

Review analysis on Agricultural Sector in Pakistan

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Abstract— Agriculture plays an important role in economy of Pakistan as Pakistan is an agricultural country so it is important to utilize all the agricultural resources in a good way to achieve more benefits from it. The current study focused on the work that has been done in literature regarding agriculture. So the techniques that has been used by previous researchers can be analyzed in agricultural area for Pakistan. also the future policies recommended by researchers can be seen from it.

Keywords— Economy, Agriculture, Statistics, Pakistan, GDP

I. INTRODUCTION

This Pakistan is an agricultural country as its natural resources are its arable land and the water. In Punjab the wheat and cotton are grown mostly and Pakistan achieves 21% of GDP from its agricultural resources and employ the labour force as 43%. It is considered as exporter for net food excluding the years effected from drought. Its exports includes fish, cotton, rice, vegetables and fruits and the imports includes pulses, vegetable oil and consumer food and the major crops are considered sugarcane, wheat, rice, cotton and gain greater than 75% for total crop out values. Mangoes are mostly available in Punjab and Sindh provinces and make the Pakistan as 4th largest producer in the world for mangoes. the objective of the current study is to review the work to be done by different researchers regarding the agricultural area for Pakistan. By comparison and discussion of different studies, the current study will provide the comprehensive insight concerning the agricultural field in Pakistan that will provide the healthy contribution in the literature

A. Review analysis

Different work has been done by different researchers for agricultural area in Pakistan to see the significant variables in this field. So Many researchers has worked out for Pakistan agricultural industry throughout different years to see the significant factors related to this field as **Asghar et al.(2018)** analysed in their research about the technical efficiency and ground water use efficiency for wheat producers. They identified the factors that effects on efficiency by taking data from 24 tubewell owners ,65 tubewell shareholders, and 75 water buyers and performed Data Envelopment Analysis (DEA) method and identified the important factors by using two-limit to bit regression analysis and found the 90% groundwater use and technical efficiency for tubewell owners, tubewell shareholders, and for water buyers also found the allocative efficiency as substantially lower for all groups that indicated the costs for wheat production could be reduced by

using optimal input allocation. They also suggested that there is a need to provide a technical and decision making support for selection of an appropriate tubewell system for reduction of cost and improvement in efficiency. **Pracha and Volk, (2011)** analyzed in their research about energy return on investment (EROI) of wheat and rice as these two considered among the two largest food crops on Pakistan in contribution of GDP. They analyzed it by taking data of 1999 to 2009 on national scale for understanding the different energy input sizes and their contribution about energy output. The result suggested that in rice production, the additional investment in production did not improve the yield but for production of wheat, they found a benefit for wheat. **Aslam et al., (2018)** investigated adopted a valuation of non marketing for low income communities by taking data of 268 households of Thar coalfield (Pakistan) in mining site. They also estimated household willingness to pay (WTP) as PKR 3921 (USD 38) for purpose of risk averting services (S1) and for domestic pipelines and for more decentralized water systems (S2) as PKR 4927 (USD 48.13) per month. They found the significant factors as household age, level of income, livestock, income from farm and quality of water as a significant factors effecting on WTP.

Fayyaz et al.(2017) investigated the role for donor funded CSR corporate social responsibility by taking a case study for Sialkot football-manufacturing cluster in Pakistan and found the donor-funded support of CSR had potential for facilitating joint access for SMEs of demanding consumers markets of developing countries. **Tang et al. (2017)** investigated Turbin house cooling requirement and load characteristics for Sahiwal city for Pakistan. They analyzed the design methods and main equipments for evaporative cooling ventilation system in Turban house Power Plant and found the significant factors related to air flow rate and found the Evaporative ventilation cooling technology is as practicable. **Ahmad et al. (2016)** investigated composition of weed species and the distribution pattern with special reference for district Mardan in Maize crop for month of august and September 2014. The analyzed it by using cluster and two way cluster analysis for four different weed communities by using CANOCO software. **Hussain et al., (2017)**examined about the recent approved variety of sugarcane CPF-248 by conducting an experiment regarding a suitable fertilizer timing schedule and used Randomized Complete Block Design (RCBD) for identifying the significant factors for different yields treatment. **Baloch and Thapa (2018)**investigated about information regarding agriculture extension services through

questionnaire by collecting data from 200 date palm farm houses in Panjgur District of Balochistan and found the study areas farmers as having a poor access for extension of services because of several factors combined effect also they found the 90% of farmers did not have facilities of enough irrigation water and also a 90% proportion were found to be alive by dubas bug. **Khan et al., (2018)** investigated about the response of supply for rice by taking data of 1976 to 2010 and applied augmented dickey fuller test on the data by using zero lag and one lag for stationarity and found stationarity at one lag. They also used vector auto regression by taking log production as the dependent variable and took lag-log production, lag-log rice price and lag-log competitive crop price as independent variables and found the significant results at 5% level of significance. They also recommended to the government that there is a need to stable the prices from government because only after that the farmers will be able in taking decision regarding land allocation for a specific crop also the loans for modern technology should distributed among them by having a suitable interest rate. **Ahmed et al. (2014)** analyzed the data for long term rain fall by taking 1961 to 2011 years for rainfed ecosystem of Pakistan. The areas were Islamabad, Chakwal and Talagang and they used Agricultural Production Systems Simulator (APSIM) and R model. They analyzed the link between SOI phase and between SST phase and found a positive link between July SOI phase and the availability of rainfall between months of October and November because these two months are considered as sowing months for wheat and found the model importance for process of decision making and for the purpose of forecasting the rainfall. **Sultana et al.,(2014)** estimated the grain yield in wheat by using a Normalized Difference Vegetation Index (NDVI) and performed field experiments for response of NDVI for different wheat cultivars and for fertilizer of nitrogen by taking data from 2008 to 2009 and from 2009 to 2010 and found a high correlation among between NDVI booting, of grain filling, and for maturity stages with grain yield. **U. I. Ahmed et al.,(2017)** worked on a household survey based on 576 households by taking interviews in Punjab Pakistan. Their purpose was to see the status of food security by using dietary intake method. They found one fourth of the households as was food insecure and by using the logistic regression analysis, they found size of family, monthly income, prices of food, expenses of healths and debt as the main factors that had influence on the status of food security in rural households.

B. Methodology

From the above review analysis, different methodologies used in agricultural area can be observed in literature as many authors has used logistic regression analysis, time series analysis, augmented dickey fuller test, cluster analysis etc for the purpose of agricultural analysis.

II. CONCLUSION

From the above analysis it can be concluded that for

improvement in agricultural sector there is a need to keep in mind all the above factors like prices of food, farmers income, water system for irrigation, quality of fertilizers etc to improve yield of agriculture because the improvement of agricultural sector will depend on these factors so as the ratio of these factors will improve, the agricultural sector will be more good. So, it is important to consider all the above factors in Pakistan so that all the natural resources can be more utilized.

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