

Analysis of Factors Affecting the Development of Mechanization in Rural Areas

Case Study: Ghani Beyglou District of Zanjan Province

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Extended Abstract

Introduction

With the growth in population and increase in the demand for more food it is required to make more investments in agricultural sector. The investment involves using mechanization in agricultural activities. Among the most important measures that should be sufficient to push the modernization of the agricultural sector, it is the development and application of technology. To improve the quality and quantity of agricultural production and market competition, public sector and non-governmental actors have to adapt themselves to the conditions of application of new technologies. Studies show that the direct and indirect effects of agricultural mechanization can be in the areas of productivity, quality and profitability for farmers. Mechanization is necessary for improving the productivity of land and labor in developing countries

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such as Iran. Mechanization also helps farmers to increase the area under cultivation and achieve higher income.

Methodology

This research is applied with descriptive – analytic and the survey method. For data collection, a library and field (questionnaires, interviews and observation) survey have been conducted. The population of the study is 2330 farmers of Ghani Beyglou District. Cochran formula has been calculated for the number of questionnaires that were completed by 300 farmers. Data analysis was performed with Pearson's correlation test and factor analysis.

Findings

In order to analyze the factors affecting the development of mechanization, the test factor analysis has been used. KMO index and the Bartlett test were used to determine the suitability of the data sets and the analyzed variables on the level of development of agriculture. Bartlett's test was significant at a confidence level of 99% in the number 1756.35 and proper KMO value (0.746) shows that the correlation and factor analysis is appropriate for variables. The study variables were examined by factor analysis on the factors investigated. The result is a reduction of the twenty-five variables to five variables.

Discussion and conclusions

Mechanization of agricultural land and horticultural producers was performed to improve quality, increase productivity and income of farmers. But there are many problems and bottlenecks in the sectors of industry, agriculture and services. In this study we have attempted to develop agricultural mechanization. Land of small farmers, small land area of the farmers and the lack of direct income from agricultural activities have been identified as the major obstacles to the development of mechanization. The fact is that the vast majority of small farmers in the agricultural sector are lower, the units are very small, and the farmers don't have economic power to buy up agricultural machines and implements. Essentially, as

mechanization increases the amount of cost and it can also increase the amounts of income. This should be borne in mind that the biggest factor is public acceptance of a new idea or a new cost and its effect on income. The study has also determined the level of mechanization and income, education levels, and there is a high correlation between the sizes of the pieces.

Keywords: Agriculture, Agricultural mechanization, Factor analysis, Ghani Beyglou District of Zanjan Province.

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