



Assessment of agriculture sector using SWOT analysis: A case study of Mirpur Khas, Sindh.

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Abstract: Agriculture plays a major role in the development of any area but limited in Mirpur Khas because of various factors as water scanty, lack of modern technology, deterioration of land, etc. Therefore, the focus of this is to analyze the Mirpur Khas agricultural sector through SWOT (strength, weakness, opportunities, and threats). The agricultural sector contributes 18.5% of Pakistan's GDP and provides 38.5% of the national workforce with jobs. A detailed study conducted through questionnaires and interviews with the local farmers of Mirpur Khas. A parallel mixed method was used to collect the data from the farmers, and collected field data were analyzed using simple frequency distribution analysis in SPSS (Statistical Package for the Social Sciences) software. The results of the study reveal that the agriculture sector of Mirpur Khas is being neglected by the concerned authorities to facilitate the sector to increase the revenue of the local area and the also increase the production of the various crops as well fruit orchids. Moreover, the farmers of the district are facing problems related to the shortage of water, high price of inputs, and availing the facilities of basic utilities and services etc. However, study findings may help concerned authorities and farmers to strength the agriculture sector by providing basic facilities and resolving the issues i.e., shortage of water, high price of inputs, and low price of crop production etc. Furthermore, the agriculture sector can be developed in larger quantities by increasing the export of the agricultural product.

Keywords: Agriculture, SWOT, GDP, Questionnaire, Simple Frequency Distribution Analysis.

1. INTRODUCTION

The lives of every human being depend heavily on agricultural products and their importance will grow day by day ("The Importance of Agriculture," 1996). As in developing countries, such as Pakistan, agriculture is still a critical resource for sustainable development and the elimination of poverty in the 21st century (Baloch and Thapa, 2019). Agriculture is considered as the mainstay of Pakistan's economy and agriculture accounts for more than 18.5% of Pakistan's GDP (Pakistan Economic Survey, 2019). The sector engages about 41% of the national workforce and provides a living for nearly 67% of the population (Kalwar *et al.*, 2018). In a 2017-18-year period, Pakistan's agricultural sector achieved significant growth of 3.81%, exceeding the target growth rate of 3.5% and the previous year's growth of 2.07% (Pakistan Economic Survey, 2018) crops are divided into Kharif and Rabi, two seasons. The Kharif season begins between April and June and will take place between October and December. Rabi" is the second season of cultivation which starts in October-December and is harvested in April-May. Pakistan's productivity in agriculture depends on timely water access. The performance of agriculture during 2018-19 remained subdued. On the aggregate, the sector grew by 0.85 percent, much lower than the target of 3.8 percent set at the beginning of the year. This underperformance

of the agriculture sector was mainly due to insufficient availability of water which led to a drop in cultivated area and a drop in fertilizer offtake (Pakistan Economic Survey, 2019).

Mirpur Khas has made a significant input to the agricultural sector in Sindh province as its climate is favorable to produce a variety of foods, with the Kharif season crops of rice, sugarcane, cotton, maize and bajra and Rabi season crops of barley, gram, wheat, and barseen. Moreover, there are plenty of fruit orchards in the district area. This district is known throughout Pakistan for its mangoes. The climate is extreme in the region during winter and summer. The district's structure of land includes a flat fertile land favorable for agriculture (PESA, 2014).

SWOT analysis is a technique for analyzing strengths, weaknesses, opportunities, and threats of any business (Akhtar and Pirzada, 2014; Hong, 2010; Ra and Eschenbach, 1992) consult with district administrator, farmers, elected representative, and many other main stakeholders to be exchanged views on the power and interests of the district through consultation. It's an analysis method that focuses on strategic planning and results (Wegren *et al.*, 2019).

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This paper focuses on the SWOT analysis of Mirpur Khas' agricultural sector. It provides detailed information about the agricultural sector in the study area. Interviews were conducted and questionnaires were distributed to farmers of the Mirpur Khas. It has been found that the agricultural sector needs to be developed and establish itself as the main development average for Mirpur Khas and as well as for Pakistan.

2. MATERIAL AND METHODS

Introduction to site selection

The Mirpur Khas district is located at 68° 59' 3" to 69° 16' 53" east longitude and 24° 48' 33" to 25° 48' 7" north latitude, in the lower part of Sindh province situated in the southeast of Pakistan. The district has a total area of 3,319 km², inhabited by 1.5 million souls (Population & Housing Census, 2017). The district

for data collection was 40 farmers of the district, non-probability sampling (purpose and snowball techniques) was used to collect the data from the farmers. The sample consists of both farmers having less or more than 25 acres of land for cultivation (Akhtar and Pirzada, 2014).

Ten interviews from the farmers were also conducted with the open-ended questions to identify the strengths, weaknesses, threats, and opportunities of the agriculture sector. Besides, the sample size was

expanded covering all talukas of the district. Also, the

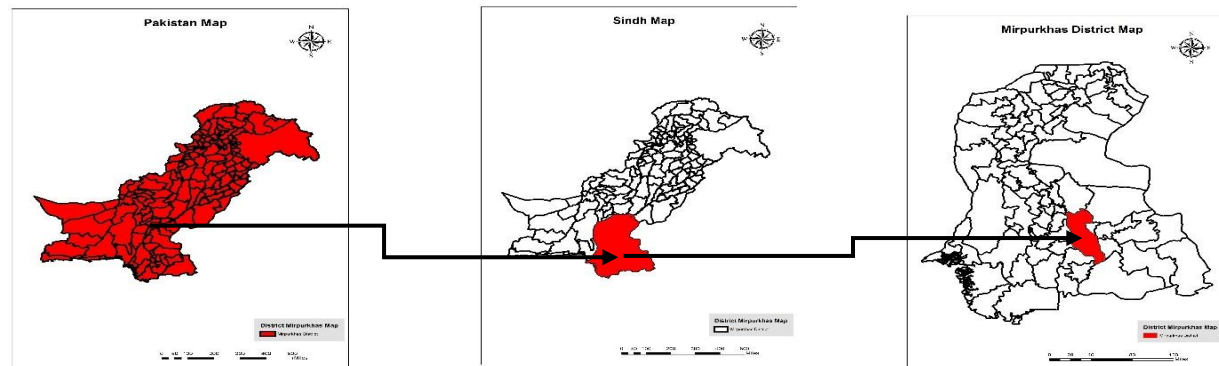


Fig. 1: Map of district Mirpurkhas

is divided into seven tehsils: Mirpur Khas, Sindhri, Digri, Hussain Bux Mari, Kot Ghulam Muhammad, Jhudo, and Shuja Abad, having rural-urban population ratio of 71.7: 28.3 (Population & Housing Census, 2017). The major source of people's livelihood in this district is based on agriculture and related activities (PESA, 2014).

Fig. 2 shows that the land cultivation in the Mirpur Khas district decreases throughout 5 years, due to water shortage and high input price, where the sale decreased annually due to the absence of government facilities. Moreover, figure 3 shows that sugarcane and cotton production is high and increases annually during the respective years.

Data collection and methodology

A mixed-method approach was used to analyze the collected data. A parallel mixed method was used to conduct the interviews and questionnaires from the farmers of the district Mirpur Khas. A questionnaire with 15 closed and open questions was prepared and divided into two parts, the parts consisted of general and agricultural information respectively. The sample size

necessary actions have been taken to confirm the results. For the data analysis, the frequency distribution analysis technique in SPSS software was used to generate the results from the collected data.

SWOT analysis

Professor Andrews of the Harvard Business School, known to be the most commonly analytical analyst of strategic (Can *et al.*, 2015), initially proposed the SWOT analysis. The SWOT analysis shows a

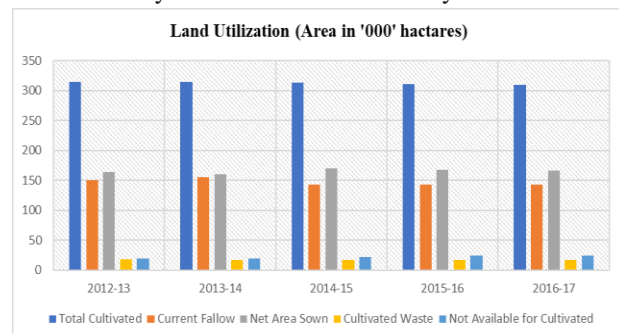


Fig 2: Land utilization of district Mirpur Khas
(Development Statistics of Sindh, 2018)

framework that allows planners and researchers to define and prioritize goals and strategies for their accomplishment (Can *et al.*, 2015; Wan-rong *et al.*, 2013) especially for the agricultural system, also in the classification of agricultural development strategies (Sahoo *et al.*, 2018). SWOT method is a systematic approach to diagnosis the factors and eventually will lead to the strategic decision-making of each factor (Laroche *et al.*, 2019).

3. RESULTS

Basic details about farmers of the area

Most of the farmers in Mirpur Khas are educated up to the middle-level and 24% are not educated, most of them are not attentive to modern land-growing techniques, crop selling methods, etc. In line with research questions, while 37% of the farmers own 1-5 acres of land, and 20% of them hold land about 6-10 acres. Approximately 43% of farmers own over 10 acres of land as shown in (Fig 4).

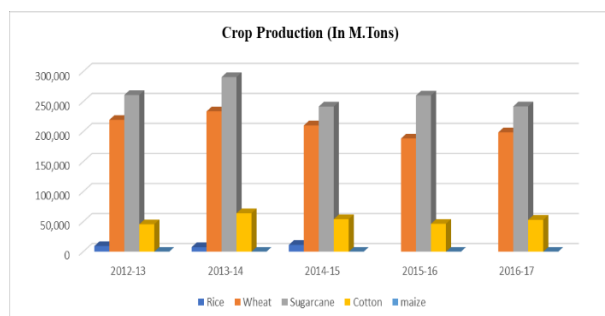


Fig 3: Crop production of district Mirpur Khas for 5 Years (Development Statistics of Sindh, 2018)

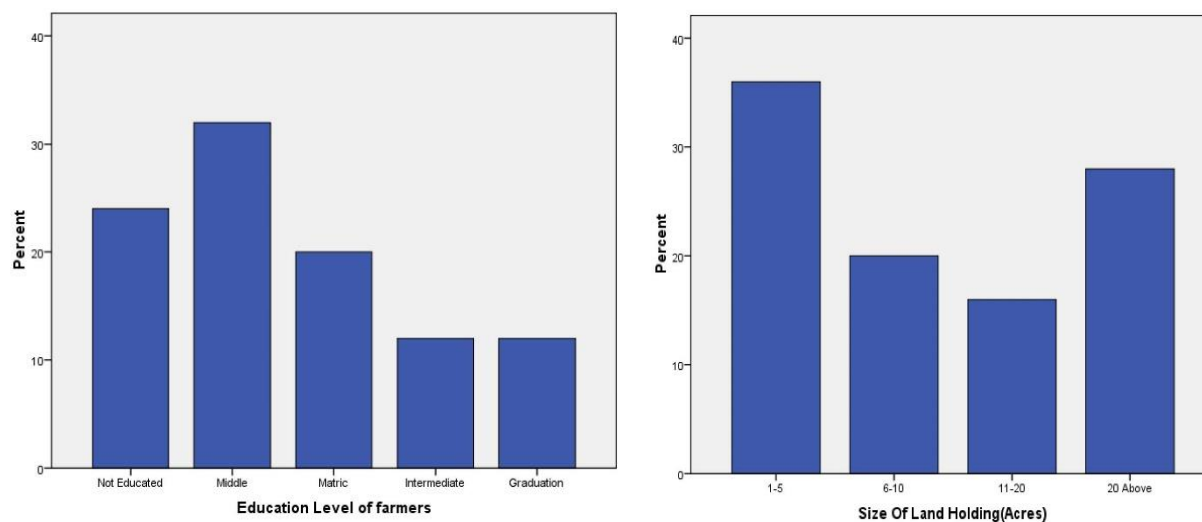


Fig 4: Education level and land holding of farmers

Issues with farmers

Water shortage is the key reason behind the uncultivation of the land in the district, as the province also faced a severe water shortage due to the old-fashioned irrigation system and misconduct of water distribution through the canals. The lower amount of land production has also resulted from a net loss and the high input price of fertilizers (Fig 5). Most of the farmers in Mirpur Khas are less educated and ignorant of modern technologies. The farmers of the district use tractor trolleys and drill machines, accompanied by a spray machine and thresher for the cultivation of land.

The results of collected data from the farmers of the study area reveal that only 4% of farmers are satisfied with the government's facilities, mostly farmers have sought support from the government. Although 40% of farmers have a problem with the bank loan process and interest rate, they charge a high-interest rate. Farmers also facing a problem of misconduct of the loans and other schemes and a huge documentation operation. Moreover, 40% of farmers face the problem because of poor infrastructure to market access when selling crops. Moreover, the purchasing of goods and political participation in the sale of goods is not adequate (Fig 6).

In the revenue generation, the district market played a very important role, 39% of district farmers sell their crops in the district market. As the mangoes of the district are well-known in Asia, 15% of farmers export their fruit crops.

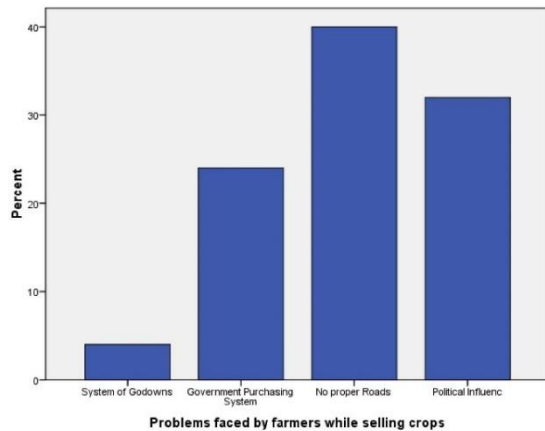


Fig 5: Problems that facing by the farmers of Mirpur Khas

SWOT analysis of the agriculture sector Strengths

The appropriate climate is the major and key strength of the agriculture sector in the Mirpur Khas district, its climate is favorable to produce numerous agriculture crops including Kharif crops. Moreover, the orchards are plentiful in this district. High-quality land, an important strength of the agriculture sector of district Mirpur Khas. The district has outstanding surface irrigation infrastructure and a well-organized canal system. The total cultivated land of the district is 88.10% of the total geographical area (*Development Statistics of Sindh*, 2018), which is its key strength. Moreover, excessive production of agricultural products can not only meet domestic demand but also upsurge exports. Therefore, two-third of the population in this district is directly dependent on agriculture and hardworking farmers are an important pillar of the power of agriculture in this district.

Weaknesses

Government facilities, such as loans and subsidies are not available to small farmers. This system has mishandling and iniquitousness. By using political influence, a handful of farmers suffer from these facilities and other people because they have no sources to borrow. So, they lack the money to buy inputs to cultivate the land. Furthermore, farmers in the district face problems when they want to sell crops. The government does not buy crops on time and road networks are not appropriate for moving crops to go down and markets. The input price for cultivation is very high in the Mirpur Khas district and cannot be used extensively. Besides, combined with limited market information and poor infrastructure to increase transportation costs, making small farmers consume only their products instead of selling them at competitive prices is more likely to affect the various stages of the value chain and the competitiveness of

domestic agricultural products. Furthermore, due to the lack of home-based industries and modern technologies, Mirpur Khas's agricultural sector is having a great impact and domestic food demand is also affecting, on another hand, lack of domestic food demand directly affects the Government's revenue and its decreasing. These are all flaws that are taking place in the Mirpur Khas's agriculture sector.

Opportunities

The district's agriculture sector can create jobs to reduce unemployment in the region through various activities for its products. With growing market demand for various agricultural products significantly increasing and providing the region with a good agricultural climate for various crops. However, the Government can strengthen the agricultural sector by providing basic facilities, i.e. hospitals, schools, water supply, markets, etc. to rural villagers. There is ample scope for the development of the agricultural processing industry in district Mirpur Khas. Open a new path of investment. This agriculture industry will promote the growth of the agricultural sector by not only developing the industrial sector but also creating demand for agricultural production. Also, by introducing new technologies for the agriculture sector, the Government can increase productivity.

Threats

Presently, no post-harvest soil erosion is used in the Mirpur Khas. This reduces soil fertility which reduces future productivity. Agriculture is one of those fields which are required in both reducing carbon emission and the carbon effects of agriculture and its accounting. However, in Mirpur Khas, there is no suitable mitigation about climate change that can largely affect the production of agriculture products and the local economy of the area. Also, adaptation strategies, such as commercial irrigation infrastructure can block agricultural production, once this affected in value chains other activities are also affected equally. Moreover, irrational policies are also a great threat to the agriculture sector, it affects the production of the sector. Additionally, the price and promotion risks and extensive use and the high price of external inputs are also threatening to the agriculture sector of Mirpur Khas. The greater cost of production and lack of skilled and educated professionals in the field of agriculture is also a threat to the sector. Also, fewer effectual local markets, lack agro-based products, and greater land prices included in this regard.

4. DISCUSSION

In the past, decreased agricultural productivity over the decades, mainly the productivity of all-important crops remained stagnant. Climate change also poses

serious challenges to agriculture in Pakistan, it also threatens the country's water availability and food security. According to the economic survey report (2018-19), the agricultural sector contributes 18.5% shares in the country's gross domestic product and provides 38.5% employment to the national labor force. This is also a vital foreign exchange earning resource and helps to stimulate the other sectors. The government is looking forward to supporting marginalized smallholders' farmers and promote small scale technologies to promote the agricultural sector, While the farmers of Mirpur Khas faced a lot of problems during farming of the land. They hold a mainly little amount of land which permitted them to cultivate the same crop over time and most farmers are ignorant of technological evolvement. Due to lack of education farmers are limited to cultivate the same crops, interest on the loan and high production cost of fertilizers are also overwhelming the burden on the local farmers, also face the lack of access to the markets for the selling of yields. The plus point of Mirpur Khas is that it favors all four seasons to produce various crops, it helps to create more employment opportunities and production capacity in an area.

5. CONCLUSION

The current research study aims to assess the Mirpur Khas's agriculture sector through SWOT analysis. The SWOT analysis aims to give data on the agricultural sector's strengths and weaknesses concerning the opportunities and threats faced by the sector. Pakistan is an agricultural country with four kinds of seasons. In Mirpur Khas, the main labor force is affiliated with the agricultural sector. The main reason behind the un-cultivation of land is that farmers face an acute shortage of water supply, high input prices, high loan interest rates, and lack of knowledge of the sophisticated technology, poor maintenance, government procurement systems, and the lack of accessibility of major markets. Results also showed that the farmers of the Mirpur Khas are not satisfied with the facilities provided by the government. The government should give priority basis incentives to the farmers that will help to increase the production and provide awareness of modern technologies to local farmers. Hence, they will be able to understand the modern techniques to cultivate more land and generates more productivity of crops.

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