PROMOTION OF AGRICULTURE IN CPEC ZONES AND POSSIBLE ROLE OF ZTBL

RESEARCH STUDY

ZTBL

PLANNING & RESEARCH DEPARTMENT

Zarai Taraqiati Bank Limited
Head Office Islamabad

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EXECUTIVE SUMMARY

Pakistan and China have strong bilateral, diplomatic, economic and military relations since 1950. These relations have become more strengthened after initiation of China Pakistan Economic Corridor (CPEC) project on April 20, 2015. Under this huge project, 51 agreements and Memorandum of Understandings (MoUs) have been signed by China with Pakistan to invest an amount of 46$ billion ($62 billion as of 2017) in three key areas of Energy, Infrastructure/Communication and development of Special Economic Zones (SEZs) in three phases from 2017 to 2030. Out of total aforesaid amount, $33.8 billion is reserved for energy sector, $11.8 billion is reserved for transportation infrastructure development, $ 0.8 billion for the seaport at Gwadar and $0.04 billion is dedicated for miscellaneous projects.

CPEC is an example of symbiotic type of relationship, where Pakistan will provide an alternative, secure and cheaper route to China to import energy and find new markets for its goods and services. In response, China will invest aforesaid amount in road and infrastructure development, power sector and development of 9 SEZs in various districts of the Pakistan to boost the economy of the country. In this study, possible agriculture opportunities have been identified by dividing possible route of CPEC in to four proposed zones i.e. Northern Zone, Central Zone, Western Zone and Southern Zone of CPEC.

Northern Areas of the Pakistan especially Gilgit-Baltistan (GB) is included in the Northern Zone. Fortunately, this region is blessed with lot of scenic beauty and lush green valleys. Therefore, this region has huge potential of tourism, which needs to be explored and promoted. Organic farming can be promoted with high value cash crops like apricot, grapes, tomato, apple, cherries, and almonds, which can offer huge potential for growth and establishment of fruit industry. Moreover, their value added products like dehydrated fruits & vegetables can be exported to international market especially UAE, Saudi Arabia, and Central Asian Republics. Woolen cloths including men's caps, soaks, men and women coats and chogas are produced by almost every household in GB. Small industries for Wool management, sheering of sheep, cleaning, separating, dying, spinning and weaving can be promoted through CPEC.

Central Zone covers selected districts of Punjab, Sindh and Khyber Pakhtunkwa (KP). Economy of this region is mainly based upon agriculture. This region has ample amount of water but unfortunately, this huge amount of water is not stored due to irregular climatic pattern. Hence, water saving techniques can be followed. High value cash crops like mango, guava, potatoes and onion in Punjab, dates and banana in Sindh and Peaches in KP has huge export potential and can create lot of employment opportunities to rural populace. Small & Medium Enterprises (SMEs) like rice shelling, cotton processing plants, clothes manufacturing plants, boat and net making, sugar processing plants, wheat flour mills can be established in this region. Cultivation of tobacco may be promoted along western route.

Western Zone mainly covers Balochistan, KP and tribal areas of KP (FATA). Agriculture in this region is least developed but this region offers huge potential to harness mineral and other natural

resources such forest, rangelands and other renewable energy. Balochistan being major producer of fruits offers huge potential to grow apple, peaches, citrus, cherries, strawberries, apple, melons and apricot. Moreover, this region also offers exploitation of huge potential of Palm oil to reduce the import bill in terms of edible oil consumption.

Southern zone covers most of the coastal belt of the country i.e. Jiwani to Karachi. There are lot of investment opportunities in horticulture, fisheries, livestock and tourism sector. Fruits treatment and processing plants, cut flower business, cold storage & ice factories, wool processing units, edible oil extraction and ghee producing units may be established here. Moreover, Crab's demand in Japan, Korea, Hong Kong, Taiwan, Vietnam, Thailand, and Cambodia are very high and can earn lot of forex. Various potential sites on Balochistan coast where harbors and jetties can be constructed and run on Build Own Operate Transfer basis.

China's demand of cotton and rice are mainly met by Asian countries like Pakistan, Vietnam, Thailand and India. In addition, Pakistan's share in China's import of food items is 0.4 pc out of total cost of US$ 99.6 billion, which is very little. Hence, Pakistan can increase its trade circle to its neighboring countries by developing high yielding & disease resistant cultivars, increasing dairy production, building cold storage to reduce post-harvest losses, application of medicine and vaccine to animals, food packaging and marketing, installation of meat processing units and promotion of Chinese Farm practices and technologies.

Besides lot of benefits of CPEC, some challenges are also exist in execution of CPEC. Illiteracy regarding automation, mechanization and general advancement is one of the big of challenge among major challenges. Informal lending, lack of proper incentives, and absence of any guidance and facilitation regarding agri. credit disbursement are major bottlenecks. Hybrid seed and high yielding cultivars are very costly and not affordable for farmers. Land is successively being dividing in to small fragments, which makes farmers unable to adopt agri mechanization at high level. In addition, issues such as climate change, low water storage capacity, depleting ground water resources and increase in industrial activity, rising population and urbanization are associated with the challenges of CPEC.

Zarai Taraqiati Bank Limited (ZTBL) being the largest specialized Bank of the country can take benefits from this mega project through its wide branch network across the country. The Bank may increase its credit facility by launching special scheme to reduce post-harvest losses in Gilgit-Baltistan. The Bank may provide Agri. Machinery on subsidized rates in GB. Keeping in view importance of cherry, apricot, almond and grapes in GB, orchard plantation can be strengthened. The Bank can empower women by providing credit for cottage industries.

The Bank may extend the area of its scheme of "Warehouse Receipt Financing" in Punjab and other provinces to provide facility of storage of Agri. produce. The Bank can promote financing for agriculture waste/by products; raw material based small industries for maximization of value addition, wool processing, and textile, spinning and plastic household items in less developed cotton growing areas. In collaboration with Chinese companies like Xinjiang Production and Construction

Corps (XPCC), the Bank can impart trainings on various topics like climate smart agriculture, conservation of water resources, crop seed reproduction, breeding and production technology, ICT-enabled agriculture and remote sensing technologies etc. through its Farmers Training Centers.

Keeping in view the importance of fishing industry in coastal areas, the Bank may include fiber glass boats in its loanable items. Shrimp farming, tin can manufacturing units, flake ice factories have bright prospects in CPEC projects.

1. INTRODUCTION

The world has been seeing a riding trend in vertical & horizontal integration and linkages among the global economies in ongoing century. Global business trends and economic activities of the nations are continuously changing and leading to the rapid shift with the developed and developing status. This has led the development of mega projects which provides clear index trade and investment priorities of the world economic powers. Resultantly, both developed and developing nations are seeking linkages for mutual cooperation to provide mutual benefits to each other. These linkages will facilitate nations to establish various economic corridors. These economic corridors can be defined as single combination of wide range of economic activities pertaining to transportation, logistic trade, economic, growth or developmental aspects.

Pakistan has a semi-industrialized economy with a well-integrated sector of agriculture. It has great potential of its growth and contributes approximate 18.5 percent to the country's GDP of Pakistan. Out of the total area of 79.6 million hectares, 22.16 million hectares is under cultivation, cropped area constitutes 22.63 million hectares, forests covers 4.47 million hectares, while 25.5 mill hec is not available for cultivation (Pakistan Economic Survey 2018-19). Similarly, China, is also a big agricultural country endowed with rich agricultural resources, has a long history of farming and the tradition of intensive cultivation. China has succeeded in producing one fourth of world's grain and feeding one fifth of world's population with less than 10 percent of world arable land. Currently, China ranks first in the world in terms of the production of cereals, cotton, fruit, vegetables, meat, poultry, eggs and fishery products.

The China has emerged as a capable lender in its neighboring country Pakistan, as both countries have a history of strong diplomatic, economic and military relations since 1950. These relations have been further strengthened in recent times due to mutual regional and international interests. After 35 years of the opening of Karakorum Highway (KKH), the Government of China and Pakistan embarked upon a mega project of China Pakistan Economic Corridor (CPEC) on April 20, 2015. Under this Initiative, the China will invest about $ 45 billion ($ 62 billion as of 2017) in three key areas of Energy, Infrastructure/communication and development of Special Economic Zones (SEZs).

CPEC will make business prospects and strengthen the existing agro trade among bordering countries directly or indirectly which boost the living standards of Pakistani consumers and producers. It will also pass through various ecological zones of Pakistan and bring a constructive change in agriculture production, which would raise the supply of agriculture merchandise in the regions (Ahmed & Mustafa, 2016). Keeping the importance and benefits to Pakistan, following objectives have been made or proposed in the study:

- Exploring opportunities to promote agriculture in the country through CPEC
- To promote Small and Medium Enterprises (SMEs) and to suggest proposals to strengthen existing Agri. Exports to China and other beneficiary countries of CPEC

- Identify possible investment opportunities for ZTBL in Specialized Economic Zones of CPEC.

2. CPEC SCOPE AND GEOGRAPHICAL DYNAMICS

China-Pakistan Economic Corridor (CPEC) is a massive bilateral project to improve infrastructure within Pakistan for better trade with China and to further integrate the countries of the region. The project was formally launched on April 20, 2015, when existing Chinese President Xi Jinping and Ex-Pakistani Prime Minister Mian Muhammad Nawaz Sharif signed 51 agreements and Memorandums of Understandings (MOUs) valued at $46 billion (now has been increased up to 62 billion US Dollar). The goal of CPEC is to transform Pakistan's economy, by modernizing its road, rail, air, and power generation systems and to connect the deep-sea Pakistani ports of Gwadar and Karachi to China's Xinjiang province and beyond by overland routes. This would reduce the time and cost of transporting goods and energy such as natural gas to China by circumventing the Straits of Malacca and the South China Sea. This Project will be implemented in Pakistan in three phases of development, which are given below:

1. Short – term phase. (Expected completion: 2020)
2. Medium – term phase. (Expected completion: 2025)
3. Long – term phase. (Expected completion: 2030)

Under this massive project, an amount of $33.8 billion is reserved for energy sector, $11.8 billion is reserved for transportation infrastructure development, $0.8 billion for the seaport at Gwadar and $0.04 billion is dedicated for miscellaneous but related projects. There are three routes planned for CPEC from west, east and central regions of the country:

- Western alignment (2,520 km, Kashgar - Gwadar), via Quetta, comprising existing section of highways N50, N85 & M8.
- Central alignment (2,190 km), via DIG Khan, N55 and M8.
- Eastern alignment (3,050 km), mostly existing motorways via Lahore, Multan, Karachi.
- The northern portion (Karakoram Highway, Kashgar – Burhan, near Islamabad,850 km) is common to the above mentioned three routes

The idea behind this route plan is to equally distribute the associated economic gains like employment generation, increase in national and international trade, and new opportunities for improved living standards for local population including health and education facilities etc. The detailed route map of CPEC in Pakistan has shown in Figure 1

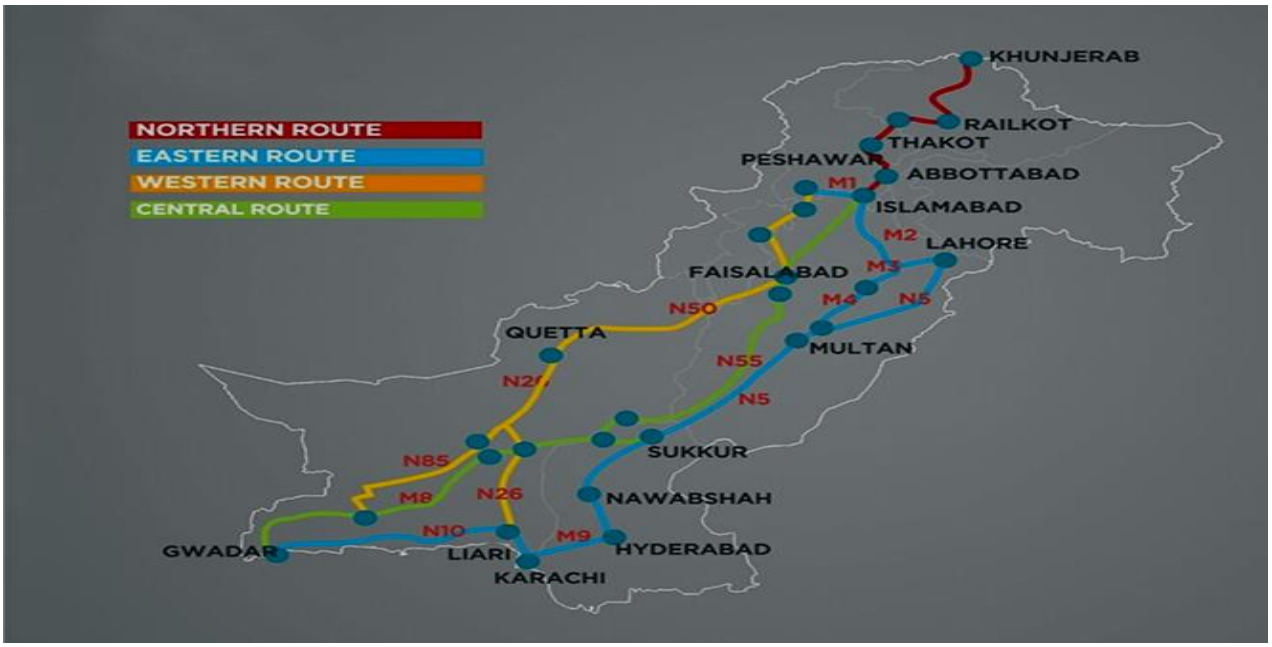


Figure 1 Possible Routes of CPEC

2.1. Components of CPEC

Name of the Component	Details
Energy Sector	• A total investment of $ 33 billion (or approximately 72 percent) of the proposed amount of $46 billion relates to development of energy-resources, including gas and electricity generation through natural resources such as coal, hydro, wind and solar. • Further $2.5 billion is also dedicated towards the construction of pipelines for transporting liquefied natural gas (LNGs) from Iran to the cities of Nawab shah (Sindh) and Gwadar (Balochistan).
Transportation Infrastructure	• A total investment of $11 billion (or approximately 24 percent) out of proposed $46 billion is directed toward enhancing Pakistan's transportation infrastructure, including highways and railway networks. • This includes the construction of a 1,100 km motorway connecting the coastal city of Karachi (Sindh) with Lahore (Punjab), which is expected to facilitate economic growth and internal connectivity. In addition to the construction of new transportation networks, several existing ones will be revamped, including the Karakorum Highway between Rawalpindi and Kashgar and the main Karachi-Peshawar railway line.
Special Economic Zones	• Under CPEC it is proposed to develop nine Special Economic

Zones (SEZs)[1], which are given below:

1. Rashakai Economic Zone, M-1 Nowshera
2. China Special Economic Zone Dhabeji
3. Bostan Industrial Zone
4. Allama Iqbal Industrial City (M3), Faisalabad
5. ICT Model Industrial Zone, Islamabad
6. Development of Industrial Park on Pakistan Steel Mills Land at Port Qasim near Karachi
7. Special Economic Zone at Mirpur, AJK
8. Mohmand Marble City,KP
9. Moqpondass SEZ Gilgit-Baltistan

- There are nine proposed priority SEZs under CPEC aiming to achieve direct benefits (foreign exchange earnings, foreign direct investment, Government revenue and export growth and indirect benefits (skills up gradation, technology transfer, export diversification, enhancing trade efficiency of domestic firms through establishing viable industries in SEZs under SEZs Act 2012 (amended in 2016).
- The nine proposed priority SEZs under CPEC included one in each province and one in GB, AJK, and FATA and in Islamabad.

2.2. Benefits to China

It will provide an alternate secure and cheaper route to china to import energy and find new markets for its goods and services, in view of the reduction of distance from Central China to the Middle East by 7,580 miles, and more than 10,000 miles from Western China (Table 1). It will open new trade avenues for China at a much lower cost. It will also improve competitiveness of China by minimizing the fuel and travel time from 45 days to 10 days, besides avoiding the security and robbery risks via sea bound Malacca route. The opening and associated potential for industrialization of the ostracized Xingjang province is another significant advantage for China.

Sr. No.	From	To	Via China (Miles)	Via Pakistan (miles)	Saved (miles)	Saved (%age)
1.	Central China	Middle East	11,206	3,626	7580	68
2.	Central China	Europe	17,801	10,928	6,873	39
3.	Central China	Pakistan (Gwadar)	10,601	3,081	7,520	71
4.	Western China	Middle East	12,537	2,295	10,242	82
5.	Western China	Europe	19,132	9,597	9,535	50
6.	Western China	Pakistan (Gwadar)	11,932	1,750	10,182	85

Table 1. Captures the savings to China in terms of distance

2.3. Benefits to Pakistan

Through CPEC Pakistan will position its self a major transit point by connecting Eurasian Region with South Asia and South East Asia. This connection will be act as kick to start its economic growth and stop external political attempts to isolate Pakistan from rest of region. The Figure 2 provides a summary of expected benefits to the economy of the country.

Fig.2 Possible Benefits of CPEC in Pakistan

CPEC is expected to provide major growth opportunity for Pakistan by improving physical connectivity and functioning of the markets, while generating economies of scale in agriculture and industry. The connectivity through corridors and high-ways will also provide impetus to public and private investments in "hardware" (transport and business-infrastructure), "software" (ICT integrated solution for crop-cycle, supply chain management and marketing) and orgware (institutional Strengthening and Capacity building).

3. AGRICULTURE POTENTIAL UNDER CPEC

The Long Term Plan (LTP) for CPEC (2017-30) mainly focuses agriculture, IT connectivity (fiber optic) and tourism as priority sector to boost Pakistan's economy. Key areas of cooperation in field of Agriculture may include: biological breeding, production, processing, storage and transportation, infrastructure construction, disease prevention and control, water resources utilization, conservation & production of land development, ICT-enabled Agriculture marketing of agricultural products to promote the systematic, large-scale, standardized and intensified construction of the agricultural industry. Moreover, CPEC provides opportunities for establishing Small Medium Enterprises (SMEs) related to agriculture for transportation and storage of Agri. produce. It also documents the modality of Chinese enterprises in operating farms, processing facilities for fruits & vegetables and grain value chains. Further, the logistics companies will operate a large storage and transportation system for agrarian produce.

According to Ministry of Planning, Development & Reforms, Gov. of Pakistan, Nine Special Economic Zones (SEZs) have been proposed. In order to determine the potential role of CPEC in trade and agriculture in the country, Burkey et al (2017)[2] classified CPEC route in to four proposed zones to discuss opportunities and to explore potential agriculture value chains, which are given under:

1. Northern Zone
2. Central Zone
3. Western Zone

[2] The Authors of The BIPP 10th Annual Report 2017, the State of Economy, China Pakistan Economic Corridor (CPEC), Review and Analysis

4. Southern region of CPEC

These four regions (shown in Fig 3) offer possibilities for raising a diversified mix of an integrated crop/ livestock agriculture system.

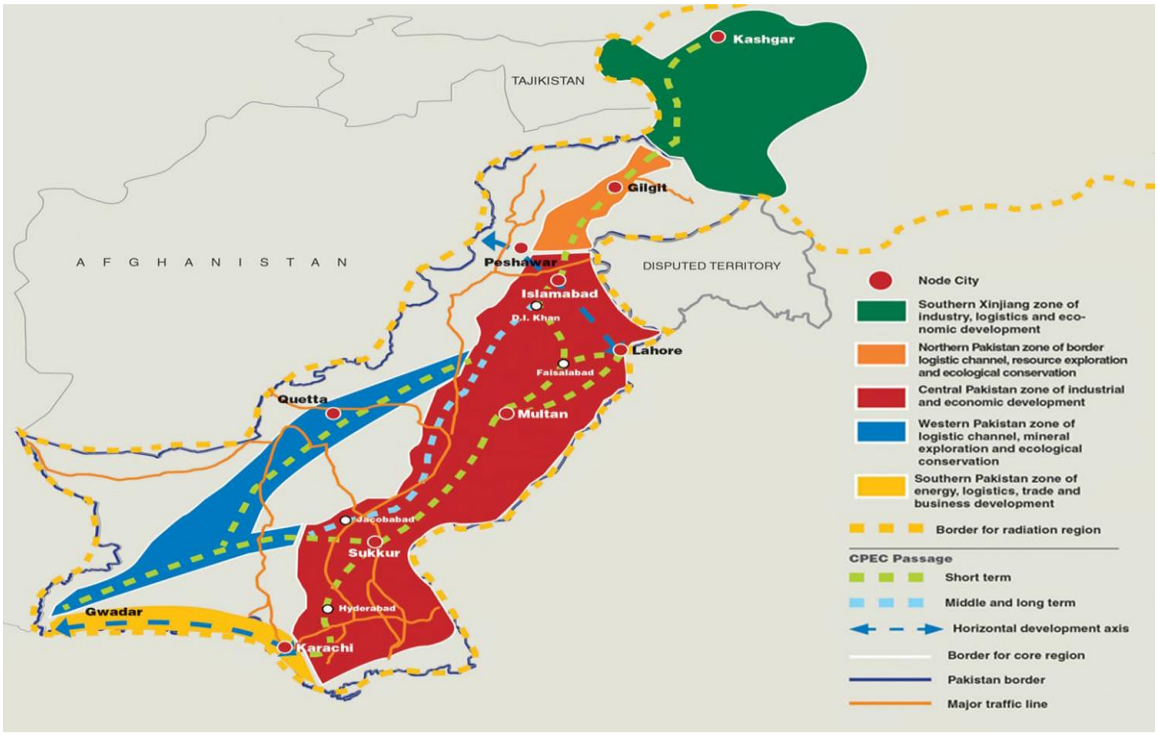


Fig 3 Classified Zones of cluster areas related to Agriculture Value Chain

3.1. Northern Zone of CPEC

Northern Areas of the country especially Gilgit Baltistan (GB) is included in this zone. This region acts as entry point of the corridor in the country. Unfortunately, this region has been neglected since decades, even now when CPEC is being developed. Political and economic stability in this region will decide overall success of the CPEC.

3.1.1. Opportunities to the Region

- **Tourism opportunities**: GB is also called as a water bank of the country and provides one of the worlds' richest ecosystems in terms of biodiversity through Karakoram Mountains Ranges. Many tourists visit natural beautiful galleries like Deosai, Ferry Meadows, Hunza valley and Gupis valley; cultural sites including Altit and Baltit forts in Hunza, Shigar Fort & Khaplu Fort in Baltistan for recreational purpose like fishing, hunting, hiking, skiing and sightseeing. Besides tourism, this region also provides cultural and historical knowledge to the historians and general public. Hence, GB can be promoted as Agri. Tourism Hub.
- **Organic Farming**: Over 90% of the population is engaged in agriculture, and holds important place for GB's growth and poverty reduction. Gilgit Baltistan region is organic by default, as a large part is under pastures, forests, wasteland and other kinds of wild land. These naturally

organic areas hold great potential for conversion and declaring the entire region as organic that can offers opportunity for the farmers/enterprises to enhance income through Organic Farming.

- **Production of higher value cash crops**: Due to its seasonal and elevation advantages, there has been a move towards production of higher value cash crops like apricot and grapes (Table 2). Tomatoes, apples, cherries offer huge potential for growth as demand for these products is growing in local and export markets. Under CPEC, a fruit processing industry may be set up in GB considering the region's capacity to produce fruits and vegetables as identified above. Exports of fruits will get a boost as thousands of tons of fruits can be exported to China as a leading growing market in the region.
- **Vegetable & fruits dehydration/processing/packaging plants:** Dehydrated fruits & vegetables is a new product of value addition series, which helps to increase the shelf life & reduce space for storage along with easy transportation. This leads to export avenues in international market especially to UAE, Saudi Arabia, Central Asian Republics where these products are already well known and fetch high price. If dehydrated fruits and vegetables plant is established and managed efficiently, farmers can earn good revenue in the form of foreign exchange by exporting dehydrated fruits & vegetables which will indirectly improve the status of farming community.
- **Wool Management:** Traditional wool products such as Patti are woven by both men and women to prepare woollen clothes including men's' caps, soaks, men and women coats and chogas, produced by almost every household. Women are more involved in this activity in the winter season. Wool management includes sheering of sheep, cleaning, separating, dying, spinning and weaving. Through CPEC, these activities can be promoted, as these products can be exported to China.
- **Hotel Industry:** With the growing tourism in Gilgit-Baltistan, there is a great opportunity for investments in the hotel industry. Besides investments in hotelling and food, the mineral, hydroelectric power generation, the cottage industry, wool, silk farming, honey production and hydroelectric power sectors have much potential for foreign investment.

Priority Sub-Sectors	Clusters/Districts	Total Production of the Districts (Tons)	Percent Share in the Province %	Percent Share in the country %
Apricot	Ghanche, Hunza Nagar, Ghizer	100,790	88	52
Grapes	Gilgit, Diamer, Astore, Ghizer	3,953	69	61

Table 2: Identified Fruits and Vegetables to be promoted

3.2. Central Zone of CPEC

Selected districts of Punjab, Sindh and some parts of Khyber Pakhtunkhwa (KP) are included in this zone, which are relatively well developed in terms of backbone and supporting infrastructure. The economy of this region is largely based on agriculture with clusters of industries like light engineering, cotton ginning, ginning and pressing, spinning, weaving, textile processing, apparel and made-up, soap manufacturing and flour mills. These industries are reasonably well developed.

3.2.1. Opportunities to Promote Agriculture

- **Adoption of water saving techniques:** This region is a repository of large part of Indus Basin, which has an ample amount of water use for farming as well as industrial purposes. According to irrigation experts, this huge amount of water can be saved by growing maize on raised beds technology. Similarly, high efficiency irrigation system like sprinkler irrigation system, drip irrigation system etc. may be promoted to conserve water. Therefore, there is need to promote the development of water-saving techniques and increase the development and remediation of medium and low-yielding land to achieve efficient use of resources. Besides, the Government may help farmers to construct mini dams along the bank of rivers.
- **Marketing of crops**: Based on a recent study[3], mango, guava, potatoes and onions in Punjab; dates and banana in Sindh and peaches and tomato in KP (mentioned at Table 3) are the priority value chains for the central region. These crops carry high potential to be marketed at the national and international levels, provided a good agriculture production (conservation agriculture and traceability) and marketing practices (meeting the international standards) are adopted.
- **Employment opportunities for women:** Crops like dates and banana create considerable employment opportunities for female population, for example banana entails 9% women involvement and provides livelihood to 12% small farmers.
- **Promotion of rice exports**: China is showing keen interest in improving rice industry, which is a strategic export crop for Pakistan. Under proposed program of CPEC, companies of private sector of both countries would cooperate with each other, to promote the hybrid rice production that holds promise to enhance land and water productivity expected to almost double the per acre crop yield, besides farm income and reducing the poverty.
- **Meat processing plants**: Chinese are planning to invest in meat processing plants at Sukkur Sindh with annual output of 200,000 tons per year and two demonstration plants processing 200,000 tons of milk per year.
- **CPEC cell**: A CPEC cell has been operational by Punjab Government to provide policy and investment guide for the private sector. The cell has identified six value added commodities (Fruits paste, Olive oil and virgin oil, dehydrated potato powder, Individual Quick Frozen vegetables (IQF), dehydrated vegetables and fruits) at various locations. In this regard, Agriculture Department, Punjab Government is providing information to the private sector as

[3] The State of the Economy Agriculture and Water- 2016 BIPP Annual Report

an important starting point of business feasibility. The same can be identified or developed by provincial Governments of KP, Sindh and Balochistan.

- **Agri-logistics/trucking/export companies:** This initiative also envisages building a nationwide logistics network and cold storages to transport Agri. produce. Government may provide facilities in both public and private sector to establish or enlarge network of existing companies to transport farmers' luggage at their destination, especially in case of exports, where refrigerated trucks are needed for most vegetables, fruits and cut flowers**.**
- **Cotton processing units:** District Rajanpur has huge potential in cotton production; unfortunately it is least industrially developed district in Punjab. However, the availability of raw material especially cotton reflect good potential for cotton textile mills, because no such units exist in the district.
- Dead towel weaving looms units and garment manufacturing units can be revived which have seen deterioration due to energy crises in Faisalabad as it is surrounded by Pakistan's Largest cotton belt.
- Sukkur is the central city of Sindh province, it is located on the west bank of the River Indus. Small scale cottage industries comprising of hosiery, boat making fishing accessories, thread ball spooling, cutlery and ceramics can be financed on short term basis.
- **Promotion of Suitable Crops:** Olive cultivation in Punjab especially in Pothowar region with low cost solar driven modern irrigation technology should be promoted. We may learn from Chinese experience in this regard.
- **Productivity of Livestock Sector:** In the livestock sector, our productivity is one of the lowest, for example Pakistan's famous Sahiwal breed in 1987 was producing 1900 liter of milk per year and during the same period imported Friesian also produced around 1900 liters but in 2017, Friesian is producing 9000 liter while Sahiwal is with a lower productivity at 1300 liters, meaning that during the last thirty years we have not been able to develop successfully in enhancing animal productivity. In fact, undertaking simple and low cost interventions like providing enough and better quality feed, water and space to the animals, the productivity can be enhanced from 10 to 30 %.
- **Climate Change:** Issues related to climate change should be paid more heed to. This will require a series of actions ranging from adjustments in infrastructure, improvement in water conservation practices, better flood management protocols and procedures and cropping and farming systems that can adapt to different weather conditions.
- **Tobacco Value Chain** The tobacco value chain is the most enterprising SME sector in Pakistan. Although its cultivation may not be that widespread, tobacco not only earns forex but contributes the most to Pakistan's excise tax base. Activities in the tobacco growing sector also create demand for input goods and services from agronomy support sectors such as fertilizers, pesticides, seeds, utilities, etc., giving rise to indirect revenue therefore it may be promoted along western route in the areas of Mardan and Mansehra.

Crop	Cluster/Producing Districts	Total Production of the clusters in Tons	Share in Province %	Share in the Country %
Potatoes	Lahore, Sheikhupura, Nankana Sahib, Kasur, Okara, Pakpattan, Sahiwal, Gujranwala, Hafizabad, Narowal, Sialkot, Gujrat	1,823,613	84	78
Guava	Lahore, Sheikhupura, Nankana Sahib, Kasur, Okara, Pakpattan, Sahiwal, Gujranwala, Hafizabad, Narowal, Sialkot, Gujrat	249,003	57	46
Citrus	Sargodha, TT Singh, Mandi Bahauddin, Khushab, Jhang and Faisalabad	1,392,942	67.5	67
Guava	Faisalabad, TT Singh, Sargodha and Jhang	96,459	24.3	25
Mango	Multan, R.Y.Khan, Muzafargarh, Khanewal, Bahawalpur	1, 159,993	87.5	67
Dates	Sukkur, Khanpur	253,862	97	46
Banana	Khairpur, Ghotki and Nausheroferoz	47,973	37	35

Table 3 Potential of Fruit Crops in selected districts in Central Zone

3.3. Western Zone of CPEC

Selected districts of Baluchistan, KP and its tribal areas (FATA) are included in this zone. It is a least developed zone, but this region offers huge potential to harness mineral and other natural resources such as forest, rangelands and other renewable energy. In Balochistan, agriculture depends on sustainable and efficient use of its valuable resources. These resources provide basis for competitive horticulture, forestry, rangelands in dry areas and access to fishing along its coastal belt. KP and FATA may provide a similar and more diversified commodity mix. New built roads and rehabilitated old ones in tribal areas provide an opportunity to develop its agriculture and mineral resource which have long been deprived of value they offer.

3.3.1. Opportunities to Promote Agriculture

- **Fruits production & packaging:** Although Balochistan's environment is harsh with little arable land but it is producing 90 percent of the grapes, cherries and almonds; 60 percent of the peaches, pomegranates and apricots; 34 percent of the apples; and 70 percent of the dates (Table 4) of the county. The region also carries huge potential to grow apple, olive and cherries. The main reason for low export volume is the absence of technology required to treat and pack the fruit to the international standards.

FATA also offer a varied microclimate zone to produce good quality fruits such as apples, plums, citrus, grapes, peaches, apricots, walnuts and pine nuts. In Tribal areas a competitive niche can be developed in selected crops by productivity enhancement, as newly constructed dam (Gomal Dam) can be instrumental in growing high value crops and promotion of off-season vegetables through Tunnel Farming.

- **Palm oil production**: Among other regions, growing edible oil in Balochistan holds a good potential, as Pakistan is in a state of crisis in terms of oilseeds importing 0.280 million MT of palm oil to meet the growing domestic demand and putting a major burden on foreign exchange. Hence, there is need to promote production of Palm oil in the zone. Under CPEC, a potential investment company can provide semi-refined form of palm oil to the local market through an oil expeller unit.
- **Investment for agro industry:** The processing industry is being developed for fruits and vegetables (apple and dates processing plants, tomato paste manufacturing, fried/dried onion plants) and promoting cut-flower business and floriculture.
- Peshawar region offers huge potential in growing peaches, citrus, strawberries, apples, melons and apricots are identified as priority value chains. However, tomato and peach cultivation should get the highest priority.
- Gems and Jewelry sector can also be established, given the mineral rich endowment of Balochistan.
- Khuzdar is rich in Mineral and units like Steel Mills, Mineral Warehousing, Copper Processing Plant, Marble cutting Units and other mineral based industries can be established.
- **Poultry/ cattle farming:** Poultry meat is an important protein source of our food. In beginning most of poultry farms were established in the areas of Punjab and Sindh. Therefore, there is need to establish poultry farms in Balochistan and KP to widen the export potential and economy of the country
- **Development of rangelands**: The rangelands and forest areas in Baluchistan, KP and Tribal areas provide huge potential to develop livestock. Some 12 million sheep, a similar number of goats and 0.38 million camels (Livestock Census, 2006) depend on vast rangelands for feed and water. The overall condition of rangelands is poor and has been deteriorating rapidly due to both the prolonged drought that occurs from time to time as well as severe overgrazing by animal herders, including the nomads and transhumant tribes/shepherds who travel through these areas on their way to and from their over-wintering areas in the Sibi plains of Baluchistan, Sindh and Punjab.

Priority Sub Sector	Clusters/Selected Districts	Total Production of Clusters (Tons)	Percent Share in the country %
Apple	Kalat, Mastung, Killa Abdullah, Ziarat, Killa Saifullah, South Waziristan Agency, Kurram Agency	226,295	55
Dates	Kech, Panjgur, DI Khan, Bannu, Lakki Marwat	241,008	43
Grapes	Pashin, Quetta, Mastung, Killa Abdullah and Killa	68,089	89

	Saifullah		
Tomato	Swat, Malakand, Charsada and Mohmand Agency, Mastung, Killa Abdullah and Chagai	194,681	38
Peach	Dir and Swat, Charsadda and Peshawar, South Waziristan Agency (SWA) and Kurram Agency	47,263	66
Melon	Lakki Marwat and DI Khan,Bhakkar, SWA and North Waziristan Agency, and DI Khan	51,794	73

Table 4: Potential of Fruit Crops in selected districts in Proposed Western Zone

3.4. Southern Zone of CPEC

This zone covers coastal belt of the country i.e. Gwadar to Karachi. Fish farming is a dominant occupation in the zone and has largest potential to develop sea food industry.

3.4.1. Opportunities to Promote Agriculture

- **Fisheries potential**: Pakistan's exports of fishery products stand at about 0.18% of world exports. Other than a huge domestic market, Pakistan has an export market for fish and fish products. About 30% (US$ 293.887 million) of the total fish catch is exported to 30 countries of the world. Major buyers are China, Thailand, Malaysia, Hong Kong, South Korea, Egypt, Bangladesh, UK, Middle East, Sri Lanka and Japan, etc. A rough estimate based on maximum sustainable yield figures, existing value addition, and foreign benchmarks, puts our total export potential at US$1.0 billion, which can be even more, if modern CPEC infrastructure is in place.
- **Fish canning industry:** In Balocistan's coastal area, fresh fish is packed in ice and sent to Karachi for advance processing and canning. It takes time and degrades the quality of fish. Hence, a canning industry can be established at Makran to exploit the potential of canning industry. Modern fish processing facilities can be developed as part of CPEC with China's help.
- **Boat making**: The fisheries sector in Baluchistan is a major source of employment for the people residing along the coastal belt; this includes fishermen and other associated businesses such as boat making and net manufacturing. Other forms of employment include hawkers, vendors, store keepers, tourist guides, drivers etc. In light of this, a project regarding development, maintenance of boat is also a part of the CPEC for improvement of lively hood.
- Makran Coastal Highway is playing a catalytic role for development of the entire Makran Coastal area of Balochistan through development of fisheries, tourism and establishment of trading and processing markets. Horticulture sector, fisheries, livestock and tourism sector can be promoted here. Fruits treatment and processing plants, cut flower business, cold storage & ice factories, wool processing units, edible oil extraction and ghee producing units may be established in Turbat.
- Post-harvest losses in exports of see food are very high due to handling of fish catch on board and long voyage time. More than 16,000 fish boats are operating, while the storage capacity is only 10,000 tons which is in-sufficient to cater the future requirements. There is a dire need to enhance the storage capacity, ensure correct hygienic handling of fresh & processed fishery

products. More seafood companies must be established to improve processing, fully utilize the available resources for export.

- Pasni is a small remote city of Balochistan with moderate population growth resulting in increased energy requirement. Being second largest coastal area of the province situated at Coastal Highway linked with Karachi and Turbat, a Mini Industrial Estate comprising of under mentioned units can be established by inviting interested SME investors of Pakistan and from Gulf States.
    - Fish & Shrimp Processing Plant
    - Hatcheries.
    - Ice Factories
    - Ware Houses
    - Fishing Net Production & Repair and Boat Making Units
    - Cold Storages
- **Establishment of Fish Hatcheries:** At present Fisheries Department is running two hatcheries at Dera Murad Jamali and Quetta and another one has recently been approved for Subakzai Dam, Zhob. These hatcheries do not produce sufficient seed for meet the growing demand of fish farmers and hence there is opportunity for private investors to fill the gap.
- **Establishment of Shrimp Hatcheries** Fisheries Department has established a shrimp hatchery at Okar Jiwani which is near completion. One small hatchery cannot fulfill the needs of market and hence there is tremendous scope for the private investors invest and make profits.
- **Establishment of Crab Fattening Facility Units** Crabs are in great demand in various countries including Japan, Korea, Hong Kong, Taiwan, Vietnam, Thailand, and Cambodia. Investment in crab fattening units with the aim of exporting to these countries will earn profits in foreign exchange.
- **Construction of harbors/jetties on BOOT basis:** There are various potential sites on Balochistan coast where harbors and jetties can be constructed and run on Build Own Operate Transfer basis. Such sites include Ganz, Ormara, Berra and others.
- **Establishment of Cage Culture Units** Cage culture is a form of cultured fisheries and has tremendous potential in sea and large reservoirs like Mirani Dam, Hub Dam, and Subakzai Dam.
- **Ferry Services** There are many beautiful sites along the Balochistan coast including Astola Island which have potential of attracting thousands of tourists each year. For the facilitation of tourists ferry service can be started and huge profits can be earned.
- Prior construction of Coastal Highway, the Karachi port was linked with the Gwadar port with uncarpeted road. It takes almost 2 days with no proper road infrastructure. After completion of the Makran Coastal Highway, this distance will be reduced up to 6 to 7 hours, with reduced the transportation cost. This developed infrastructure is expected to boost economic activity along coastline among others to promote tourism and develop a modern fishing industry.

4. CURRENT TRADE SITUATION OF CHINA

4.1. Pakistan's Agriculture Exports to China

China is ranked as the second largest export destination of Pakistan with a share of 7.7 percent in Pakistan's total exports, after the United States (16.7 percent). Nevertheless, Pakistan's exports to China are heavily concentrated in cotton and rice, which accounts for 75 percent of Pakistan's total exports to China. Notably, Pakistan's cotton exports to China have been increased from US$358 million in 2006 to $1,818 million in 2018. Other major Pakistani exports to China include ores, slag and ash, fish and other aquatic invertebrates, raw hides and skin, etc. (Figure 4).

4.2. Pakistan's Agriculture Imports from China

China occupies 1st position in the Pakistan import market as it has 100% shares in total imports, followed by UAE which has 24% shares. While Sudia Arabia ranked it's self as 3rd in the list and has 14% shares. Currently, Pakistan's total imports from all over the world stand at 60.163 billion $ (International Trade Center, 2018). Out of total share, china has $ 14.54 billion share. Major Agri. Imports are Fertilizers, cotton, vegetables, cereals, oil seeds, silk and coffee tea and spices (Figure 5).

4.3. China's Imports from World

China's leading suppliers of agricultural imports include United States, Brazil, Australia, Canada, New Zealand, and Argentina. China mainly imports soybeans from the US, meat from Brazil, dairy produce from New Zealand, fish and other aquatic invertebrates from Russia. Similarly, China's demand of cotton (cotton yarn) and rice imports is being met by the emerging economies of Asia, like Pakistan, Vietnam, Thailand and India.

Out of around US$ 99.6 billion food imports of China, Pakistan's share is only around 0.37 percent (roughly US$ 0.4 billion)[4]. Pakistan can enhance its exports through various CPEC initiatives and by tapping in to the growing imports dependence of China in general. Nine Special Economic Zones (SEZs) under CPEC would serve as a platform to develop clusters and infrastructure to increase the exportable commodities to China through encouraging innovation, entrepreneurship, and collaboration. These commodities are cereals, dairy, eggs, meat, honey, tobacco, seafood and fruits etc.

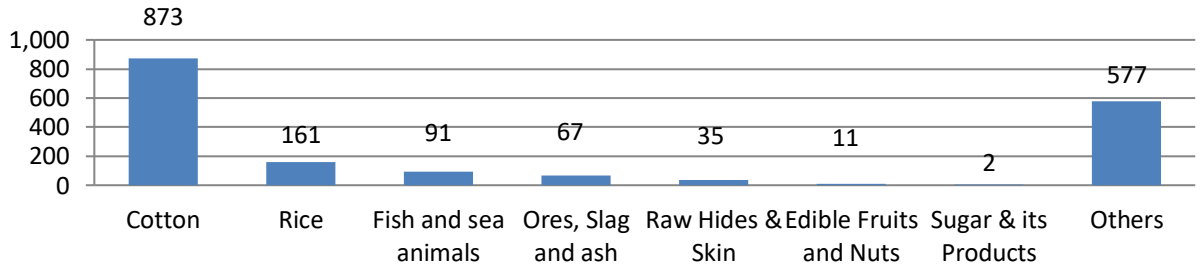


Figure 4. Worth of Exports to China in 2018 (Amount in Million US$)

[4] State Bank of Pakistan Annual Report, 2017-18

Source: International Trade center

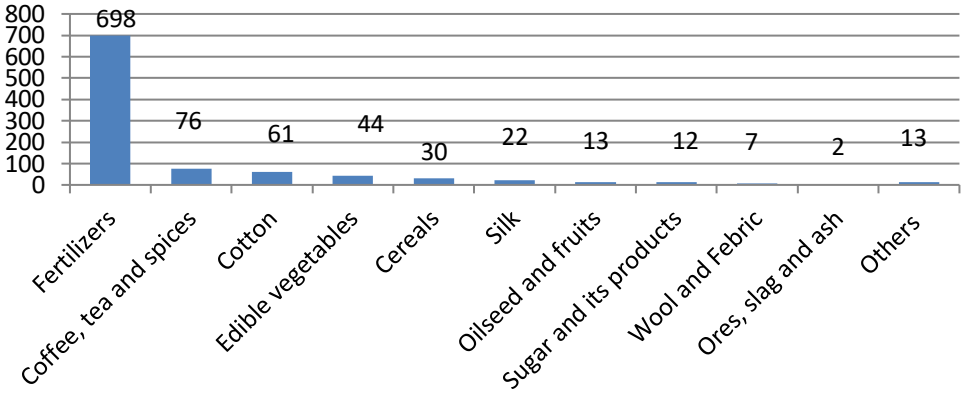


Figure 5. Worth of Imports from China in 2018 (Amount in Million US$)

5. OP *Source: International Trade Center* E EXPORTS

Shortage of arable land and fresh water resources in China, is requiring to import land-extensive crops (such as wheat and rice) to feed its population. Besides, with rising living standards, China's demand for agricultural imports is growing gradually. Which is likely to create agro-based trade opportunities in countries having substantial potential in agricultural produced.

It is worth mentioning that while Pakistan remained the top supplier of cotton yarn to China (until 2015); Thailand dominated as leading rice exporter to China until 2009. However, Thailand's rice pledging scheme in 2011, leading to an increase in export price of Thai rice, created export opportunities for other rice producer countries. Pakistan also took benefit of its low cost rice and emerged as the second largest supplier of rice to China, after Vietnam. CPEC is likely to help Pakistan utilize its vast untapped potential in agriculture, and to develop the sector, which is currently lagging behind in terms of its productivity, if compared with the other comparable countries.

- **Hybrid/High Yielding Cultivars**:
  The Long Term Plan of CPEC would help in increase of productivity and efficiency of the crop sector by transforming low and medium yield lands in to higher ones. Recently, Yuan Long Ping High-Tech Agriculture Co Ltd, one of the major Chinese hybrid seed production companies, carried out a month's long program in the areas of Swat, Mansehra, Sahiwal, and Larkana, etc. to develop a heat resistant rice seed variety that would enable the crop to be cultivated in all the ecological zones of Pakistan. The company also provided training in local research

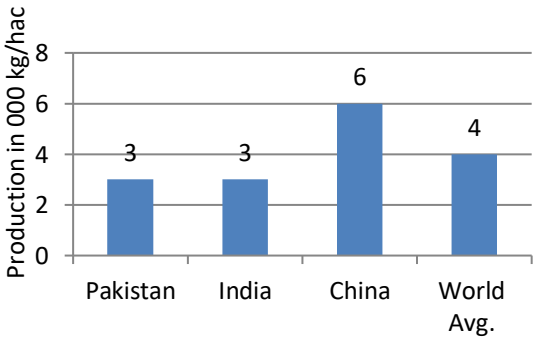
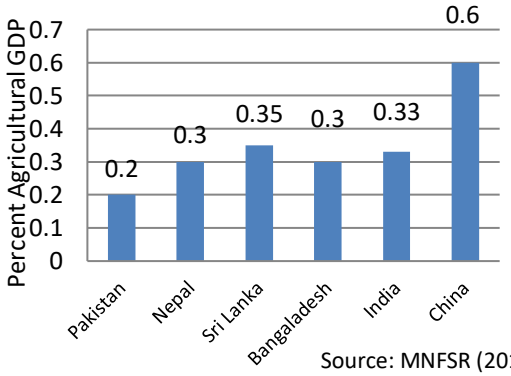


Figure 6.Cereal Yield Comparison (2016)

institutions such as the Pakistan Agriculture Research Council (PARC) in hybrid seed breeding and field management skills. Market players predict that the hybrid seed varieties would also be exportable to economies such as Philippines in the near term.

- **Exports of Fruits:** The region of Gilgit-Baltistan is known for its fresh fruit exports, like cherries, apricot and apples, CPEC will be a game changer by opening business opportunities for the region's traders. With an estimated production of 4,000 tones cherries and up to 20,000 tons of apples every year, the region has potential to tap into the Chinese market. This will provide local traders with an advantage and help them increase their sales by tremendous saving in cost of transportation.
- **Dairy Sector:** With increased focus on dairy sector under CPEC and an objective to export such commodities to China, private investments to modernize the sector are expected. Although the cattle population of Pakistan is around 48 million, currently only 5 percent of total milk production is used for the production of tetra-packed products. Commodities such as dried milk, cream, sweets and other dairy products can be manufactured to serve the needs of both domestic consumers and exporters. Recently, China has launched projects to uplift dairy sector under the umbrella of CPEC in Khyber Pakhtunkhwa. Moreover, a Chinese state owned enterprise, has shown interest to acquire shares of Fauji Foods Limited up to 51% to expand operations and manufacturing high value added dairy products to be exported to China.
- **Dairy practices may be strengthened**: China being a largest importer of Dairy and Meat products, Pakistan has an opportunity to take a huge share in the Chinese markets by introducing Hazard Analysis and Critical Control Point (HACCP) and Sanitary and Phyto-Sanitary (SPS) standards based value added dairy and meat products. The government should establish an independent Milk and Beef Board with representation from all sectors of the dairy industry which would design and execute an export policy throughout the dairy sector.
- **Cold Storage**: The fisheries sector would benefit by the proposed establishment of fish feed production units and hatcheries to meet the growing demand promotion of aquaculture in saline inland and coastal areas of Sindh and Balochistan. As an example, Mufeng Biological Technology Co. has built a cold storage central near the Khunjerab Pass (active since last year) from which imports seafood (such as squid, shrimp, pomfret and bonefish, etc.) to Xinjiang Region and for Sale in areas like Urumqi, Beijing, and Shanghai is managed. The storage center would also process orders that would arrive at Gwadar Port en-route to China.
- **Animal Medicine and Vaccine Production:** Increased usage of and

Figure 7. Public Sector Investment in Agriculture



Source: MNFSR (2018)

collaboration in animal medicine and vaccine production is listed as a policy objective under CPEC. This in turn would improve the lifespan and productivity of the livestock. The KP government website has listed a plan for collaborative investment in biologics and vaccines, citing a substantial supply and demand deficit (annual production of 3.9 million doses as against an annual requirement of 132 million). The provincial government also states that the country has lost around US$ 0.5 billion in the livestock sector due to animal diseases. In this regard, an initial investment worth US$ 10 million has been earmarked. However, there is a need to ensure that Pakistan strengthens the regulatory mechanism to inspect the nature, intensity and frequency of such dosages to animals to ensure health and food safety standards are met.

- **Research Centers and Demonstration Plants:**
  Currently, Pakistan has a very low public sector agriculture investment rate compared to regional economies (Figure). Private sector involvement would hence help accelerate the modernization. China has a history of developing technology demonstration centers and training programs in African economies of Cameroon, Ethiopia, Liberia, Tanzania, and Uganda, etc., where Chinese experts share harvesting, breeding, and sowing techniques with local partners and help the latter in research initiatives meant to improve productivity of the host countries' agriculture sectors. In addition, hybrid seed development programs are also envisaged under CPEC.
- **Use of Efficient Technologies:** As already mentioned, old and traditional techniques are being used for production of Agriculture and livestock in the country to harness the export potential. Therefore, there is need to introduce efficient and improved breeding technologies, grain production technologies, sanitation and storage facilities, transportation facilities, livestock feeding and milking techniques, slaughtering techniques and introduction of Information and Communication Technologies in Farming to meet international standards.
- **Food Packaging and Marketing:** Under CPEC, a desire to innovate marketing and sales model of the agriculture sector is highlighted. This arrangement would be mutually beneficial and of a nature comparable to that of knowledge transfers. Chinese firms would be able to research on various marketing models, while Pakistan's agriculture would get a much-needed promotional boost. The Rashakai Economic Zone near Mardan, Khyber Pakhtunkhwa is expected to host firms working in the fruit and food packaging segments.
- **Meat Processing:** The slaughtering and meat-processing sector would experience positive spillovers in the form of high value addition and exporting potential. Segments such as frozen foods would benefit from increased mechanization and improved marketing efforts. According to a report of USDA on China's foreign agricultural investments, China has approved 56 inspections, testing, and cold storage facilities dedicated to imported meat. The initiative is meant to standardize and modernize the monitoring and inspection of meat imported from the BRI partners.
- **Promotion of Application of Chinese Farming Practices and Technologies:** On behalf of Strong Pak-China Relationships, Government of Pakistan is going to launch 13 Mega

Projects with the collaboration of China to boost Value Chain Process and adaptation of latest Agriculture Technologies in the country. Keeping in view strong bilateral relationship with China and other countries, Pakistani Government must welcome Foreign Companies to introduce their practices and experiences in Agriculture Sector. This would increase domestic yield and output of most crops at a significant level.

- The **availability of innovative farm machinery** should be ensured, by import without duty from China and other countries. The resulting increase in the use of modern technology in domestic farms will save time and cost of domestic producers. For example, by using rice harvesters, silo technology, rice growers, cotton pickers, combine harvesters etc. a huge amount of resources can be saved and the usage of arable land can be increased.
- There is potential for **partnership for promotion of technology between Pakistan and China**. Some of these areas include conservation of water resources, crop seed reproduction, breeding and production technology, agricultural products processing, animal & plant epidemic prevention & control, mechanization demonstration, ICT-enabled agriculture and remote sensing technologies, post-harvest agricultural practices, including storage, transportation and agricultural processing.

  In order to benefit from China in these areas and others, Agriculture Department may develop a technology partnership program, whereby modern agricultural demonstration zones can be established and individual enterprises and farmers can be supported. However, in order to further develop this thread, the Department must arrange a few stakeholder exposure visits to Xinjiang Production and Construction Corps (XPCC), where these areas can be studied further.

6. CHALLENGES TO CPEC

The aspirations under CPEC and the opportunities provided by the structural changes underway in China generally bode well for the agriculture sector of Pakistan. However, Pakistan would have to tackle longstanding structural roadblocks in order to fully benefit from the potential technology transfers and relocations. In particular:

Addressing Farmers' Illiteracy: The automation, mechanization and general advancement desired under CPEC is challenged by the prevailing low literacy rate amongst local farmers and hence their willingness to adhere to conventional farming methods. There are some encouraging initiatives being undertaken to address this deficit, such as the Department for International Development-Telenor joint venture Khushal Zamindar, which aims to introduce mobile-based agricultural knowledge dissemination among cash crop farmers. However, the issue would need large-scale training and awareness measures to remedy the situation.

Bank Financing and New Product Directions: Currently, the small-scale farmers are facing expensive informal lending, lack of proper incentives, and absence of any guidance & facilitation. The increasing participation of commercial banks in this regard is a welcome development, though the demand is still consistently higher than the supply of credit. The increased efforts of microfinance banks, fin-tech firms and provincial departments (such as Punjab Information Technology Board (PITB) and Sindh Agriculture Department) are also

helping expand the coverage and of credit disbursement to small farmers with limited or negligible credit history.

In order for small scale corporate farming to flourish thus, these farmers would require cheap, accessible financing as well as new product directions (such as horticulture) to increase their competitiveness.

Innovation in the Seed Sector: The existing trends in the crop seed segment paint a discouraging picture. Certified variants are available for certain crops only (such as wheat and rice), with fruits, vegetables, and grain counterparts almost exclusively imported. The increased yields and higher export incomes would be unachievable without due consideration to modernization and innovation in the sector.

Cluster Farming: The vast majority of farmers in Pakistan have land units that are fragmented and are below 12.5 acres, which makes it difficult to generate economies of scale that would justify the use of mechanization and sophisticated cropping patterns. One possible solution is to encourage cooperative farming, which allows economy of scale by forming vibrant clusters of farmers. Another problem is the lack of proper documentation of land records. Efforts to digitize such records would ameliorate the concerns of potential investors by offering greater transparence.

Water Administration: Lastly, the issue of water availability is to be addressed in order to inhibit the adverse impacts of climate change. Issues such as limited storage capacity, trans-boundary disputes (concerning the Indus Water Treaty), outdated distribution systems, and depleting groundwater resources underline such concerns. Additionally, the vulnerable water supply is being threatened by rising demand due to a planned increase in industrial activity, rising population, and urbanization efforts associated with the CPEC.

7. INVESTMENT OPPORTUNITIES FOR ZTBL

Zarai Taraqiati Bank Limited (ZTBL) is a specialized financial institution in country; is catering credit needs of farming community as well as transferring knowledge on latest Agri. technologies through its field force of Mobile Credit Officers (MCOs) at door step of farmers. The Bank has wide network of 32 zonal offices with 502 branches all across the country. The Bank can take many benefits from this initiative by focusing its strategy towards capacity building of the farming community and social development of Small and Medium Enterprise (SME) in the country. The Bank may participate in various projects that are proposed to be completed under 9 Special Economic Zones (detail is shown table 5). Possible investment opportunities for ZTBL in Northern Zone, Central Zone, Southern Zone, and Western Zones of CPEC is described below in detail:

7.1. Northern Zone

Out of Nine Special Economic Zone, the "**Moqpondass SEZ Gilgit-Baltistan (GB)**" lies under the Northern Zone. The Maqpondas SEZ is earmarked in district Gilgit, GB, naturally rich in precious stones, fruits. Based on the available endowment structure potential industries like marble and granite, iron ore processing, fruit processing and value addition, steel industry, mineral

processing and value addition and leather industry have been identified, in which the Bank can participate and promote agriculture in Gilgit-Baltistan region by adopting following initiatives:

1. The Bank may collaborate with Government of Gilgit-Baltistan to launch any scheme similar to Scheme for Dehydration of Fruits & Vegetables (which has been now discontinued).
2. Some farmers owned Agri. machinery and some get on rental basis. Except for a few self-constructed conventional warehouses, rest of the required infrastructure is almost non-existent. In absence of these facilities, farmers are sustaining huge production losses particularly in apricots, cherry which is a perishable commodity. The Bank may introduce and enhance access of farmers towards machinery and equipments required for drying storage, packaging and transport of highly perishable fruits at subsidized rates.
3. Keeping in view the interest of tourists, the Bank may provide credit to growers of cherry and other fruits for orchard plantation. It would facilitate both growers and tourists simultaneously by enjoying and selling of cherry fruit.
4. Farmers of Gilgit Baltistan are being exploited by intermediaries due to non-availability of outlet to market/sell their dry fruits. If Bank, consider dry fruit shop as loan able item, then it would help them to establish their own outlet for marketing of their dry fruits.
5. To address this shortage of accommodation, ZTBL may offer loan amount to youth of the area for construction of guest houses on existing terms and condition of the Bank. This activity would provide self-employment opportunity and promote agri. tourism and spiritual tourism. In addition, to promote education and unemployment the Bank may promote vocational trainings, enterprise development and tourism among youth.
6. Business of Car and Tyre Repairing workshop in Gilgit-Baltistan has wide business opportunity along CPEC route. In addition, it is also included in the list of loan able items under financial inclusion program of the Bank. Hence, such shops can be promoted among habitants of the area to increase Bank's business.
7. Cottage industries like embroidery, wool management to prepare woollen cloths like shawl, caps, socks, dari/khais, and mats under Khawateen Rozgar Scheme may be strengthened to empower rural women of the region.

7.2. Central Zone

Most of the proposed Special Economic Zones (SEZs) like Rashakai Economic Zone (REZ) M-1 Nowshera, Allama Iqbal Industrial City (M3) Faisalabad, ICT Model Industrial Zone Islamabad and China Special Economic Zone Dhabeji Sindh are included in this zone.

Proposed **Rashakai Economic Zone (REZ)** on M1, KP is located at Mardan, M1 Motorway intersection and links to CPEC route through Burhan interchange. REZ is served as a bridge for Northern Areas of Khyber Pakhtunkhwa. Due to this central position, the economic zone may possibly become a trade hub for KP. It can be valuable in expanding transit trade to Afghanistan and Central Asian countries. Based on the strengths of the connected districts and resource pool, the REZ economic zone has predominant investment feasibility for industries in fruit & food packaging and textile.

Special Economic zone, Dhabeji is located close to Karachi port (at a distance of 55 km from Karachi and near to port Qasim). Due to its ideal location this zone will attract investors for heavy investment in manufacturing and automobile industries, although several agro based industries such as rice and flour mills are already working in Dhabeji.

Port Qasim Special Economic Zone is the second SEZ proposed under CPEC in Sindh. Port Qasim has the largest oil terminal among other terminal facilities including container, liquid chemical, and multipurpose terminal making the business easier at that place along with the availability of basic utilities like portable water, power, gas, telecommunications, banking and other facilities including Transshipment and transit trade facilities with Afghanistan and Central Asian Republics.

One SEZ **Faisalabad Industrial City** is also proposed in Punjab at Faisalabad district. Faisalabad has the mix of different largest industries and is the land suitable for major fruits & vegetables (Rice, Wheat, cotton and Sugar Cane etc.), forestry and livestock. Based on the available endowment structure the possible set of potential industries would be Agriculture and Industries including pharmaceuticals, textile, steel, engineering, chemicals, food processing, plastics and agriculture implements etc.

Islamabad is the Capital city of Pakistan and it has well established industries, logistics network and trade routes (Railways, airport, highways). Full availability of water, electricity, drainage and communication systems will ensure the successful businesses in **ICT model industrial zone**.

1. Sugarcane and tobacco crop in Mardan (10 Km from Rashakai) and Wheat, Maize, Tobacco, Maize, Rice, Sugar Cane, Mustard, Water melon, Musk Melon, Apricot, Guava, Pear, Peaches, Plum, Citrus and Mulberry are being planted at Swabi (30 km from Rashakai) has made Rashakai Economic Zone attractive for investment.
2. As discussed above, china is showing keen interest in improving rice industry, which is a strategic export crop for Pakistan. Hence, the Bank may collaborate with Interested Companies of China and finance improved seeds and hybrid to farmers.
3. The ZTBL can promote financing for agriculture waste/by products raw material based industries for maximization of value addition chain, wool processing/spinning, textile spinning/waving and plastic household items in the less developed cotton growing districts like Rajanpur.
4. Warehousing and logistics facilities in Islamabad and Lahore will be strengthened to form a warehousing and logistics network system connecting cities and covering the area along the CPEC. To develop agricultural processing capacity, modern agricultural products, processing equipments and facilities will be provided to the processing units. It is also proposed to develop agricultural industry cluster around Islamabad and Lahore to create a processing base meeting international standards. In this regard, the Bank may extend the area of its scheme of "Warehouse Receipt Financing" in Punjab and other provinces to provide facility of storage of Agri. produce.

5. The Bank can impart trainings on conservation of water resources, crop seed reproduction, breeding and production technology, agricultural products processing, animal & plant epidemic prevention & control, mechanization demonstration, ICT-enabled agriculture and remote sensing technologies, post-harvest agricultural practices, including storage, transportation and agricultural processing through collaboration of Chinese companies like Xinjiang Production and Construction Corps (XPCC), commonly known as Bingtuan.
6. District Sheikhupura has the mix of different largest industries and is the land suitable for major fruits & vegetables (Rice, Wheat, Berseam, and Sugar Cane etc.), forestry and livestock. It has the biggest oil Depu at Machike and is culturally rich to promote tourism.
7. Unfortunately, Pakistan is among the top 10 vulnerable countries, which will be effected by the phenomenon of Climate Change. This emerging issue has created situation of water deficiency and drought in most areas of Sindh, Southern Punjab since last many years. Hence, there is need to adopt the Climate Smart practices like Alternate Wet and Drying Technique, Bed Furrow Irrigation, Zero Tillage, Raised Bed Technology and Dry Seeded Rice etc. In this relevance, the Bank may finance climate smart seeds and techniques. Moreover, the Bank may launch green banking products and create awareness regarding reduction of carbon emission.
8. The Bank may collaborate with Sindh Government to impart trainings/workshops to train women for increasing livestock production & Conversion into by-products. The awareness campaign may transfer of appropriate technology regarding livestock nutrition, breeding, management, disease control and marketing. Other training programs may include the environment and natural resource management etc. to build the human capacity.

7.3. Western and Southern Zone

Mohmand Marble City, KP is one among the other 9 proposed priority SEZs, Mohmand Agency bordered with Charsadda, rich in minerals and agriculture, Bajaur Agency, Khyber Agency and Afghanistan, which are naturally rich in marble and other minerals including Uranium, dimensional stones, granite, coal, marble, manganese ore, limestone. Based on the endowment structure the potentially identified industries would be stone industry, including but not limited to Marble. Other industries include mineral, such as coal and copper extraction and processing.

Bostan Industrial Zone under western zone is situated at district Pishin bordered with Quetta (provided with enough skilled labor), Qila Saifullah (famous livestock, fruits and vegetables), Ziarat (famous for dry fruits, apple and grapes) and Qila Abdullah (climate suitable for fruits and vegetables). Fruit processing and its value addition, agriculture, halal food industry, mineral extraction and machinery, ceramic industries, wholesale and storage have been identified for possible investments.

1. **Fiber Glass Boat Building Yards**: Presently, most of the local fishermen in Balochistan are using wooden boats, which are not only heavy and consume more fuel but also have rough surfaced floor which are home to bacteria and deteriorate quality of fish. On the other hand fiber glass boats are lighter in weight and consume less fuel and it is easier to clean their surface. In order to provide low cost fiber glass boats to fishermen, the Bank may include these types of boats in the list of loanable items as it has great potential of investment in boat building yards.

2. **Fishing Net Manufacturing Units** Fishing nets having prescribed mesh size of not more than 5 inches are in demand among the fishermen. Establishment of fish net manufacturing units on Balochistan coast will not only facilitates the local fishermen but will also repay the investor in short span of time.
3. **Shrimp Farming** Shrimp are found in their natural habitat at Dam, Kalmat, and Jiwani bays on Balochistan coast. However, in order to meet the growing demand for export and also for fast food restaurants investment in shrimp farming has bright prospects.
4. **Fish Processing Plants** With the opening of Gwadar Port in near future for cargo traffic the demand for export of fisheries products will increase many fold. In order to bridge the gap investment in establishing fish processing plants near Gwadar, Jiwani, and Pasni stations will ensure good returns.
5. **Tin Cans Manufacturing Units** Packaging of fish for export and even local consumption in big cities requires hygienic packaging. For this purpose tin/can manufacturing units have huge potential for profit. At present there are no such units on the Balochistan coast.
6. **Flake Ice Factories** In order to keep the catch in fresh condition usage of flake ice has assumed a pivotal role. Previously, salt was applied which changed the taste of fish and hence this practice has been discontinued.
7. **Cold Chain Transportation** Maintenance of cold chain from landing site to processing plants and to final destination is a basic requirement. Investment in this area has great scope as at present no company having expertise in this field has entered the market.

8. CONCLUSION

It is concluded that CPEC is a like a shining star for the economy of Pakistan, which can bring massive change in the agriculture sector of the country through its projects valued at PKR 62 $ billion as of 2017. China will invest aforementioned amount in 3 phases under its Long Term Plan 2017-30. This project would benefits both countries by reducing traveling time, fuel cost and robbery chances of goods.

Pakistan must use this Gold Coin (CPEC Projects) to improve its Economic Growth by providing political security and success to Special Economic Zones. Pakistan can reduce its overall trade deficit by increasing its agriculture exports to China by focusing on the production of commodities which are in high demand in China such as soybean, meat and dairy products. This will enable country to increase its access to Chinese markets, which can now be more easily due to CPEC.

The ZTBL can also take benefits from CPEC by investing in opportune areas that are mentioned in Nine Specialized Economic Zones at various locations in the country. Being a specialized Bank for Agriculture, the Bank should collaborate with Chinese company Yuan Long Ping High-Tech Agriculture Co. Ltd, Mufeng Biological Technology Co. and XPCC through Federal Government to learn from Chinese experiences.

Government must encourage private sector to modernize its business process, invest in research & development, improve human capital, seek international certifications and meet quality standards as expected by the consumers so as to increase the demand of its exports for China. Additionally, it is important that the government must formulate an export oriented strategy by considering abovementioned modalities to address industry's competitiveness issue, encourage value addition and diversify markets and products.

9. REFERENCES

- Abid. A., Jie. S. Saif U.2018. Socio-Economic Impact of CPEC on Agricultural Productivity of Pakistan: A Principal Component Analysis.Intl. J.Food and Agri. Eco. Vol. 6, No. 3, pp. 47-57
- Aga Khan Rural Support Programme. 2017. A perspective Study on Horizons of CPEC in Gilgit Baltistan
- Hadi. N.U., S. Batool and A. Mustafa. CPEC: An Opportunity for a Prosperous Pakistan or Merely a Mirage of Growth and Development. Volume VIII, Issue 3.
- Hashmi, F.K.., M. Rashid., A. Razzaq and A. Imtiaz. Research Study CPEC: Scope of Agriculture SMEs & Role of ZTBL. Available at www.ztbl.com.pk
- http://www.intracen.org/itc/market-info-tools/trade-statistics/
- Kamal. J. and M.H. Malik. Dynamics of Pakistan's Trade Balance with China. SBP Staff Notes 04/1. Available at www.sbp.org.pk
- Hashmi, F.K.., M. Rashid., A. A. Piracha .I. Mazhar and A.H. Khan. Research Study. Prospects of Pakistan's Agri. Exports to China. Available at www.ztbl.com.pk
- Rasool A. and M. A. Hassan .2017. "CPEC-Zarai Ahdaf ka Hasool". Zarai Digest, July-September, 2017, University of Agriculture, Faisalabad.
- Shahid Javaid Burki Institute of Public Policy at NetSol. The State of the Economy China Pakistan Economic Corridor Review and Analysis.10th Annual Report, 2017
- www.sindh.gov.pk
- www.cpec.gov.pk
- www.sbp.org.pk

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