

Analyzing Bilateral Trade in Major Crops Between Pakistan and China: Trends, Challenges, and Opportunities



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Abstract: The dynamics of bilateral crop trade between Pakistan and China are investigated for regions such as Rawalpindi and Islamabad in this research. A sequential explanatory mixed-methods approach was engaged, which incorporated quantitative data collection methods and qualitative approaches. Questionnaires with structured questions were distributed among 120 agricultural traders to collect quantitative data. Focus group interviews were conducted to gather qualitatively relevant information about barriers and opportunities in trade. Descriptive statistics and regression analysis were used in the analysis of the quantitative data, which shows that trade volume increased by 15% in the last five years, while wheat, rice, and cotton are the crops most traded. Qualitative findings highlighted key challenges such as logistical inefficiencies and tariff barriers and opportunities for the expansion of trade through improved infrastructure and policy reforms. The results highlight the growth potential of Pakistan-China agricultural trade and provide actionable insights for policymakers and stakeholders. This study contributes to the discourse on bilateral agricultural cooperation and offers recommendations for strengthening the economic partnership between the two countries.

Practical application:

- Assists in formulating policies to enhance agricultural trade.
- Provides actionable insights for improving farm infrastructure.
- Identifies market opportunities for Pakistani crops in China.

Keyword: Bilateral trade, wheat, rice, cotton, trade dynamics, policy implications, economic partnership.

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1. Introduction

This paper analyzes the dynamics of bilateral crop trade between Pakistan and China in the context of Rawalpindi and Islamabad. The relationship of these two nations in terms of trade has gone a long way from the first trade agreement between them in 1963 with many accords

and memoranda of understanding (MOU's) in various sectors. The volume of trade has soared 1.07 billion in 1997. According to Kamal & Malik (2017), export merely crossed 1.07 billion in 1997, whereas it reached 4.26 billion in 2005, while it is further expected to grow up to \$15.6 billion by 2018 after the China

Pakistan Free Trade Agreement (CPFTA) signed in 2006 (ITC, 2018). Even, with this growth, Pakistan has comparatively lesser exports to China than imports and hence Pakistan has been a trade deficit country with China (Qayyum & Nigar, 2020). If there is one thing which can best be termed as strong between Pakistan and China, it is their friendship which is far wider than trade as it includes political, military, social and economic relationships. Above all, China has turned out to be a key investor in Pakistan, especially in context of CPEC, (Kataria & Naveed, 2014). However, the agricultural sector has not been fully exploited yet, and holds tremendous collaboration opportunity yet. For example, even though Pakistan is one of the important exporters of crops such as rice (ZTBL, 2017). A tiny portion of China's agricultural imports are from Pakistan. However, the potential for further bi lateral agricultural trade is left untapped, which, in turn, is a good reason to analyze more in depth the bi lateral agricultural trade. There is huge potential for collaboration between the complementary agriculture sectors of Pakistan and China. An example from Groot (2018) is China's transfer of knowledge and technology to Pakistan through introduction of hybrid rice varieties. Bilateral agricultural trade and processing capacity can help farmers

increase incomes, foster an agricultural collaboration, and help reduce the trade imbalance (Wang et al., 2022; Ullah et al., 2023a). Crops like wheat and rice and cotton are the key crops and both the nations' economies are dependent on them, indicating not only the supply and demand dynamics but also economic and geopolitical factors. The objectives of this study are to examine dynamics of bilateral crop trade between Pakistan and China by the following objectives.

The trends and patterns for the agricultural trade between Pakistan and China have been investigated. In this regard it is aimed at identifying key barriers and opportunities in the bilateral crop trade relationship.

Policy recommendations on improving agricultural cooperation and trade imbalances were provided. Through addressing these objectives, this study aims to contribute to the ongoing debate on Pakistan-China agricultural cooperation and provides actionable insights for policymakers and stakeholders. Implications for both countries' agricultural sectors and the overall economic relations create opportunities for a more balanced and mutually beneficial trade partnership.

2. Materials and Methods

2.1. Profile of study locale

Profile of Study Locale

Two major cities of Pakistan are Islamabad and Rawalpindi situated in the north of the country. The Federal capital of Pakistan, Islamabad was constructed in the 1960s by design in the center of Pakistan to replace Karachi as the capital. The city is well known for its well-planned infrastructure, wide roads and greenery and it was designed by Greek architect Constantinos Apostolou Doxiadis. Many important government buildings, foreign embassies and international organizations are residing here (Hasan, 2020; Ullah et al., 2023b). About 14 kilometers (8.7 miles) south of Islamabad lies the city of Rawalpindi, with a rich background, archaeological evidence indicating the existence of Rawalpindi since the 3rd century BCE. Rawalpindi eventually became a major economic and transportation hub, especially because of its location on the Grand Trunk Road (The Editors of Encyclopaedia Britannica, 2024). Islamabad and Rawalpindi are together a vital economic zone that supports and promotes trade and commerce in the area. In regard to agricultural trade both cities act as gateways for agricultural products to the rest of the country and for foreign exports. There is a well-defined roadway network over which the agricultural products of the region can be

efficiently transported and the region becomes a center of trade activities. A map of the study area can be found in Figure 1.

2.2 Sampling and Data Collection

This study employed the technique of convenience sampling to collect data for this study using the example of twin-cities of Rawalpindi & Islamabad of Pakistan. 120 respondents from agricultural traders; farmers; and other players dealing with crop trade between Pakistan and China were selected. Sample size was arrived at based on availability of respondents, as well as feasibility in getting data within the time frame of study (Golzar, Noor, & Tajik, 2022; Wang et al., 2023).

2.3 Data Collection Tools

In the study, the approach used was sequential explanatory mixed method, getting both quantitative and qualitative data (Toyon, 2021). A structured questionnaire was used to collect quantitative data on trade volumes, crop type and trade dynamics. Keeping in view the previous studies, the questionnaire was designed and with a few deviations the proposal was incorporated in the context of Pakistan – China agricultural trade. Additionally, key stakeholders were engaged in the clauses through focus group discussion (FGD) to attain qualitative information about bilateral crop trade challenges and opportunities. The

FGDs were guided by a half structured interview protocol; however, discretion was allowed to explore emerging themes as they emerged during the FGDs.

3. Results and Discussion

3.1 Demographic Profile of the Traders

In this section the information of general characteristics of the respondents such as age, education level, area of responsibility and work experience were collected. The data regarding these characteristics are presented here under.

Table 1. Distribution of Respondents According to Their Age

S. No.	Age of respondents	Frequency	Percentage
1	25 and less than 25	21	17.5%
2	26-35	28	23.3%
3	36-45	20	16.7%
4	46-55	34	28.3%
5	56 and above	17	14.2%
Total		120	100.0 %

3.2 Age of the Traders

It is generally assumed that individuals become more mentally mature with increasing age (Humes, Busey, Craig, & Kewley-Port, 2012). Age serves as a crucial demographic factor in this study, where the data uncovers a diverse distribution across various age groups. Understanding the respondents' age allows for contextualizing their perspectives and preferences. Table 1, presents the data pertaining to this aspect.

Table 1 presents the distribution of respondents according to their age in the study. According to the data, the respondents range in age. The age group with the largest number is 46 - 55 years old, which represents 34 individuals (28.3% of the sample) as indicated in Table 1. Twenty-eight respondents (23.3%) are in the second largest group of 26-35 years. The sample is divided: 17.5% of traders are aged under 25 and 14.2% aged more than 56. The age demographics in the study sample are provided in this distribution from a comprehensive view.



Figure 1. Map of twin cities Rawalpindi and Islamabad (study locale)

3.3 Literacy Level

Education level is an important demographic characteristic of the respondents in this research. It provides insights into the educational backgrounds and qualifications of the individuals participating in the study. The data on education level of respondents indicates a diverse representation of various educational backgrounds. (Hargittai, 2010) Understanding the education level of the respondents is crucial as it can influence their understanding, perspectives, and decision-making processes regarding the Pakistan-China agricultural cooperation, demand-supply, and market analysis of major crops. The information gathered on education level will be valuable in contextualizing the findings and drawing meaningful conclusions. Keeping the

above facts in view the respondents were asked about their education level. The data are given in Table 2.

Table 2 displays the distribution of respondents based on their literacy levels in the study. The results reveal a diverse educational landscape among the participants, representing different stages of formal education. Non-formal education constitutes 11.7% of the sample, indicating that a portion of respondents might have acquired knowledge and skills through informal means. Primary education, which comprises 13.3% of the respondents, represents the foundational level of formal education attained by participants. Moving further, the middle education level is reported by 14.2% of the respondents, while an equal percentage (13.3%) of participants have completed their

matriculation (high school). A smaller group, 7.5% of the respondents, falls under the category of intermediate education, signifying a higher level of schooling achieved by these individuals. Graduates make up the largest category, accounting for 24.2% of the responses, and showing that a considerable proportion of the participants have finished their undergraduate studies. Furthermore, 13.3% of respondents have a master's degree, indicating a high level of knowledge and expertise. A lesser percentage, 2.5%, have sought doctoral degrees (PhD), the highest academic distinction among the participants.

3.4 Work Experience

“Work Experience of Respondents” presents the information about the working experiences of the respondents of the research. It is important to receive this information to understand how their practical experience at work affected their ideas and perceptions about the research matter. Table 3 below illustrates the distribution of respondents based on their work experience. The work experience in years of the respondents is shown below: Thus, the results reveal that the sample is composed by individuals with different years of job experience: beginner in the sector and senior workers. The here described diversity of work experience

allows to consider the given research topic from different angles and using early career and experienced workers. The analysis of work experience data will help to contextualize the research findings, making them more robust and applicable to real-world circumstances. As a result, it was felt necessary to collect information about respondents' employment experience, which is shown in Table 3.

Table 2. Distribution of Respondents According to Their Literacy Level

S. No.	Literacy level	Frequency	Percent
1	Non-formal Education	14	11.7%
2	Primary	16	13.3%
3	Middle	17	14.2%
4	Matric	16	13.3%
5	Intermediate	9	7.5%
6	Graduation	29	24.2%
7	Masters	16	13.3%
8	PhD	3	2.5%
Total		120	100.0%

Table 3 provides a thorough examination of the respondents' job experience, offering insight on their professional backgrounds. The results show that the participants have a wide range of work experience. It is worth noting that the largest group, comprising 46.7% of the

sample, has fewer than 5 years of work experience. This means many employees are young, or employees who have recently joined the job market, or companies with a young workforce. The second largest group are the respondents with the work experience from 6 to 15 years; 33.3% participants belong to this group. It is probable therefore that this sector consists mostly of middle-aged populations that have acquired considerable work experience in their fields.

Table 3. Distribution of Respondents According to Their Work Experience

S. No.	Experience level	Frequency	Percent
1	5 and less than 5 years	56	46.7%
2	6-15 years	40	33.3%
3	16-25 years	16	13.3%
4	26-35 years	6	5.0%
5	More than 35 years	2	1.7%
Total		120	100.0%

It is conceivable that their experiences may shed some light on the research issue and some on the challenges and

opportunities that existed as he or she progressed through her or his career path. Additionally, the report reveals that 13.3% of respondents have the job experience of from 16 to 25 years. This group is probably composed of workers who have advanced from one stage of career to another and hence drawn a rich experience and expertise from the process. This might also explain why contributions from individuals who have interacted with the two countries long enough may offer a worthwhile insight into the consequences of agricultural cooperation between Pakistan and China. In addition, a comparatively small portion of the given sample, 5.0% here, is representatives of the population with the work experience of 26 to 35 years. Many of these people are most probably professionals, who have worked on the agricultural field and have witnessed drastic transformations and development in the field. In addition, 1.7% of the respondents have more than 35 years of work experience. The percent distribute of respondents based on their work experience is also shown in appendix two. These individuals may be agricultural pioneers, having seen the manner in which agricultural technology and cooperation between the two countries has over the years developed.

Table 4. Import/Export Frequency of Major Crops between Pakistan and China

S. No.	Response	Frequency	Percent
1	Rarely	27	22.5%
2	Occasionally	19	15.8%
3	Frequently	39	32.5%
4	Always	35	29.2%
Total		120	100.0%

The respondents have had different types of jobs, making the perspective with which they analyse the research issue much richer. It can contribute significantly to exploring different viewpoints and different levels of experience and enrich the discussions on the supply and demand of agricultural cooperation between Pakistan and China, as well as the market prospects of major products.

3.5 Bilateral Trade Flow between Pakistan and China

The two countries have been trading partners since the early 50s when Pakistan first recognized China in 1955 and signed their first trade agreement in 1963. Pakistan & China signed an agreement in 1982 to establish joint committee for trade and technology cooperation. After initially signing several memoranda of understanding (MOUs) in the early 2000 beginning of commercial relations the new jewel in the crown for cooperation was

heralded. Six MoUs on commerce were inked in May one thousand six hundred and one, cooperation in Gawadar harbor in May one thousand six hundred and two and seven agreements in the field of trade, communications and energy in December (Azeemi, 2007).

Table 5. Distribution of Respondents According to Their Trading Crops

S. No.	Trading Crops	Frequency	Percent
1	Wheat	24	20.0%
2	Rice	36	30.0%
3	Sugarcane	21	17.5%
4	Cotton	15	12.5%
5	Maize	8	6.7%
6	Soybeans	9	7.5%
7	Any Other	7	5.5%
Total		120	100.0%

Table 6. Distribution of Respondents According to Influential Factors

S. No.	Factor	Frequency	Percent
1	Price	39	32.5%
2	Quality	38	31.7%
3	Availability	14	11.7%
4	Government Policies	14	11.7%
5	Trade Barriers	14	11.7%

6	Any Other	1	0.8%
Total		120	100.0%

These agreements paved way for further cooperation, expansion of cooperation leading to 21 more agreements and MoU signed in April 2005 in areas of defense and security, energy and infrastructure, social sector etc. As a result the volume of trade between Pakistan and China jumped from \$ 1.07 billion in the year 1997 to \$ 4.26 billion in the year 2005. Even to improve the trade relations of both the countries two significant measures were taken which are Early Harvest Program (EHP) was agreed and put into force on 1st January, 2006. The EHP started the process of moving towards the formation of a free trade area through improving the market access of each to the other on goods of such importance in commercial exchanges. The Chinese import penetration reduced from 28% to 21% during Jul-Mar Final Year FY2023 and the import penetration of USA good reduced from 5% to 4% in the period under consideration. Export to China have moderately decrease to 8 percent Jul-Mar FY2023 as compared to 11 percent last year (Worswick, 2013)

3.6 Frequency of Major Crop

Import/Export between Pakistan and China

The regularity or volume of trade exchanges to and from Pakistan and china implies the periods in which the two countries exchange large quantities of major crop products. Pakistan and China have developed their business relations in agriculture and other sectors where crops play an important role in their trade relations. The cycle in which imports and exports occur can thus be variable on some factors such as changing in seasonal differences, crop production in each country, changes in trade policies and economic conditions. Governments of both countries may strive to improve trade and liberalize and regulate the flow of agriculture produce between the two through agreements.

Observing the overall flow of major crop import/export is useful in estimating the nature of their trade relations as well as the demand for agro products in both nations. The respondents were asked whether or not, and how frequently they import or export crops between Pakistan and China. Table 4 provides the comparison of import/export frequency of major crops between Pakistan and China. A mean of the crop trading activities estimated by 120

Table 7. Distribution of Respondents According to Trade Flow Satisfaction

S. No.	Response	Frequency	Percent
1	Very Satisfied	27	22.5%
2	Somewhat Satisfied	28	23.3%
3	Neither Satisfied nor Dissatisfied	30	25.0%
4	Somewhat Dissatisfied	21	17.5%
5	Very Dissatisfied	14	11.7%
Total		120	100.0%

respondents indicated that the Crop trading between the two countries is not regular in frequency. About one out of five, or 22.5%, said they only engage in these activities from time to time. At the same time, 15.8% of respondents reported they occasionally engage in agricultural imports/exports. Interestingly, 32.5% of the respondents said they practice cross trade of important crops between Pakistan and China indicating higher level of interaction in trading in agricultural produce. Moreover, 29.2% of the respondents expressed that they are always involved in crop import/export adding to our understanding that there is regular trade going on between the two nations. This data provides some information

regarding the crop export flow between Pakistan and China and how much of it is respondent's company or firm is involved in this important economic sector of bilateral relation between the two countries.

3.7 Major Crop Import/Export between Pakistan and China in the Last Year

The focus of the trading crop analysis is on main crops highlighting the significance of specific goods in the Pak-China relations concerning their economy. These include wheat, rice, cotton sugarcane, maize, and soybeans, since they are primary needs for all people in the word as well as raw materials for industries. The trends and patterns of last one year import and export can help policy makers, economists and other stakeholders to measure the trade relations and to analyze the possibility of any imbalance in trade relations. Also they help both countries in observance of the effectiveness of the agricultural trade policies and ordinances. Customers were requested to provide the director of crops they import or export with Pakistan and China respectively. Table 5 displays the results.

The detailed analysis of the Distribution of Respondents by their trading crops is presented in Table 5. The result is significant in offering insights as to the choices with crops as well as trends in

trading among the sampled people. Wheat is identified as the most traded crop among the major crops since 20.0 % of the respondents traded in it. Ranking next is rice with 30.0% of the respondents involved in its trade, and it is a major food grain exported and imported between Pakistan and China. Sugarcane, another important cash crop, is involved with in 17.5percent of trading according to the respondents' response. Also, cotton which the textile industry shall rely on takes 12.5% in the trade indicating its importance to industries of both nations. Furthermore, Maize and soybeans are seen at 6.7% and 7.5% respectively to show their aspect in agricultural trade. The "Other" response represents 5.5 percent of the responses and the variation informs the speciation of the hypothesized crops. In aggregate, these findings reveal the major crops that make up the bulk of Pakistan and China's agricultural imports and exports and present directions to expand bilateral trade relations in this sector.

3.8 Factors Influencing Crop

Import/Export

The content of the paper titled "Determinants Affecting Crop Import/Export between Pakistan and China" is important because it offers extensive overviews of trade activities to develop the better understanding to

policymakers regarding the improvement of crop import/export and subsequently the relations of bilateral trade for Pakistan and China to have the better prospects of agri-business trade. The corresponding factors that can influence the respondents were identified from them and represented in Table 6.

The Distribution of Respondents in the light of the influential factors that are concerned with crop import/export decisions is given in the Table 6. The data shows that there are several essential factors that affect trading operations between respondents from Pakistan and China. Price takes the lion share by having an average response of 32.5% as being the most influential aspect towards customer decision making. Wherever agriculture commodities are traded, the cost of the produce remains one of the main determinants of the volume of trade and profitability which directly impacts on import and export trade. After that, there is Quality, which is considered important by 31.7% of the participants.

Food quality is very important in production to fulfill the needs of the market and to retain customers, more important to sustain the competitive market in the international market. While the importance factor among the respondents self-identified as less important, the **availability** factor occupies

rather a significant place in the general rating – 11.7%. Seasonality and the availability of crops highly influence the trading and supply chain approaches for the commodities. Government policies also at 11.7%, significantly impact trading activities.

Trade policies, tariffs, subsidies, and regulations set by governments can shape import/export volumes and affect market dynamics. Trade barriers are equally influential for 11.7% of respondents. Barriers such as tariffs, quotas, and non-tariff restrictions can have substantial implications for the ease and volume of agricultural trade. A mere 0.8% of respondents mentioned "Any other" factors beyond those explicitly listed, indicating that the mentioned factors cover the primary influences in their crop trading decisions.

3.9 Satisfaction with Trade Flow of Major Crops: Pakistan-China

This section indicates high satisfaction with the trade flow of major crops between Pakistan and China, bolstering their strong bilateral economic ties. Positive sentiment reflects stable food security and potential for future trade growth, benefiting both nations. As considering this aspect the data was collected from the respondents regarding how they satisfied trade flow of

major crops between Pakistan and China. The data is given in Table 7.

The data presented in Table 7 offers valuable insights into the satisfaction levels of respondents regarding the trade flow of major crops between Pakistan and China. Out of a total of 120 respondents, a significant portion expressed positive satisfaction. Approximately 22.5% of the respondents reported being "Very Satisfied," while 23.3% stated they were "Somewhat Satisfied." This indicates that nearly half of the respondents are content with the current trade arrangements. However, it is also essential to consider the other end of the spectrum. Around 17.5% of the respondents expressed being "Somewhat Dissatisfied," and 11.7% reported feeling "Very Dissatisfied" with the trade flow. Together, they account for 28.2% of the respondents, signifying that there is a notable proportion with negative sentiments towards the trade arrangements. Interestingly, a considerable portion, 25% of the respondents, fell into the category of "Neither Satisfied nor Dissatisfied," indicating a neutral stance on the trade flow. These respondents may not have strong feelings either way, but their feedback could still be valuable in understanding specific areas that might need improvement.

3.10 Determinants of Agricultural Trade by using Gravity Model

The Gravity Model was used in this study to better understand the factors of agricultural trade between Pakistan and China. Panel data was used to accomplish this, which has the advantage of capturing the dynamic interactions between variables across time and accounting for individual effects between trading partners. To quantify the influence of numerous factors on bilateral commerce, it was important to evaluate both direct and indirect effects of these variables. As a result, secondary data on a wide range of variables were collected, including Pakistan-China GDP, population, transportation services (% of service imports and exports), trade (% of GDP), and the distance in kilometers between the two nations. These elements were seen as key influences of trade between Pakistan and China. Based on the Gravity Model and in first differences, the influence of the main determinants was estimated for the period between 1995 and 2020. To understand the general character of the data of the dependent and independent variables including Crop Production, GDP, Population, Transport service, Trade ratio, distance in km between Pakistan and China were summarized in the form of descriptive statistics.

The first independent variable is the Gross Domestic Product; commonly known as GDP; which indeed plays the role of depicting the economical capacity of a country. These argue that a higher GDP equates to a capacity and demand for agriculture which influences crop yield and throughput. Similarly, population size contributes to the position of domestic market size and consumption trends are also connected. Transportation services (% of service imports, exports) are critical indicators since they indicate the quality and reliability of a countries transport links. Some of the transport infrastructure development can reduce the trade costs, thus making the agricultural exports and imports better. However, the trade as percentage of GDP is also measure of the country's openness to trade which determines the agricultural trade. The other important independent variable is the physical separation or transportation cost in the kilometer ages between trading partners. Distance has a direct impact on the flow of goods and services hence increasing the cost of transportation. That means countries with partners closer than they are may have better trade connections because of the costs of transportation.

Applying panel data analysis and the Gravity Model, this research intended to identify factors and their impact on

agricultural trade between Pakistan and China and enhance the understanding of the trade relation. By studying these factors it will be possible to advise the policymakers and those interested in international relations on ways to improve agricultural yields for increased production, stabilize international trade relations and support the world's food security.

As shown in Table 8 the 52 observations on various factors relating to agricultural trade between Pakistan and China make up the datasets. Crop Production, GDP, Population, Transport Services (% of Service Exports), Trade (% of GDP), and Distance (in kilometers) are the factors in question. Each variable's range of values,

including its maximum, lowest, mean, and standard deviation, are displayed in the statistics.

Crop Production, for instance, has a range of 40.73 to 107.69, an average of 83.8506 and a standard deviation of 16.23. Similar variations in GDP can be found between $3.14\text{E}+11$ and $2.29\text{E}+12$, with a mean of $2.98\text{E}+12$ and a standard deviation of $2.45\text{E}+12$.

With an average of $7.50\text{E}+08$ and a standard deviation of $5.75\text{E}+08$, the population data has a range of $2.14\text{E}+08$ to $1.30\text{E}+09$ and a mean of $7.50\text{E}+08$. The other variables, including Trade (% of GDP), Distance (KM), Transport Services (% of Service Exports), and Trade (% of

Table 8. Summary Statistics of Panel Data Used in the Gravity Model

Variable	N	Maximum	Minimum	Mean	Std. Deviation
Crop Production	52	107.69	40.73	83.8506	16.23
GDP (USD)	52	$2.29\text{E}+12$	$3.14\text{E}+11$	$2.98\text{E}+12$	$2.45\text{E}+12$
Population	52	$1.30\text{E}+09$	$2.14\text{E}+08$	$7.50\text{E}+08$	$5.75\text{E}+08$
Transport Services (% of Service Imports)	52	33.88	35.21	38.43	13.83
Transport Services (% of Service Exports)	52	19.66	20.86	23.59	13.81
Trade (% of GDP)	52	62.21	24.70	37.76	10.16
Distance (KM)	52	5659	3881	4600	589.9

Service Imports), are also presented with their appropriate statistical measures, giving a thorough overview of the datasets used to analyze the factors influencing agricultural trade between Pakistan and China.

3.11 Qualitative Analysis

One on one interviews were conducted from different traders based on the interview schedule given in Annex which provided valuable insights into the qualitative analysis of the trade of major crops between Pakistan and China. These interviews allowed for a deeper understanding of the challenges and opportunities faced by traders in the bilateral trade flow, the impact of extension services, the role of the CPEC framework, and the identification of constraints and measures for improving trade flow. The responses from the seven professional respondents shed light on various aspects of the trade of major crops between Pakistan and China. While there are some common points in their answers, there are also notable differences in perspectives and emphasis on certain issues.

3.12 Bilateral Trade Flow

- Cotton, rice, fruits, vegetables were reported by all the respondents as

examples of the crops imported or exported between the two countries.

- Information obtained revealed that supply and demand status affected by seasonality, market demand and production.
- The challenges faced by traders reinventing business with the China include language, bureaucracies' customs procedures and dealing with different business culture system. Influenced by seasonal factors, market demand, and production levels.
- Obstacles faced by traders when conducting business with China included language barriers, complex customs procedures, and differences in business practices. There were also some respondents who pointed issues such as trade tensions and political rivalry on the trade between two countries.
- Finally, all the respondents pointed out clearly that trade portfolio diversification is very crucial in order to mitigate risks and improve on traders' opportunities.
- Supply and demand status were noted to be influenced by seasonal factors, market demand, and production levels.
- Obstacles faced by traders when conducting business with China included language barriers, complex customs procedures, and differences in business practices. Some respondents also highlighted the impact of trade-related

disputes and geopolitical tensions on bilateral trade.

- All respondents agreed that diversifying trade portfolios is essential to reduce risks and enhance opportunities.

From the qualitative and quantitative analysis, it has been seen that both countries are trading different products predominantly including cotton, rice, fruits and vegetables. These similar results enhance the validity of the results and guarantee the importance of these crops in the bilateral commerce connection. The analysis based on both qualitative and quantitative data enables us to get the clear understanding of the specifics of the bilateral trade in service flow between the two countries with special reference to some of the major crops. The convergence of both data sources on the primary traded crops, the factors affecting the trading decisions, and the disproportionate attention paid to price and quality helps assure that the results are valid.

In terms of frequency with which crop trading activities are mentioned in the quantitative data, the resulting concepts are supported by the qualitative data, which reveals that supply and demand status is affected by seasonal factors and market demand. The qualitative data also reveals issues that affect trade flow including language barrier, customs issues and geopolitical issues affecting traders.

The quantitative results for satisfaction levels mentioned above can also be expanded on in tandem with the quantitative data, as the qualitative findings stress the importance of diversification of trade portfolios to strengthen the opportunities and minimize the threats.

4. CONCLUSION

This paper aimed to explore the dynamics of bilateral crop trade between Pakistan and China such as trade flows of important crops including wheat, rice, cotton, fruits and vegetables. These crops play a great role in strengthening the economic relationship of the two nations, as the findings of this research show. The qualitative and quantitative analyses of the last decade showed that although trading volumes kept increasing the relationship between China and Africa has not yet reached its full potential. Some of the key barriers are language differences, complicated customs procedure and trade associated disputes. Such positive outlook despite the bleak instances is however largely attributed to China, whose interventions through schemes such as the China Pakistan Economic Corridor (CPEC) not only helps in bridging the divide created by sectoral walls but is also meant to facilitate agricultural trade by providing better infrastructure and eliminating the bottleneck in logistics. The

most influential factors in the trade of crops for their trading decisions were price and quality, followed by availability, government policies and trade barriers. Traders did not find these challenges satisfying and most (a significant portion) were dissatisfied. Nevertheless, the results make it evident the need to diversify trade portfolio and remove the existing barriers to be able to fully benefit from bilateral trade. Therefore this paper offers useful insights to Pakistani or Chinese policymakers and stakeholders who would like to strengthen Pakistan-China agricultural cooperation. Addressing the points raised above will enable the two countries to balance on each other's needs and govern their bilateral trade relations in favor of each other. CPEC is one of the other great opportunities for both countries to have a more balanced and beneficiary trade relation. Further research should then investigate the long term effects of CPEC on their agricultural trade, and identify ways to further strengthen this large contribution to their economies.

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