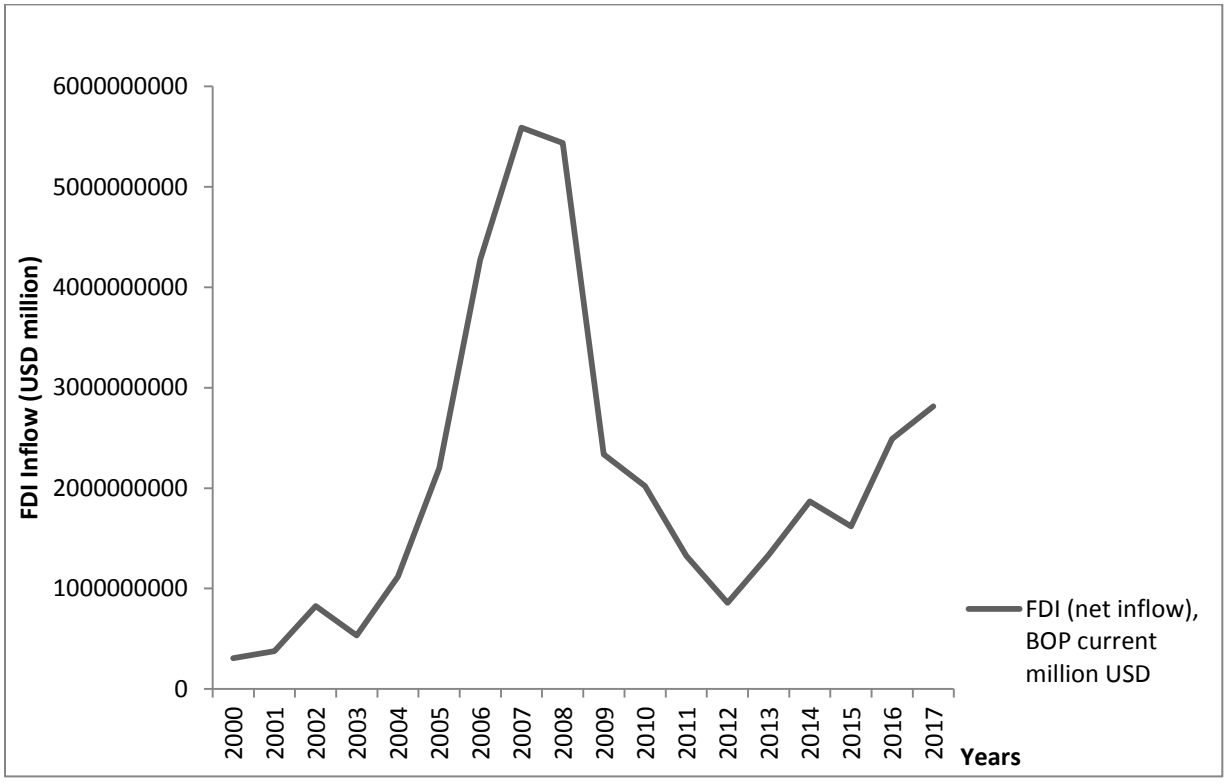


Source: UNCTAD | World Investment Report (WIR), 2018

4.1 Trends of FDI Inflow in Pakistan

Since, late 1980s to date FDI has increased significantly increased in the developing economies. Figure 6 demonstrates the inflow of FDI in Pakistan from 2000 – 2017. There has been sharp increase in FDI inflow observed throughout 2001 to 2007 due to economic and political stability that prevailed within the country at that time under a dictator regime. Investment friendly policies served as secondary driving force for FDI inflow. FDI inflow in 2000 was USD 308 million which within 8 years rose to USD 5152 million and dropped again to USD 2000 million in 2010. FDI rose expressively from 0.4% of GDP in 2000 to 3.7% of the GDP in 2007 (which is the highest recorded figure till date).

Figure 7 Trend of FDI Inflow (million USD) in Pakistan (2000 – 2017)



Source: The World Bank Data | Author's own computation

The above graph shows that after a sharp decline in 2007 the FDI trend in Pakistan has started to pick up from 2015 onwards. This FDI increase is mainly attributed to CPEC. Currently, China has become one the biggest investors in the country. Pakistan's FDI increased massively from USD 1.6 billion in 2015 to USD 2.8 billion in Fiscal Year (FY) 2017 18 (World Bank).

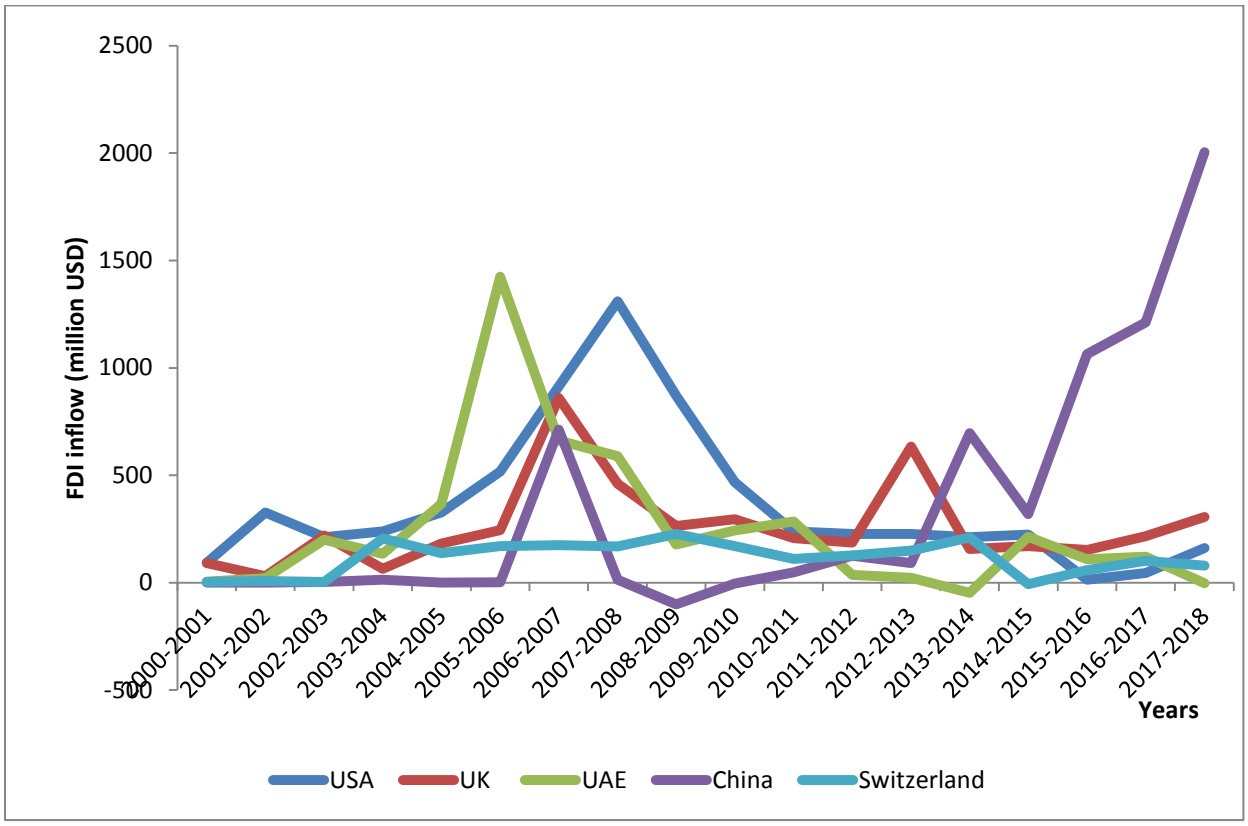
A sharp decline in 2009 -2013 occurred mainly due to the economic recession and political anarchical conditions prevalent in the country at that time. Terrorism wave was the highest in those years as well, which made the investor confidence decline.

State Bank of Pakistan has also reported that FDI was the highest in the second half of the last year i.e. 2018. It increased by 17% in year to $319.2 million from $272.8 million mainly attributed to regain of investor confidence after rupee devaluation against dollar. The sudden surge in investment is mainly accredited to China, who alone invested net FDI worth $120.6 in December 2018. Energy, construction and financial business remain the top sectors for attracting investors.

4.2 Country wise FDI inflow (USD million)

United States, United Kingdom, United Arab Emirates and Switzerland are major contributors in the Pakistan's FDI share. During the past few decades before 2010, US has been one of the main investors in the country. However, trends have changes after 2007 and a further decline of US's share was observed after the CPEC signing. UAE was listed as the second biggest contributor to the country's FDI while UK and Switzerland have also had a fair share. While trends of most of these countries declined or observe a stable pattern, China's trend picked up after 2015 (see figure 8).

Figure 8 Country wise Net Foreign Investment Inflow (million USD) in Pakistan (2000 – 2017)



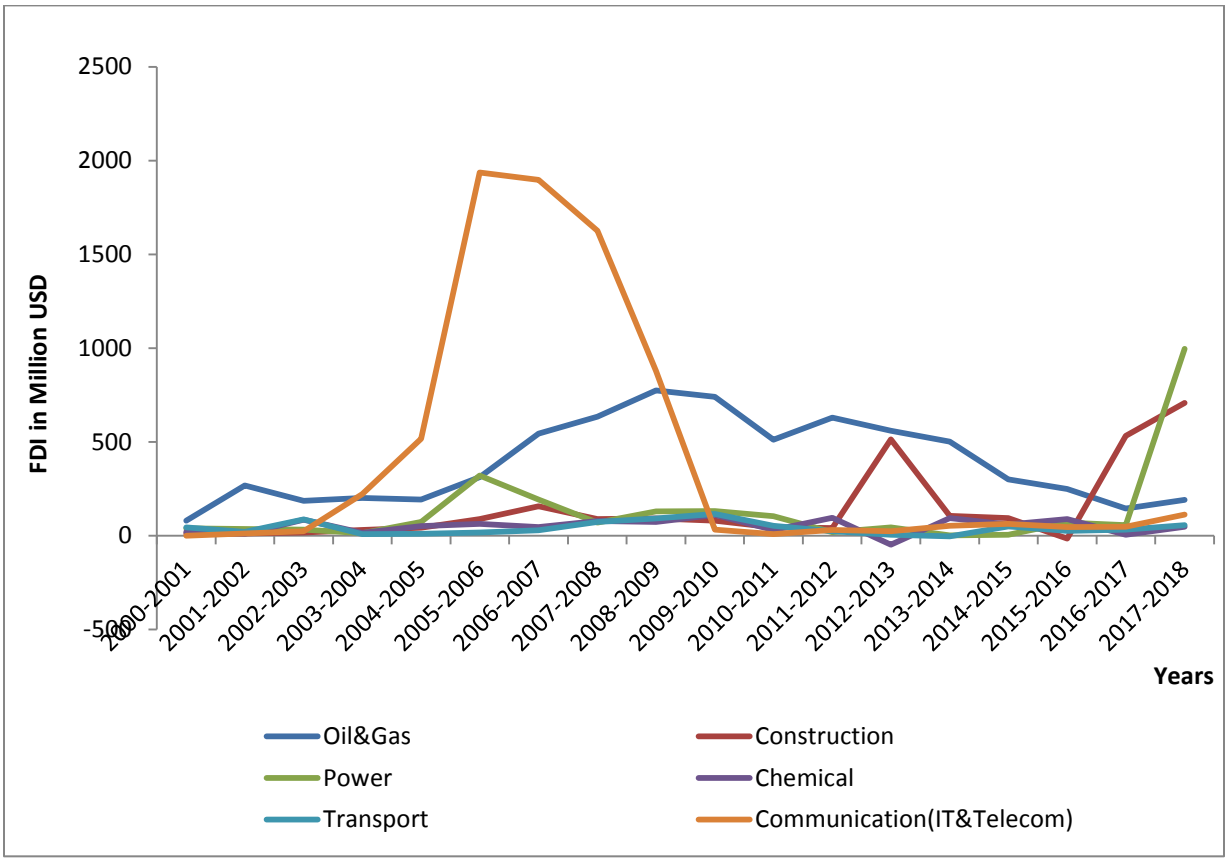
Source: Data take from Board of Investment, Government of Pakistan. Author's own computation. http://boi.gov.pk/ForeignInvestmentinPakistan.aspx

In the above figure, we observe, while China's share to Pakistan's FDI is increasing rapidly, USA's share has been on a declining trend. UK's share has been fluctuating varying with the political stability of the country. Japan, South Korea, Netherlands and Norway had a fair contribution in Pakistan's FDI for the past few years as well.

4.3 Sector wise Net FDI in USD million

Pakistan attracts major FDI in the following sectors: financial business, oil and gas, power, construction, communication and petroleum refining. Other export-oriented sectors such as ceramics, leather, textile and metal and rubber products and chemicals have attracted lesser FDI as compared to the aforementioned sectors.

Figure 9 Sector wise Net Foreign Investment Inflow (million USD) in Pakistan (2000 – 2017)



Source: Data take from Board of Investment, Government of Pakistan.
Author's own computation. http://boi.gov.pk/ForeignInvestmentinPakistan.aspx

Figure 8 shows that communication sector attracted the major share from 2005-2010 due to the global rise in technological and communication industry. Telecom companies were the biggest investors in Pakistan during this era. After a decline in investment in 2010 the trend has been stable for the communication sector. It can also be observed that after 2015 FDI in power and construction sectors have sharply risen due to CPEC Early Harvest projects in the respective sectors.

5 Chinese Investment in Pakistan and its Economic Impacts

CPEC is a key driver of FDI in Pakistan. Previous chapters have shown the FDI trends and sector wise segregation in the country. Under this section we will treat CPEC as FDI inflow from China and observe its changes on different variables such as the *GDP growth, job growth* and *trade openness* which focus on export growth of Pakistan. Moreover, debt implications will also be analyzed for the loan based projects under CPEC.

As already mentioned, according to UNCTAD report developing countries attract the most FDI. Since, Pakistan is also a developing country it has been attracting a lot of FDI inflow as well. However, recently the FDI inflow has observed significant increases mainly due to CPEC. Developing nations aim to achieve higher rate of growth of socio-economic indicators (Chenery and Shout, 1966). FDI is the most stable component to meet this goal as Iqbal and Zahid (1998) have found out in an empirical study done on Pakistan's economic growth. While the growth trend can be adversely affected by a country's political instability, increasing foreign debt, exchange rate fluctuations; trade openness can contribute towards promoting growth. Malik (2015) further emphasized FDI together with trade liberalization and domestic capital contribute in a better manner toward growth rate.

Pakistan can learn from the experience of other successful Asian Economies such as China, Malaysia, Singapore and Vietnam and FDI's transformational role to shape their economies during the 1990's. All these countries have been able to turn into export-oriented economies through an active role of FDI (Giap et al., 2015; Vu, 2011). Similarly, Pakistan can gain maximum benefit of this FDI inflow to further boost the economic growth. Technology transfer,

high demand generation, increased productivity and rising competition help the GDP growth rate to continue rising with an upward trend.

Gudaro et al., (2010) in an empirical study on Pakistan used multiple regression models for time period 1981-2010 and found out that FDI inflow has a positive impact on growth rate. Therefore, they have suggested that the Government must focus on formulating investor friendly policies to attract foreign investors. Javaid (2016) also conducted an empirical analysis on Pakistan from 1966 to 2014 using ADL-ECM technique and found out a significant and positive relationship between FDI inflow and growth rate both in short and long run.

Furthermore, **Endogenous Growth Models** posit, if physical and human capital investment rates, export share and other policy variables change permanently, it also leads to permanent changes in economic growth (Toulaboe et al., 2017). Economic growth through FDI has an impact through two main sources:

i. Capital accumulation in the investing entity (the recipient country of FDI), new inputs and the transfer of foreign technology (de Mello, 1999; Dunning, 1993; Blomstrom et al., 1999; Borensztein et al., 1998).
ii. Transfer of knowledge through labor training, skill acquisition and development of local labor force and different management practices (de Mello 1996, 1997, 1999)

Toulaboe argues that FDI should have a contagion effect. Foreign firms should work in collaboration with local firms rather than the former completely overtaking the latter. Findlay (1978) agrees that economic growth is boosted through FDI by advanced technological and managerial practices that these foreign firms bring in the country.

Romer (1986) in his *endogenous growth theory* has suggested, as capital is accumulated there are no decreasing returns, but human capital acquires skills and training through technological transfer. We can deduce that FDI contributes towards human capital development, skill acquisition and other forms of labor training. (Blomstrom et al., 1996; Borensztein et al., 1995; de Mello 1997, 1999). In addition to labor training and development, productivity and efficiency are positively affected as well.

The affects can vary from country by country basis depending on their specific macroeconomic indicators. For instance, Hasli et al. (2016) found out among other variables (such as infrastructure, stock market performance and financial resources) that unemployment in China attracted more FDI while in Singapore and Malaysia it was the opposite case i.e. it deterred FDI.

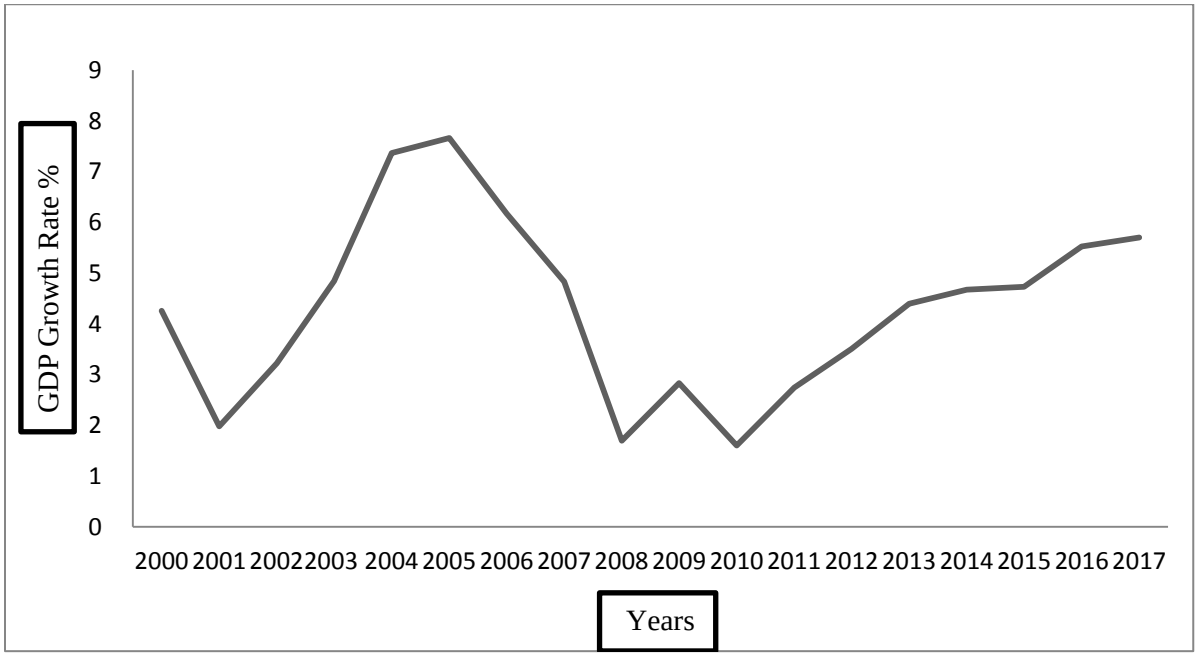
Overall endogenous growth literature has also shown that country specific conditions such as level of human capital, openness of trade regimes, established financial markets, and investment policies have a positive impact of FDI on growth. However, country specific macroeconomic factors always play a major role in encouraging or discouraging FDI inflow.

5.1 CPEC and GDP Growth of Pakistan

Pakistan is a developing economy which is experiencing an annual growth rate of 5.7% as recorded for the Fiscal Year 2017. The growth rate was recorded 4.7% in the year 2015 by the Pakistan Bureau of Statistics (PBS). Reports of PBS suggest that at least a 7% rate of growth is needed to reach its developmental goals. FDI inflows have been serving as the growth engines to reach the targeted growth rate. In the past few years, Pakistan has adapted liberalization and investor friendly policies to attract foreign investors in the country, but political instability and

terrorism activities nullify the goal achievement process. Global economic slowdown and domestic headwinds add to the challenges of goal attainment.

Figure 10 Pakistan's GDP Growth Rate 2000 - 2017

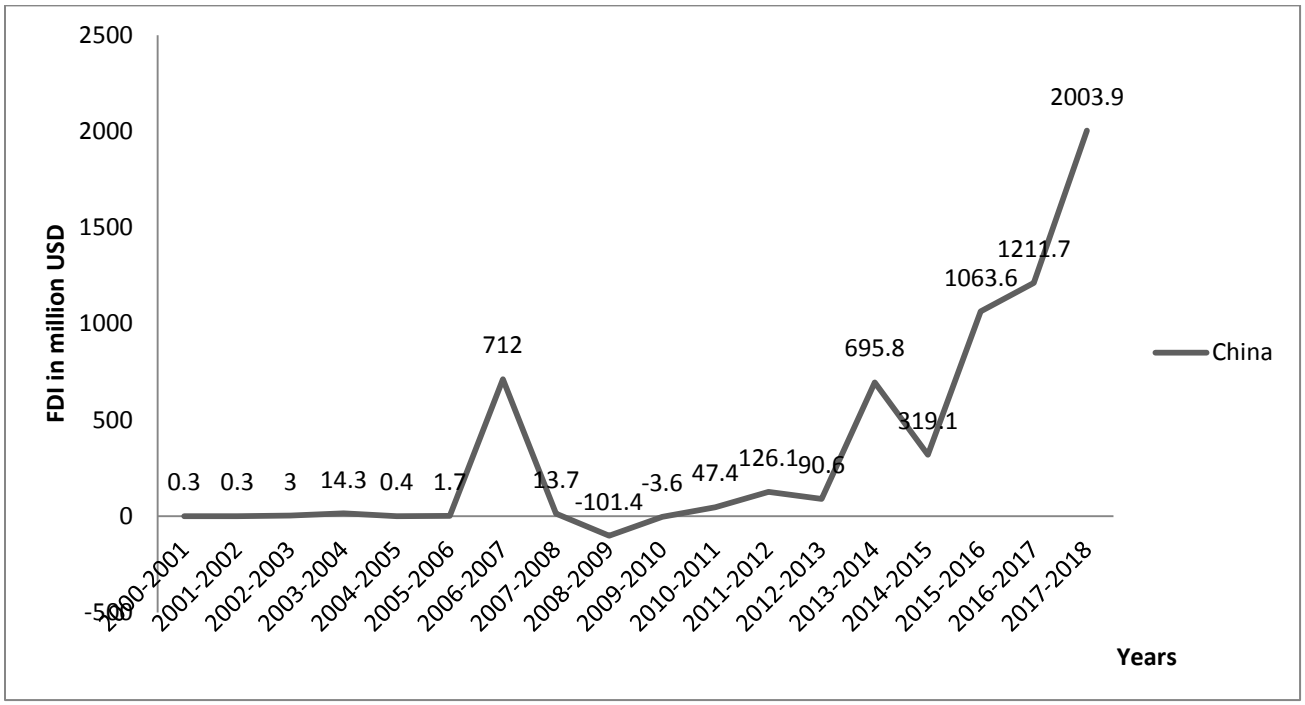


Source: The World Bank Data | Author's own computation

Figure 10 shows the GDP growth rate trend of Pakistan. It has sharply risen after 2010, however till 2015 it has been fluctuating between 2 - 4% annually. We observe that after 2015 the trend has even risen further and went beyond 5% in 2017.

The following figure 11 explains that China's heavy FDI inflow after 2015 is the reason behind the sharp rise in GDP growth rate trend of Pakistan. After 2015 the trend has been on an upward trajectory and has not observed a decline since then. However, projections suggest that this may face a decline as most of the Early Harvest Projects are close to completion (The News, 2018).

Figure 11 China's Share in Pakistan's FDI (million USD)



Source: Data take from Board of Investment, Government of Pakistan.
Author's own computation

It can be seen from the above figure that from $319 million in FY 2014-15, Chinese FDI inflow rose to $1063.6 million in FY 2015-16. Prior to the signing of the CPEC agreement China's share in the Pakistan's FDI was smaller as compared to that of USA, UK and Switzerland as seen previously in figure 8.

In FY 2006 - 2007 it was recorded 712 million while in FY 2010 - 2011 it dropped off to 47.4 million. The above figure also shows disinvestment in the FY 2008 – 2009 till 2010, after which it started to pick up gradually. Except for the FY 2006 – 2007 when it rose to 14% China mostly contributed only 0.5 % of the total FDI in Pakistan.

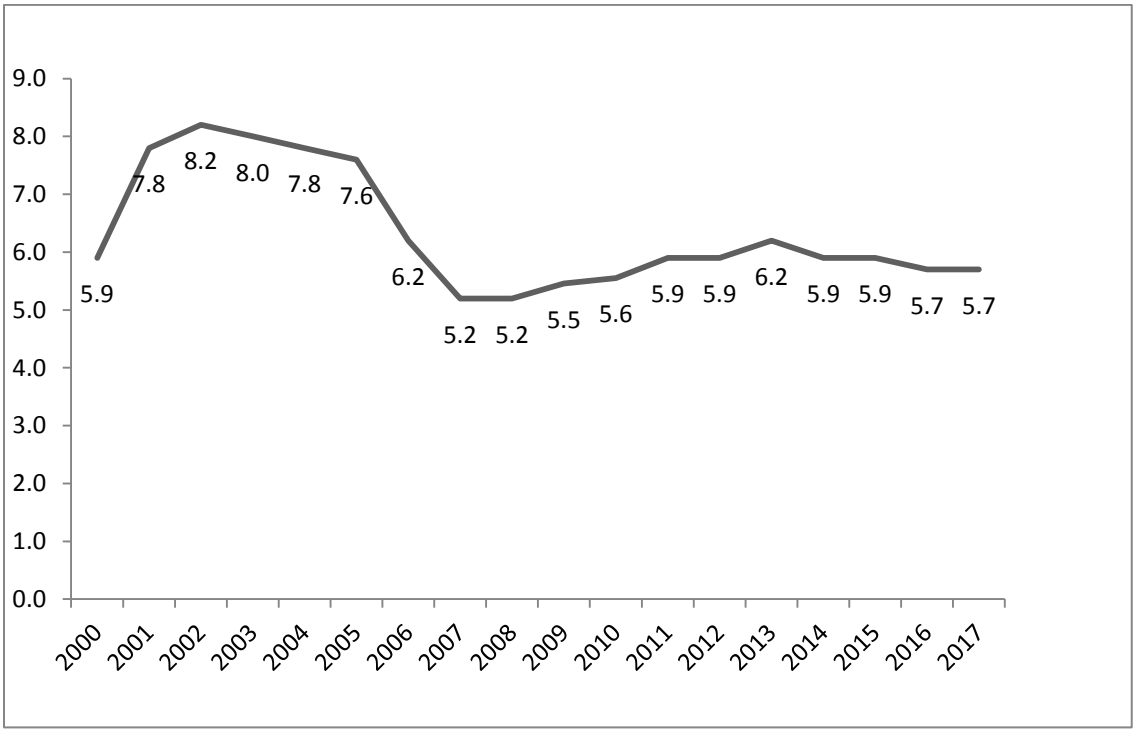
China's overseas FDI activities have risen rapidly and attracting more capital to Pakistan is advantageous to the country's growth and development. Major share of this investment is in the

power sector, followed by infrastructure (railways, highways and ports), telecommunication and trade.

5.2 CPEC and Job Growth in Pakistan

Pakistan's population is exceeding 207 million according to the Census 2017 where more than half the population is below 30 years of age. Current unemployment rate is close to 6%. However, the country's unemployment rate has remained below 10% but has been following varying trends since 2000 till 2017.

Figure 12 Current Unemployment Status of Pakistan 2000 - 2017



Source: Data taken from World Bank

Figure 11 shows that the country's deteriorating situation in 2002 made the unemployment rate jump to a record high of 8.2 when almost 4 million of the labor force was idle. The trend was mainly aggravated due to high population growth, illiteracy, lower female labor force participation, corruption and low governance standards of institutions.

In later years as more FDI started to inflow, unemployment rate kept decreasing. When disinvestment started in 2009 the trend picked up again. The cycle repeated itself of dropping the unemployment rate when CPEC started to pour in FDI and created a lot of work opportunities.

5.2.1 CPEC Projects and Employment Generation Statistics

Under CPEC, construction and energy projects are considered as the Early Harvest Projects i.e. to be completed by 2020. CPEC – center of excellence has reported that 75,000 jobs were generated due to the establishment of these projects. 97% of these jobs were taken up by the local Pakistani citizens and only 3% of the jobs were allocated among the Chinese laborers.

Although, energy projects had more of the skilled Chinese labor force for the constructional phase. However, later domestic workers outnumbered the Chinese workers during the operational phase.

One of the arguments to prove the previous point is that, production units mostly aim at maximizing benefits and minimizing costs. Similarly, a working paper series for CPEC found out that Sahiwal Coal Power Plant, China Power Hub Generation Company and other significant energy projects are reducing the number of highly paid Chinese technicians and replacing them by cheaper local skilled workforce. This workforce mainly comprised of top engineering universities graduates of Pakistan who were later sent for trainings to China. Moreover, recently on-site trainings for semi-skilled workers have already begun as well to inculcate more sophisticated skills. Current foreign workers are employed in the maintenance department and must exit the project within 3-year time period. The department has started recruitment of domestic workers.

An overall of 75000 jobs were taken up by the locals in the Early Harvest Projects (Field Surcey CoE-CPEC).

International Labor Organization has reported that across the world 3500 SEZs exist in 130 countries in total but this number is increasing rapidly and the quick progress is attributed to sustainable development.

Employment oppurtunities created by SEZs can be helpful in estimating the job growth in Pakistan through 9 SEZs being established by the CPEC. Industries established under the SEZs (mostly labor intensive) will make a contribution and add value towards domestically produced goods. Recently, Centre of Excellence has collaborated with the National Vocational and Technical Training Comission (NAVTTC) to identify future demand of workforce on different trade levels.

CPEC's official website reports that it is a billion dollar project under BRI which has the potential of creating millions of direct and indirect jobs not in Pakistan but the entire South and Cnetral Asian region. Moreover, through business and trade related activities CPEC will help its neigboring countries as well.

One of the few biggest projects of CPEC includes transport infrastructure and construction projects in the special economic zones. Since 2015, 70,000 direct jobs have already been created and 60,000 of those jobs are taken up by local people (Tribune, 2019).

Huge inflow of investment will generate numerous economic activities thereby resulting in employment generation. It is expected that besides infrastructure and energy sector development, SEZs will also generate millions of job and technological advancement opportunities.

Infrastructural development projects mostly require civil, mechanical and electrical engineers. Other skill set required is technicians such as masons, welders, carpenters, surveyors, steel fixer

and machine operators etc. Also, economists and finance and human resources professionals, language interpreters are also needed for the projects.

Dearth of skilled labor force in Pakistan has been dealt with short term solution of importing expensive labor from China which increases the project cost and lowers the profit margin. For long term local workforce has to be prepared in order to meet the CPEC projects requirements, improve productivity and efficient utilization of local human resources. Job provision to locals will eradicate extreme poverty and improve living standards of people and promote social welfare.

There have been contradictory projections about job creation from International Labor Organization (ILO), Applied Economic Research Center and Planning Commission; who believe that 400000, 700000 and 800000 opportunities will be created, respectively, between 2015 and 2030. A noteworthy economic progress is projected as a result of employment opportunities.

With the ongoing immense amount of projects there are numerous opportunities for the development of human resources in both the countries. These CPEC projects can produce leaders, managers and entrepreneurs.

Ahmed (2018) has projected that CPEC will create 1.2 million jobs through the early harvest projects but this number may increase as the long-term projects are included. The energy, infrastructure development, Gwadar port and the SEZs have the potential to reduce the unemployment rate of 5.9%.

22 projects out of the 42 agreed upon projects are in progress and Business Recorder analyzed the employment statistics of projects that are in progress or will initiate soon. The following

table demonstrates the employment statistics of projects under the following groups: energy, infrastructure, Gawadar and SEZ.

Table 4 Project wise (Potential) Employment Generation

Sr No.	Name of CPEC Project	No. of Jobs Created (or projected to create)	Type of Job Position
ENERGY SECTOR			
1.	Port Qasim Coal Power Project	16000	Engineers and construction laborers
2.	Sahiwal Coal Power Plant Project and Zonergy	5000 in Construction phase 50,828 in 16 energy projects 22900 have been created under 5 energy projects (which include coal as well as hydro projects) **Total** = 73,728 Jobs created	Laborers Engineers, supervisors, technicians and laborers
3.	Solar Power Project	3,000 jobs created	
4.	Sukki Kinari and Karot	300 - 500 engineers are currently working. 6,000 jobs for locals will be created in future	Engineers
CPEC TRANSPORT INFRASTRUCTURE SECTOR (Highways, Railways)			
5.	Peshawar-Karachi Motorway	9,800 jobs created for locals	Engineers, supervisors, technicians and laborers
6.	KKH Phase II Havelian	2071 jobs created for locals	
7.	Orange Line Metro Lahore	956 jobs created for locals	
8.	Free zone project at Gwadar	2404 jobs created for direct and indirect employees	
9.	ML-1 project of Pakistan	10,000 to 15,000 direct jobs	

	Railway, Karachi Circular Railway, Gwadar Airport, Eastbay Expressway at Gwadar and other road projects are soon to be started	created in 2018-19. 75% was the local workforce.	Engineers and other professionals
10.	Railway Infrastructure	It is estimated 8 laborers per kilometer are required for successfully running the system that means around 12,000 laborers for 1500 km will be needed.	Engineers, supervisors, technicians and laborers
GAWADAR			
11.	Gwadar Sea Port, Air Port and economic zone.	0.1 million will be created	Engineers and other professionals
12.	China Communications Construction Company & Fiber Optic	20,000 new jobs created 580 jobs created	Engineers and other professionals
9 SPECIAL ECONOMIC ZONES			
13.	9 SEZs will take approximately 9,400 acres of land. 4,500 of which is allocated to the Faisalabad's Special Economic Zone.	0.6 million jobs will be created 158 labor intensive jobs per acre of the industrial area will be created	Engineers and other professionals

Source: Data taken from CPEC-center articles | compiled by author[1]

[1] **Source:** CPEC – Center: Working Paper Series | Employment Generation and Labor Composition in CPEC and related infrastructure projects and Employment Outlook of CPEC: A Meta-Analysis and Business Recorder at https://fp.brecorder.com/2018/08/20180805396614/

The Special Economic Zones (SEZs) are designed to use 70% of their area for industrial zones and the remaining 30% is allocated for the housing and employees' facilitation.

The categories of skilled labor required for these projects include Signal Support Staff, Electrical Engineers, Project Managers, Communication Engineers, Electricians and Civil/ Construction Engineers.

To meet the shortage of skilled labor force in the country National Vocational and Technical Training Commission (NAVTTC) has already started to provide trainings in 38 CPEC-specific trades in 197 institutes across Pakistan (PCN, 2017). On the other hand the Government of Pakistan wishes to establish Pak-China Technical and Vocational Institute at Gawadar specifically to promote skill training for port machinery. With the current 58% literacy rate of the country it is of paramount importance that technical and soft skills to be developed to meet requirements of CPEC projects.

5.2.2 A CASE STUDY – Willingness of people to switch jobs from fishing to industrial work

Nasir and Kakar (2018), from the Pakistan Institute of Development Economics assessed the impact of CPEC on job switching of local fishing community in 600 km long coastline, Gawadar, Balochistan. They conducted a research study based on a survey by interviewing 266 local fishermen and asked for an opinion of they would be willing to switch jobs from being a fisherman to an industrial employee. (234 was the sample size after data cleaning). More than 90% of the local community relies on fishing as a means of livelihood due to lack of any other employment opportunity. 82% of the respondents were married with average household size of 9 members and the average age was 34 while the average income PKR 26000. The main objective

of the research to analyze at what wage rate will the fisherman be willing to switch to an industrial level role and what hurdles can arise to prevent smooth transition of job switching. Constraints of the job witching were mainly skill requirement, distance to work and uncertainty of the job.

The research study used Contingent Valuation Method (CVM) to estimate the willingness of fishermen to accept another role. "CVM is used to display the "economic value" of environmental goods and services. For these goods and services, the study created a hypothetical scenario of job market through which Willingness to Switch (WTS) of the fishing labor into industrial sector was estimated" wrote Nasir and Kakar.

CVM technical process was the tested in the hypothetical job market and consisted of the following steps:

i. Moving from average income offer to minimum income offer (on agreement)
ii. Moving from average to maximum (on disagreement)

Fishermen were asked to state their preference of switching followed by three bids in terms of wages. Kakar and Nasir report, "The responses are "Yes" or "No" for the initial bid which is offered to the respondents. The respondents who respond with a "Yes" for the initial bids are then offered a lower bid (minimum) and if the respondents refuse the initial bid, the bid is increased to a maximum amount. Hence, in the context of the study a bid (25000) was offered to the respondent to switch from fishing to industrial sector. For those who said "yes", the bid was decreased to minimum (15000) and then they were asked if they accept this bid in terms of "yes" or "no". Next, they were offered a bid of 25000 again and those who refused the bid average income (25000) were then asked if they would switch by offering them the maximum income

(35000). Thus, three bids of minimum, average and maximum gave a better idea about their willingness to switch from fishing to industrial sector".

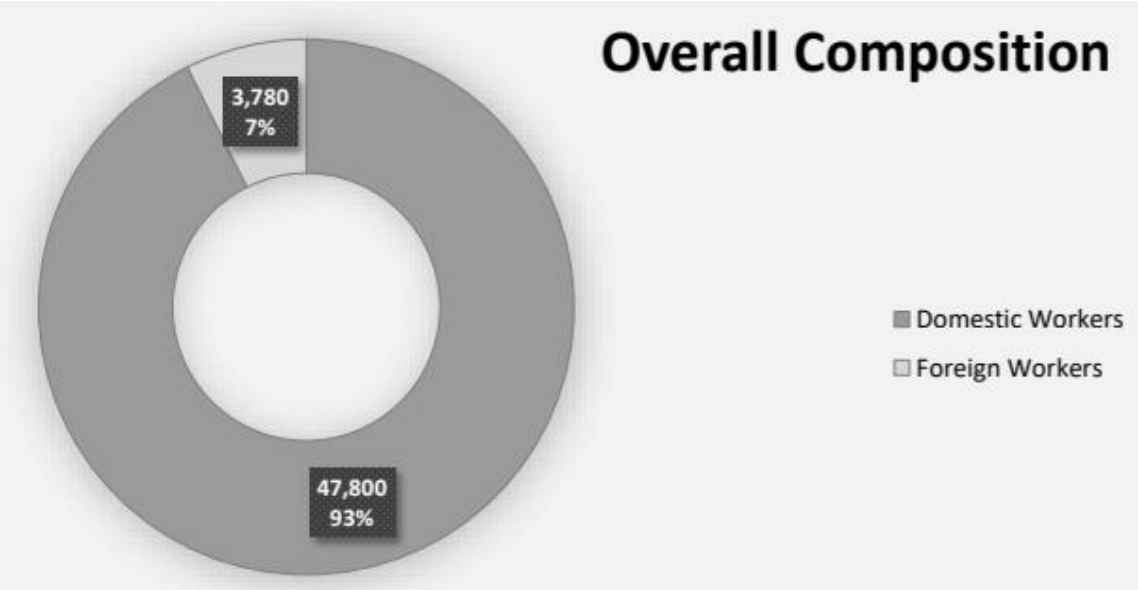
The study found out that the bid amount had a positive relation with the willingness to switch. Since the average wage recorded was PKR 26000, if a minimum wage of PKR 30,000 or above is offered, fishermen would switch the jobs. Respondents with higher fish catch demanded a higher compensation.

However, in order to be recruited for industrial jobs, free training to adapt to new skills is the main requirement for now. Also to ensure job security long term contracts will improve the willingness to switch.

It is pertinent to mention that the amount of jobs that CPEC has brought into the country is catering to the needs of thousands of poverty ridden people. Since, most of the jobs are concentrated in the infrastructure construction sector the leaders must take into consideration the element of job creation once these projects are completed to avoid unemployment rise in the future.

Special Economic Zones can serve as a platform for employment creation. Moreover, the port gives more shipping options to importers and exporters. Long term jobs through manufacturing and industrialization and an increase in exports to china.

Figure 13 Job Growth and Labor Composition (domestic and foreign workers) in Infrastructure Projects 2017



Source: CPEC – Center: Working Paper Series | Employment Generation and Labor Composition in CPEC and related infrastructure projects

The above figure shows the composition of local and foreign workers, gathered from infrastructure projects in 2017. It was recorded by the CPEC center that only 7% or the workforce was foreigner i.e. the Chinese labor force while 93% of the workers were locals which clearly demonstrates that the job opportunities created by these CPEC related projects are numerous.

Chinese labor force comprises of the highly skilled technical staff that assists the local workers to gain optimal results out of the ongoing projects.

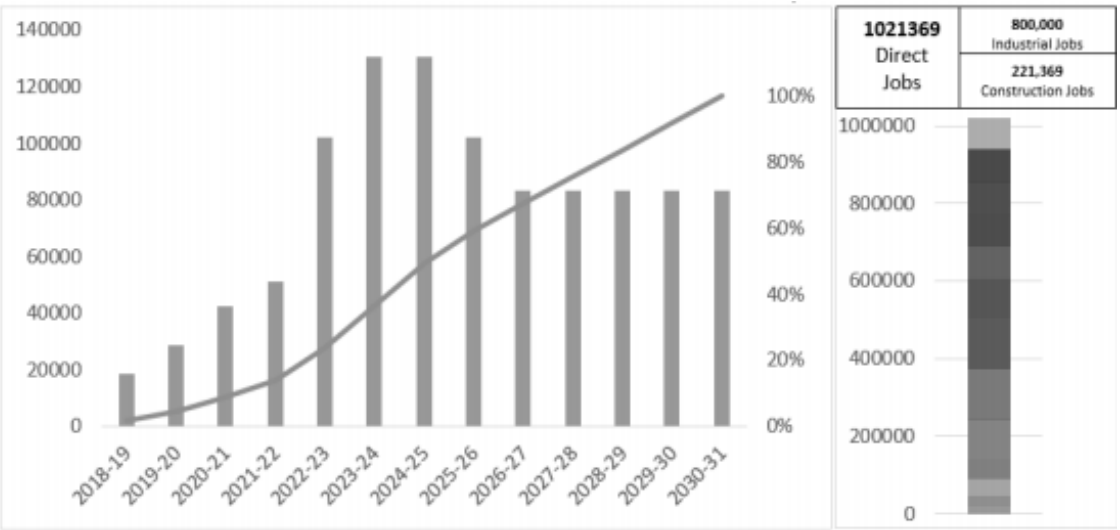
An overall of 75,000 jobs were taken up by the locals in the Early Harvest Projects which includes the infrastructure and energy projects (Field Surcey, CoE-CPEC, 2017).

Figure 14 Total Jobs and Composition of Labor in Infrastructure Projects (2017)

Source: CPEC – Center: Working Paper Series | Employment Generation and Labor Composition in CPEC and related infrastructure projects

Figure 14 further elaborates on the project specific labor composition. CPEC - center of excellence has reported that approximately 52000 direct jobs were created through six road related projects. Average ratio of employment of Chinese to Pakistanis was 1:18. The above chart reveals that only 7% jobs were taken up by the Chinese workers while the rest of them were taken by the local Pakistani labor force.

Figure 15 Job Projection in Industrial Cooperation (2018 – 2030)



Source: CPEC – Center: Working Paper Series | Employment Outlook of CPEC: A Meta-Analysis

Figure 15 shows the employment projections by Rashid, Zia and Waqar (2018) for CPEC - Center. Overall the employment will face an increasing trend for the next 10 years. However, jobs in industrial and construction sector will experience enormously high numbers during the period of 2024 – 2025 when most of the mid-term projects will be close to completion; labor force will be high in demand.

CPEC has created numerous jobs in energy, construction, industrial sector (See Appendix 2 for details). The number of jobs will keep increasing over the upcoming 5 - 6 years during the projects are in construction phase. However, demand for construction workers will gradually drop till 2030 when infrastructure for all projects will be built. Operational phase will have more openings for literate and skillful staff. Government will have to introduce substitute employment opportunities to avoid people falling into poverty trap who held labor intensive jobs previously.

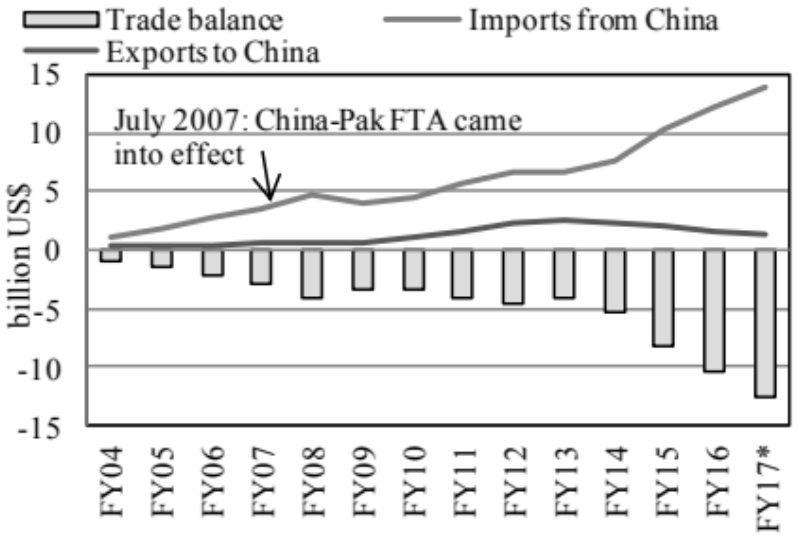
5.3 CPEC AND TRADE OPENESS

5.3.1 Current Status of China's Trade Globally and with Pakistan

China is one of the top countries in the world with reference to its highest volume of export (12.8% of share in world) and second largest volume of imports. (USA is the largest importer with a current account deficit of $488.5 Billion in 2018, according to the Bureau of Economic Analysis). The Manufacturing sector in China contributes the most to boost the trading volume through exports - it accounts for 94% of the total exports and 65 % of total imports (Abbas and Ali, 2018). Besides US and Europe it is also pertinent to observe China's trade with Asia.

Hong Kong has the largest trade partner share with China while Pakistan is 13th on the list. China shares a deficit with some of its trade partners such as Japan, Korea, Thailand, Malaysia and Saudi Arabia. More than half of its export includes electrical machinery. In the South Asian region, India is the largest trading partner followed by Pakistan. Main imports from this region include pearls, gems and cotton.

Figure 16 Pak-China Trade 2004 – 2017



Source: State Bank of Pakistan | Staff Notes

From the above Figure 16, we can see that Pakistan's imports from China have observed an increasing trend since 2004. The sharp rise of imports in 2015 is attributed to CPEC which mainly included electrical and mechanically machinery for energy and infrastructure development projects.

Table 5 below shows the change in imports from 2005 to 2016 observed for the same item:

Table 5 Pakistan's Main Imports from China in 2005 and 2016 (million USD)

Item	2005	2016
Electrical Machinery	429	3,364
Mechanical Machinery	540	2940
Iron and Steel	41	1061
Organic Chemicals	119	636
Man-Made Filaments	93	556
Fertilizers	22	300
Articles of Iron or Steel	44	525
Plastic	66	364
Ceramic Products	62	169
Vehicles other than Railway	72	398
Total	2,349	13,680

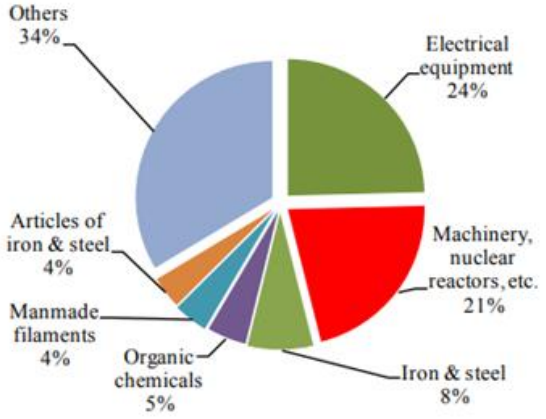
Source: International Trade Center SBP Staff Notes

Pakistan's main imports consist of electrical and mechanical machinery. Also, we can observe a significant difference in import size in 2005 and 2016. The first two components in table 5 have increased due to the CPEC projects.

The following figures 17 and 18 show the import and export percentage from and to China of various goods. Pakistan usually exports a lot of agricultural commodities while imports huge

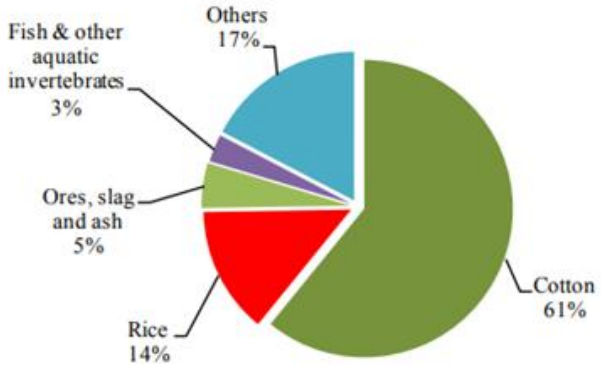
amounts of heavy electrical and mechanical machinery. Iron and steel are the third most imported products from China. Cotton exports hold the largest share in exports to China.

Figure 17 Pakistan's Major Imports from China (2016)



Source: International Trade Center | SBP Staff Notes

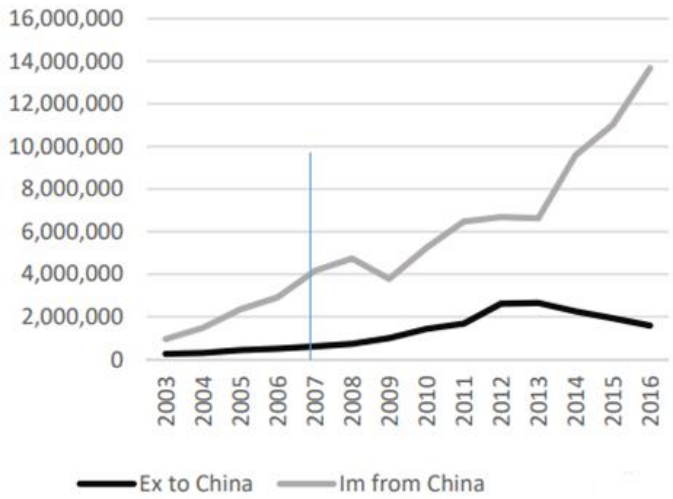
Figure 18 Pakistan's Major Exports to China (2016)



Source: International Trade Center | SBP Staff Notes

Pakistan's imports from China have been always more than it has been exorting. The low exports to China are due to the competition that it has to face from other ASEAN countries.

Figure 19 Pakistan's Import from and Export to China (US$) 2003 – 2016



Source: International Trade Center | SBP Staff Notes

Figure 19 illustrates that after the CPFTA agreement was signed in 2007 overall trade increased. Over the years export import gap has been widening resulting in a current account deficit of Pakistan. After CPEC related import of machinery has started the gap has widened further.

Figure 20 Pakistan's Trade Deficit with China (USD Billion) 2013 – 2017

Source: Pakistan Business Council (PBC) | Annual Report, 2019

The above figure 20 illustrates, since 2013 Pakistan's imports from China have increased sharply while the exports have been declining giving rise to an increasing trade deficit. Pakistan's trade deficit with China rose from US$3.97 billion in 2013 to US$13.88 billion in 2017. CPFTA can help Pakistani exporters to compete on same footing as other international exporters in Chinese markets and decrease the trade deficit. Also, the establishment of SEZs under CPEC will not only increase number of jobs in Pakistan but will also serve as a platform for export led growth by introducing concepts of products diversification, better mangement practices, good business environment, well organized services and offer Pakistan the oppurtunity to compete in the international markets with similar regional competitiors. Additionally, they will also help in creating balance between indutrialization and social development.

5.3.2 China Pakistan Free Trade Agreement (CPFTA)

CPFTA is a strategic agreement in order to exploit cross border markets and aims at strengthening bi-lateral relations between two neighboring countries. It was signed in 2006 but came into effect in 2007 to promote and diversify trade. Moreover, it intends to expand trade by removing trade barriers and facilitating cross border flow of goods to enhance economic cooperation.

After the agreement came into effect, China granted concession to Pakistan for the first five years on 7,550 tariff lines. 35% of the products were included in the 0 rated category (for three more years after 2007). They included: marble, leather, cotton fabrics and medical equipment. On the other hand 15% of the products did not receive a concessional treatment such as fish, cotton, paper, plastic and textile items.

Pakistan offered concession to China on 6803 tariff lines for the first five years. Products that held high significance for the industry were offered zero tariff rates such as the electric and electronic products, machinery, chemicals and various raw materials. Woven fabrics, synthetic fibers, paper and paperboard, machinery products and footwear did not receive any concession.

Tribune a local newspaper reports that the basic objective CPFTA phase 2 is to enhance market access, further liberalize and facilitate trade, promote transparency. The agreement has recently been signed in April 2019 and aims at further strengthening technical and economic cooperation. It includes a safeguard mechanism to protect the local industry. This mechanism lacked in phase one. 17, 00 items have been listed as sensitive to safeguard the local industry. Export access and import protection were the main features of the agreement.

5.3.3 CPEC and Export Growth in Pakistan

In line with the endogenous growth theory, when there is technology transfer, innovative techniques are brought into the country that affects productivity consequently leading to more exports. Majeed and Ahmad (2006, 2007) based on theory and evidence of developing countries have found out that the effect of FDI on exports is significantly positive. However, both the authors also suggest that developing countries must focus more on industrial exports rather than agricultural exports.

Hoekman and Djankov (1998) based on data of central and eastern European countries analyzed that local businesses take the opportunity of attaining foreign goods to improve their skills and increase productivity leading to an export rise. Pfaffermayr (1996) also empathizes on the FDI led export growth which serves a dual objective i.e. FDI inflow and export growth.

Success stories of Asian economies also support the positive relation between FDI inflow and export growth. Most multi-national corporations use developing countries as their export platform. Furthermore, export growth also indicates trade liberalization and friendly investment conditions in the host country. If such a condition exists it attracts more foreign investors further enhancing production capacity leading to surplus output for exports.

Pakistan's exports consist of mostly agricultural products. The recent inclusion of agricultural projects in CPEC will help the country to increase its export growth and simultaneously give the opportunity of reducing the trade deficit with China which has now been reported $13.88 billion by the Pakistan Business Council.

Tribune reports that the transfer of technology for agricultural projects would increase per acre yield of crops and would serve as a value adding mechanism for agricultural products. China's

global food imports are $99.6 billion out of which Pakistan accounts for only approximately $0.4 billion i.e. 0.37% only. Ministry of National Food Security and Research (MNFSR) issued a Food Security Policy in 2018 stating that under the CPEC initiative 9 agricultural development zones will be established. The agricultural and technical cooperation will solely be based on comparative advantage and cooperation needs. CPEC will provide an opportunity to produce high-tech agricultural products. Potential exports to China include: cereals, eggs, honey, animals, tobacco, meat, sea food, fruits and nuts. This will help the emerging rural businesses to flourish through innovative techniques and entrepreneurial establishments.

Economic Survey of Pakistan 2017-2018 has stated that contribution of agriculture to the GDP of the country is 18.9% and employs 42.3% of the labor force. It accounts for almost 65% of export earnings. Pakistan is lagging other countries in terms of productivity as compared to other regions. Cooperation under CPEC for agriculture sector will help it to develop and utilize its potential to the maximum.

Enhanced agricultural goods productivity can help Pakistan to boost its exports. Pakistan has also an advantage of low transport cost. If product efficiency and export quality is produced, low carry costs can help Pakistan to generate huge amounts of revenue.

State Bank of Pakistan has confirmed the following projects that are already set up under CPEC. They include:

1. **Fruit Processing Industry Gilgit-Baltistan** is going to help boost the fruit exports such as apricots, apples, almonds and cherries. The fertile soil and perfect weather conditions and environment in that region help farmers to produces these fruits in huge amounts. Asian Development Bank has researched and found out that they produce more than

100,000 metric tons of fresh apricots. The by-products of fruits are also used for retail business. Hence, setting up proper high technology-based fruit processing industries will definitely help the farmers' productivity and more income generation from exports.

2. **Sino-Pakistan Hybrid Rice Research Center** (at Karachi University) is specifically set up to produce "high quality and high yielding" rice. The collaborative research program focuses on research and development by producing different and good quality rice by cross-breeding. Young researchers will also be trained in modern agricultural techniques to produce varieties of rice.
3. **Meat Production & Processing Units**: Setting up a meat production and processing unit will not only boost exports to China but also to Afghanistan and Central Asian markets. Hussain (2017) reveals the unit in Sukkur is planned in a way that it will produce 200,000 tons per annum and the demonstration plant will process 200,000 tons of milk in a year.
4. **Khyber Pakhtukwa - China Sustainable Donkey Development Program**: Livestock department at the KP has announced that it will develop donkey farms to increase the donkey's population and socio economic status of donkey breeders. To prevent scarcity of animals in Pakistan only 80,000 donkeys will be exported to China. Foreign companies have signed a $ 3 billion project for commercial farming of donkeys. China is the right export market for donkeys as their hides are used to produce traditional Chinese medicine. A local newspaper reports that the initial cost of investment is $1 billion which will easily be covered by revenue generation.

The above mentioned projects will target two main economic indicators: job creation and export growth.

5.4 Debt Sustainability Analysis of Pakistan in the wake of CPEC

After having discussed the economic growth and development opportunities created by CPEC we will now analyze the debt implications caused by loan based funding for infrastructure projects. It is important to answer; will CPEC projects generate enough revenue for Pakistan to meet debt obligation and servicing cost without putting additional pressure on the external payment capacity?

5.4.1 CPEC and Rising External Debt of Pakistan

According the Pakistan Economic Survey 2017-18 Pakistan's total public debt was US$ 153 billion at end December 2017 while the total debt of the Government was recorded to be US$ 141 billion. Debt to GDP ratio is 72.5 % as of 2018, (Trading Economics). An increase of US$ 9.51 billion in the total public debt was recorded in the first half of the FY 2017-18. Rise in domestic debt and government borrowings was recorded US$3.92 billion and US$2.77 billion. "External debt contributed US$ 5.59 billion to the public debt while government borrowing for financing of fiscal deficit from external sources was US$2.58 billion", Pakistan Economic Survey 2017-18.

The rise in external debt indicates the borrowing done to finance:

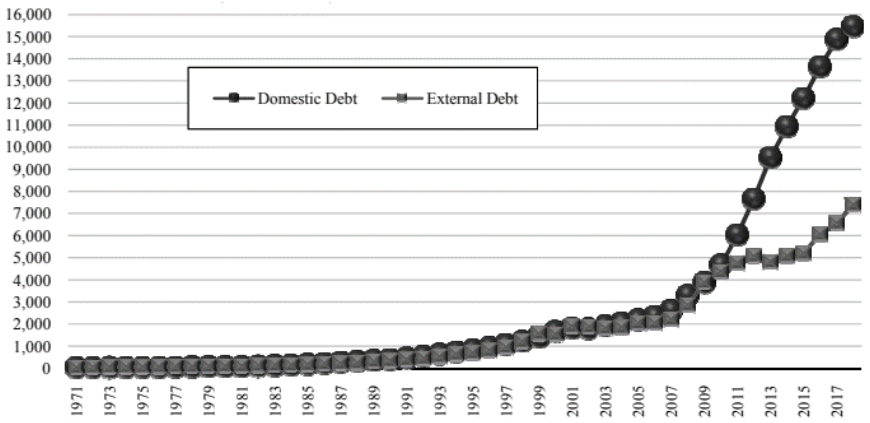
i. Fiscal deficit and
ii. Revaluation loss to Pak Rupee (depreciation against US Dollar and appreciation of other currencies against US Dollar)

The devaluation of rupee has also caused the increase in rupee value of external debt.

Economic Survey of Pakistan has also highlighted that bi-lateral loans were mainly received from China for the funding the CPEC projects.

Increasing CPEC investments are building up the external payment obligations. Moreover, huge debt repayments and repatriation of profits is causing a fast depletion of foreign exchange reserves and deteriorating repayment capacity of the country.

Figure 21 Trends in Domestic and External Debt (PKR in Billion)



Source: State Bank of Pakistan, Economic Affairs Division, Budget Wing and Debt Policy Coordination Office

From the above figure we can see a significant rise after 2015. This is mainly attributed to CPEC loan inflow for infrastructure projects.

A local newspaper (The News) reports that as of June 2018 external debt and liabilities have risen to $95.097 billon posing a serious threat to the country's repayment capacity of foreign obligations. External Debt and Liabilities account for 33.6 % of the GDP.

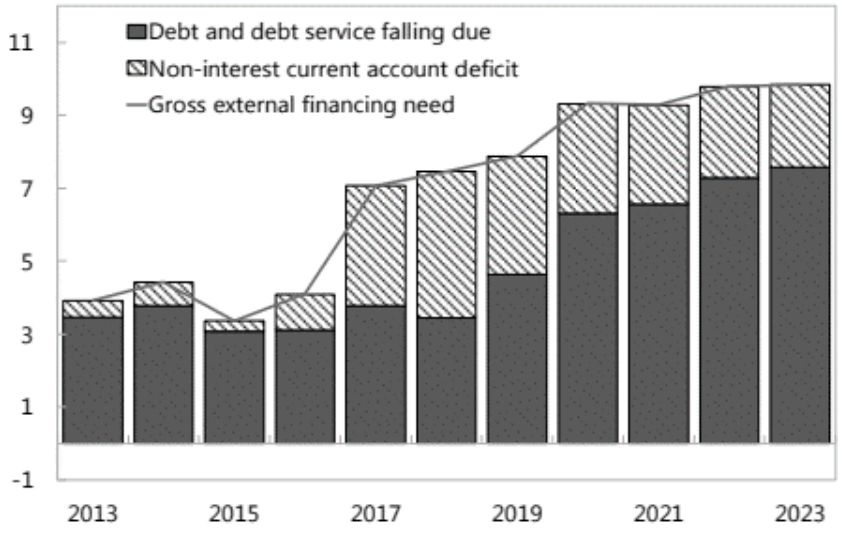
The News (2017) has also reported that Pakistan will have to pay US$100 billion to China by the year 2024 out of total investment of US$18.5 billion in 19 early harvest projects mainly accounted for **energy projects**. Chinese officials further elaborated that these loans are concessional loans that charge interest of around 2 – 2.5 % and account for 1.1 % of Pakistan's foreign debt. Additionally, these loans are taken by Chinese companies and investors from State owned banks in China and are responsible of paying back the loans.

Andani (2019) has a different opinion about energy projects and repatriation of profits. He claims it as a debt trap and calculates that Government of Pakistan will pay US$20 Billion to Chinese IPPs so that they can give it back to Chinese state owned banks. Furthermore, the return on equity in some cases is as high as 34.2%. US$11.3 billion will be paid as dividends to Chinese IPPs.

For **infrastructure projects**, Andani (2019) has calculated that the Government of Pakistan will repay US$ 7.5 Billion against a US$5.9 billion loan at an interest rate of 2-5.2%. He forecasts a depletion of foreign exchange reserves and devaluation of the Pak Rupee even further. He concludes, "What comes from China goes back to China". By 2037-38 Pakistan might not be able to repay and may default on its repayment and dividend payments and have to face a similar situation like Srilanka; where it had to handover the Port Hambantota to China by failing to repay $1 billion.

5.4.2 Capacity to Repay – Projections by IMF till 2023

Figure 22 Gross External Financing Needs (% of GDP)



Source: IMF | Country Report No. 18/7

According to IMF's Country report Gross External financing needs will continue to rise as projected till 2023. The increased current account deficit and external debt service is driven partially by CPEC related loan repayments and profit repatriations. This will result in elevated external financing needs which will increase to US$ 45 billion (9.9% of GDP) in FY2022/23 from US$ 21.5 billion in FY2016/17 (7.1% of GDP).

IMF forecasts that risks in terms of Pakistan's capacity to repay the loans are high. Moreover, continuous inflow of CPEC investments could further speed up the piling of loans and external payment obligations resulting in deterioration of repayment capacity and foreign exchange reserves.

6 Policy Recommendations

CPEC has reaped significantly good results in terms of GDP, Job and export growth in Pakistan. During the past 3 years the short term or the early harvest projects have contributed positively to the economy of Pakistan. This section will shed light on some of the policy recommendations that must be undertaken to avoid the currently existing loopholes and maximizing the results of upcoming mid-term and long term projects.

Pakistan can learn from the experiences of its neighbor China who has rapidly absorbed technological development in production and raised its export share across the world. Pakistan has the opportunity to capitalize through transport infrastructure, trade facilitation and energy sector expansion. Also, the mineral resources such as iron, copper and zinc are found in abundance in the southern provinces (Sindh and Baluchistan), these can be exploited further as well. The following section highlights what should be done to optimally utilize the opportunities provided by CPEC. Successful implementation of the project lies in the effective interaction of investments, institutions and governance policies.

Few policy recommendations to gain maximum benefits through CPEC are:

Overcoming the Current Account Deficit by capitalizing on SEZs: (export growth and import substitution)

Pakistan's current account deficit has been recorded as high as 2 billion USD in March 2019. Most of the trade deficit has emerged from trade with China. Special Economic Zones developed under CPEC should consider the aim of high speed industrial growth which would consequently give rise to export promotion. Moreover, the existent exports can further be enhanced by introducing innovative techniques and ensuring value addition through manufacturing processes.

Pakistan's exports to China have to face competition by the South East Asian Nations (ASEAN) due to the concessional tax rates offered to them by the former. Under the FTA Pakistan should try to obtain similar benefits with China as any other ASEAN nation. Increased production of quality goods will help us attain the export promotion goal.

Hussain (2017) has projected that the exports must increase at least by 15% annually in order to meet the debt obligations and servicing costs of CPEC projects. Moreover, exchange rate management should be efficient to make the exports competitive in the international markets. On the other hand, import prices should be lower to attract more investment in the country.

Moreover, since a lot of technological transfer has been done through China, import substitution should be introduced by promoting domestic production for items like: electrical and mechanical equipment, glass, rubber, fertilizers and organic chemicals.

Export growth will also help in debt servicing, dividend payments and repayment of loans.

Boosting Industrial Capacity

Industrial Capacity can be increased manifold through modernization of equipment and automation to raise quality and production of goods. Also, in order to meet the goal timelines manual processes must be replaced by automated processes. Quick and quality delivery of the projects is the foremost priority right now.

Capacity increase can also be increased by promoting a culture of research and development labs to enhance product diversification (as already done for rice). More agricultural products such as cotton can also be added to the list of diversified products for export purposes. Proper marketing and branding of such products is needed to raise profitability.

Skill Development Initiative (inclusion of marginal communities and youth)

Since, a lot of modern, automated and technical equipment is being transferred into the country, skill development trainings have become of paramount importance to smoothly and efficiently run the projects. Training and development can vary according to region, project type and preparing for future needs.

i. Vocational Training Centers in collaboration with Chinese experts must be established within the premises of SEZs. The onsite training mechanism will ensure capacity enhancement of workers according to the work that is demanded of them. Hands on learning experience will help them grow and polish their skills professionally.

ii. Currently, a lot of labor force consists of male population as the projects are mainly construction related. However, a gender balance must be maintained for the operational phase. Female participation should be encouraged in all areas ranging from engineering to administrative activities.

iii. In addition to skill development of already existing workforce, youth from rural areas must also be targeted to help them develop technical skills e.g. to operate the machinery that does not require formal education. However, they must also be encouraged through incentives to complete formal education in order to attain higher level positions in the project.

iv. Once the projects are fully operational, internship programs must be introduced for all relevant disciplines such as electrical, mechanical and environmental engineering, finance, accounting, supply chain and other specific disciplines helpful for port related projects.

Financial & Budgeting Policy

Local Pakistani Companies should be financed by commercial banks for their sole or joint projects with Chinese companies. Infrastructure Development Fund and Commercial Banks of Pakistan can collaborate together on scrutinizing the project proposals and assessing the feasibility of projects before granting loans. Furthermore, hedging approaches and risk managing policies can be introduced to mitigate future losses. Provincial Developmental Budget allocation should prioritize funding for urban and rural infrastructural development projects that link main highways and motorways with CPEC projects.

Innovation and Research & Development

After the projects are fully operational, it is our own responsibility to work independently from Chinese workers to generate innovative ideas and techniques that can help to further maximize the results and keep the projects operational in their full capacity.

Compliance with Environmental, Labor and Accountability Standards

One of the biggest challenges that huge power and infrastructural development projects are causing is the environmental degradation. Compliance with environmental standards is the ultimate need of the hour to avoid facing deadly climatic changes in future. "Clean Manufacturing" techniques can help lower this threat and gain maximum benefit from FDI inflow in the country.

Local labor force must not be exploited at cheaper wages but should be awarded the same wage rate as of international standards. Hiring should be done on merit and appropriate skill level to promote competition.

Lastly, strict accountability measures should be introduced by National Accountability Bureau to avoid corruption and ensure transparency of documents and spending details.

7 Discussion and Conclusion

This research study aimed at assessing, if CPEC is actually beneficial for the overall growth of the economy of Pakistan. The statistics and trends have clearly shown that the after CPEC agreement was signed there was sharp rise in FDI inflow causing an increase in GDP growth and Job growth. A stark combination of pre and post CPEC is shown to find the changes in the variables. Once the projects are operational export growth is likely to rise as well to overcome the current account deficit with China, specifically. Moreover, CPEC also has an effect on other social welfare indicators such as elimination of poverty through employment, better quality jobs, and easy access to public facilities (schools, hospitals). Moreover, technical skill development of local workforce is another indirect effect of CPEC for a long lasting and sustainable impact.

CPEC is the way forward for the Pakistani Economy through structural transformation done via infrastructural development, energy production for industrial expansion and facilitating the traders through Gwadar Port constructions. In addition to the new infrastructure, already existing infrastructure is being improved and upgraded as well. It is an all-rounder project to boost the Economy of Pakistan in terms of industrial production, transportation, trade and establishing Special Economic Zones to attain long term goals of sustainable economic growth.

Besides the humungous growth factor, CPEC is also generating debt burden for the country. The return on equity investment, loan repayment and debt servicing for some projects is posing a serious challenge to the economy. However, optimistic views from government officials suggest that these obligations can be met easily once the projects are complete and generate revenue e.g. export growth, energy and transport projects.

It is important to mention that CPEC aims at long term sustainable growth for Pakistan and not just a temporary boost in GDP. The project is helping as a driver of societal uplift as well in terms of eliminating poverty through job growth and offering better employment prospects. Moreover, huge transport network of roads, highways, motorways is not only facilitating trade but the general public living in rural areas as well, by providing them access to public services (hospitals, clinics, schools etc.).

The CPFTA aims to strengthen bi-lateral relations between the two countries and with the signing of the second phase of this agreement lately, relations have been further solidified. Pakistani exporters can exploit the Chinese markets but, the trade account deficit of with China still remains high. Until and unless our exports increase by 15% per annum it will be hard to balance the accounts. To achieve this target our exporters would have to divert exports from traditional market destinations to other areas. Private business sector should use modern processes, innovative techniques and invest in human capital to boost production to meet market needs. Moreover, we need to negotiate a deal where we are offered same level of concessions as other ASEAN nations.

One constraint of the study is that an econometric model or analysis could not be used for a time frame of three years, hence, relied completely on numbers released by the official Government departments and changing trends.

However, government projections reveal that the project is very likely to boost the economic growth of Pakistan. Good governance practices and investor friendly policies can attract even more FDI in the country. Pakistan has come a long way facing political, economic and social challenges and it can benefit from CPEC only if internal institutions and policies are strong as

well. Higher literacy rate, lower unemployment, poverty elimination, innovative practices, good governance, strict compliance standards, transparency and accountability and technical skills development are the very foundations which can make CPEC a huge success in the South Asian region.

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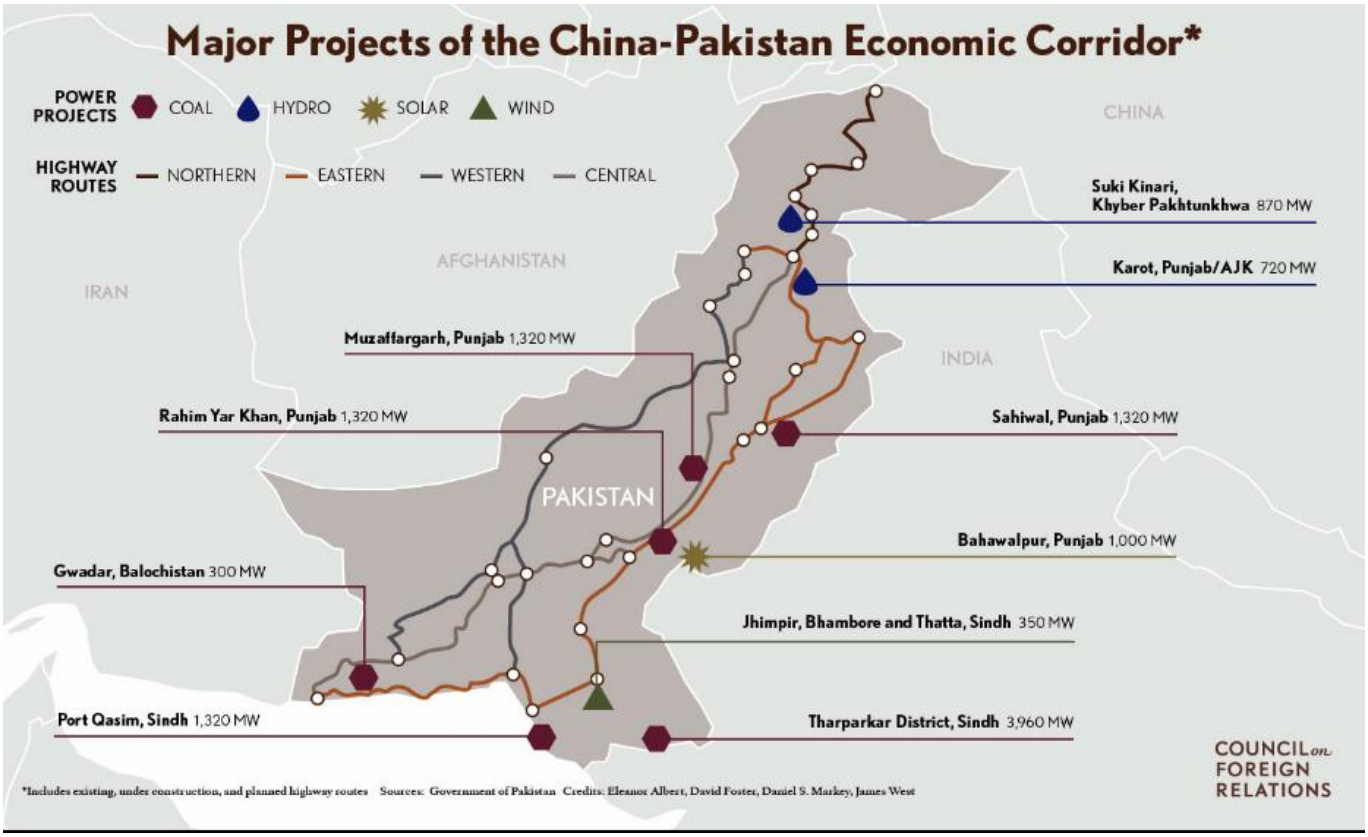
APPENDIX

Appendix 1 CPEC Major Projects in Pakistan



Source: Council on Foreign Relations

Appendix 2 CPEC Projects and Employment Impact

Sr. No	Name	Capacity	Cost (US $M)	Construction Labour	Operational Staff
1	Port Qasim Electric Company	1,320 MW	1,980	3,500	250
2	Sahiwal Coal Fired Power Plant	1,320 MW	1,600	3,500	250
3	EngroThar Coal Fired Plant	1,320 MW	2,000	3,500	250
	Surface Mine in Block II of Thar Coal Field	6.5 mtpa	1,470		
4	Rahimyar Khan Coal Power Project	1,320 MW	1,600	3,500	250
5	SSRL Mine Mouth Power Plant	1,320 MW	2,000	3,500	250
	SSRL Thar Coal Block Mine	6.5 mtpa	1,300		
6	Gwadar Coal Power Project	300 MW	360	425	26
7	HUBCO Coal Power Plant	1,320 MW	970	2,562	278
8	Quaid-e-Azam Solar Park	1,000 MW	1,320	2,919	191
9	Dawood Wind Farm	50 MW	125	217	85
10	UEP Wind Farm	100 MW	250	374	159
11	Sachal Wind Farm	50 MW	134	217	85
12	Sunnec Wind Farm	50 MW	125	217	85
13	Karot Hydro Power Station	720 MW	1,420	5,214	375
14	SukiKinari Hydro Power Station	870 MW	1,802	6,300	453
15	Gaddani Power Project	1,320 MW	3,960	3,500	250
	Jetty + Infrastructure	20 M tons of imported coal	1,200		
16	Salt Range Mine Mouth Power Project including mining	300 MW	800	425	26
17	KohalaHydel Project	1,100 MW	2,397	7,966	610
18	Pakistan Wind Farm II	100 MW	150	374	159
19	Thar Mine Mouth Oracle	1,320 MW	1,300	3,500	250
20	Muzaffargarh Coal Power Project	1,320 MW	1,600	3,500	250
21	Gas Power Plant	525 MW	550	683	250
22	KKH Phase II	440 km	3,500	76,205	
23	Peshawar to Karachi Motorway (Multan to Sukkur Section)	392 km	2,600	55,970	
24	Eastbay Expressway	18.9 km	140.6	190	
25	Gwadar International Airport	4,300 acres	230	40,000	2,500
26	Construction of Breakwaters	1.2-1.5 km	123	350	150
27	Dredging of Berthing Areas and Channels	1.2-10 km	27	2,500	25
28	Infrastructure for Free Zones and EPZs Port Related Industries	Gwadar Port free zone: 2,280 acres GIEDA industrial zone: 3,000 acres EPZA export processing zone: 1,000 acres	32	83,500	
29	Necessary Facilities of Fresh Water Treatment and Supply	3.5 million gallons	130	1,500	350
30	Hospital	68 acres (300 beds)	100	15,000	1,200
31	Technical and Vocational Institute		10	3,000	180
32	Cross Border Optical Fiber Cable	840 km	44		
33	DTMB	44			
34	Matiari to Lahore Transmission Line	878 km (660 KV)	1,500	8,706	
35	Matiari to Faisalabad Transmission Lines	660 KV (Projected)	1,500	8,706	
36	Expansion and Reconstruction of Existing Line ML-1	1,736 km	3,650	6,923	30
37	Havelian Dry Port	680	40	2,712	500

Source: An Employment Impact of China Pakistan Economic Corridor CPEC Projects | International Journal of Information Research and Review Vol. 04, Issue, 04, pp.4049-4055, April, 2017.