

# IRRIGATION AND AGRICULTURAL PRODUCTIVITY: A CASE STUDY OF CHASHMA RIGHT BANK CANAL (CRBC), D.I.KHAN, NWFP, PAKISTAN

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## ABSTRACT

This paper examines the relationship between irrigation and agriculture productivity in Chashma Right Bank Canal Command area of Stage II. For the said purpose survey data were collected from 139 households of seven villages. In this study we assessed and compared the per acre yields of various crops before and after the CRBC. For the analysis purpose three approaches have been used such as t-statistics, Dummy variable approach and regression. The results show that all the relevant variables (e.g. area under cultivation, per acre yield, cropping intensity, etc) are statistically significant. It is important to note that CRBC played crucial role in the socio-economic development of the study area.

## INTRODUCTION:

Pakistan like many other developing countries is primarily an agricultural country. Agriculture in Pakistan is the lifeblood of the nation. Agriculture is the largest sector of the economic activity and plays a crucial role in the country's economic development by providing food and raw materials and employment to a large proportion of the population. While agriculture held an important place in Pakistani economy, its efficiency remained at a low level. Pakistan economy has undergone considerable diversification over the years, yet the agricultural sector, is still the largest sector of the economy. With its present contribution to GDP at 23.3 percent, it accounts for 42.1 percent of the total labour force and is the largest source of foreign exchange earnings by serving as the base sector for major industries like textile and sugar. It also contributes to growth by providing raw materials as well as being a market for industrial products. What happens, therefore, to agriculture is bound to have a substantial impact on the growth of overall GDP (Govt. of Pakistan, 2004).

Because of its rich land resources, hard working man power and large irrigation system Pakistan had the obvious comparative advantage in the development of its agriculture which would have changed the fate of the rural areas where majority of the population lived. But the early architect of Pakistan's economy in 1950's opted for import substitution industrialization, which

was made possible through an overvalued exchange rate and physical controls over imports. This policy harmed the agriculture sector by transferring the resources from agriculture sector to industrial sector. The lop sided industrial development resulted on one hand in the inefficient industries and on the other hand the agricultural sector performed unevenly and the country became more dependent on external financial assistance. The excessive dependence on external assistance to finance development plans robbed the economy to flourish efficiently. The result was that during 1980's Pakistan economy performance was highly unsatisfactory in terms of current account and budget deficit, and to keep the economy to maintain the minimum growth rate, the country had to accept the unpalatable stabilization and Structural Adjustment Program prescribed by the IMF and the World Bank (Khan, 1994).

Three main factors that contribute to agricultural growth are increased use of agricultural inputs, technological change, and technical efficiency. Among agricultural inputs, water is an important pre-requisite for agricultural development. An assured water supply spells prosperity, creates employment potential, increases income and enhances capital formation. The need for regulated supplies of water and manure at regular intervals and requisite doses was long realized for the increase in the farm productivity. In fact the production of crops requires soil, water, seed, labour