IRRIGATION, AGRICULTURAL PRODUCTIVITY AND POVERTY ALLEVIATION-A CASE STUDY OF STAGE II, CHASHMA RIGHT BANK CANAL (CRBC), DERA ISMAIL KHAN, NWFP, PAKISTAN

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ABSTRACT
This paper examines the two important relationships: firstly, between irrigation and agriculture productivity, and secondly, between agricultural productivity and poverty alleviation in Stage II of Chashma Right Bank Canal. For the said purpose, survey data were collected from 139 households in seven selected villages. The study has assessed and compared the per acre yields of various crops, area under cultivation, cropping intensity, income, consumption and saving before and after the CRBC. For the analysis purpose two approaches have been used such as t-statistics and regression analysis. The results show that all the relevant variables (e.g. area under cultivation, per acre yield, cropping intensity, income, consumption etc) have increased significantly. It is important to note that CRBC has played a crucial role in increasing the agricultural productivity and in turn agricultural productivity has reduced the poverty not only in the command area but also of the adjacent areas.

INTRODUCTION

Agriculture is the lifeblood of our economy. Different strategies were adopted from time to time to revamp Pakistan agriculture. But irrigation has direct bearing on agricultural strategies in Pakistan. It forms the backbone for sustained agriculture. An assured water supply helps increase farm yield and income and facilitates increased capital formation.

Pakistan like many other developing countries has primarily been an agricultural country. 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. 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 abase sector for major industries like textile and sugar. (Govt. of Pakistan, 2004).

The levels of productivity of the agriculture sector in less developed countries like Pakistan are far below the potential that the developed countries achieved several decades ago. The low levels of these factors in turn affect agricultural productivity adversely. Therefore, poverty is not only an effect but also a cause of low agricultural productivity (Ahmad, 2003).

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. Irrigation has proved beneficial to the agricultural development of a country. In fact, irrigation forms the lifeline for sustained agriculture. It alleviates suffering, preserves life, averts famine and advances the material prosperity of the country. The construction and maintenance of an irrigation project has far reaching effects on the economic life of the community living within a region. Investment in irrigation project leads to the creation of new productive activity. (Reddy, 1995).

Moreover, Knowels (1948) observed, "The Irrigation works have provided security of life, they have increased the yields and the value of the land and the revenue derived from it. They have lessened the cost of famine relief and have helped to civilize the whole region."

The North West Frontier Province (NWFP) is relatively backward in terms of agricultural productivity than Punjab and Sind. Major crops in NWFP include sugarcane, wheat, maize, gram (chickpea). Within the NWFP, the southern districts are comparatively poorer and per hectare yields