

FACTORS AFFECTING THE INCOME INEQUALITY IN
IRRIGATION SCHEMES OF SRI LANKA :
THE CASE OF MINIPE PROJECT

By

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ABSTRACT

HEMARATNE, HAPUARACHCHIGE, Postgraduate Institute of Agriculture, University of Peradeniya, Sri Lanka. May, 1991, Factors Affecting the Income Inequality in Irrigation Schemes of Sri Lanka: The Case of Minipe Project.

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This study was mainly focussed to explain the factors affecting the income inequalities of farmers in the irrigation schemes of Sri Lanka. One of the pioneer major irrigation schemes, Minipe, was selected as the study area. The data were collected for two seasons, 1987/88 Maha and 1988 Yala, during the cultivation year of 1987/88. Equally distributed samples in head and tail sections of the project covering both distributory and field canals were selected and those sample farmers were interviewed for this purpose making multiple visits to each of them.

The aim of this study was to look at the above mentioned inequality problem with respect to income distribution pattern of the farmers in the system. A methodology related to the income distribution theory,

production theory and the tabular methods were adapted to examine the above phenomenon.

The study revealed that the economic conditions of the farmers in different parts of the canals are unequal. These inequalities are clearly identified at the levels of the head and tail sections of the entire irrigation system. The poverty among the tail-end farmers are three times greater than that of head-end farmers. The average income received by the tail-enders are twofold lower than the income received by the head-enders. The income distribution pattern among the tail-enders is also very large when compared to the same of the head-enders.

The largest component of the total farm income is from paddy cultivation. The yield difference of paddy in the head and tail sections of the scheme is comparatively very large. The paddy productivity mainly depends on the amount of irrigation water available to the farm. In addition, other factors such as use of fertilizer, agrochemicals, etc. are also dependant on the availability of irrigation water.

The study further revealed that the location of the field is one of the crucial factors for receiving

irrigation water adequately. Many fields in tail-end section did not receive sufficient quantity of water when compared to the fields in the head-end section of the project. Distance between the location of field and distributory canal and the externalities (external diseconomies) generated by the various actions of the farmers regarding the allocation of irrigation water are two most important factors which determined the quantity of irrigation water available to each field.

The income disparity of the head-end farmers at the distributory canal levels is comparatively larger than that of tail-end farmers. When a very few rich farmers whose off-farm incomes were very high have been excluded from the analysis, the inequalities in tail-end sections were greater than the head-end sections.

When the disparity among farmers in the head and tail parts of the field canal level was examined, it was found that in tail section of the main system the larger inequality existed among the tail-enders than among head-enders. However, this difference was not found in similar parts of the head section of the project. The major reason was that, unlike the tail section, the head section of the project does not face the problem of water availability very much. The factors other than irrigation

water such as, fertilizer, farm power etc. have contributed very significantly towards the farm productivity in this section.

Several policy alternatives can be suggested to minimize the income inequalities of the farmers. Priority must be given to improve the water distribution pattern and to reduce the effect of irrigation water externalities. The establishment of farm organizations to obtain their direct participation in the water management activities, rehabilitation of the water delivery system especially the field canals, transformation of appropriate technology and agricultural education to the farmers and the supply of infrastructural facilities are some of the possible policy alternatives to fulfill the above requirements.