Analysis of Effective Factors on Arable Units Output with Emphasis on Farmers Manner in Sistan Region

Mohammad Hossein Karim*
Associate Prof., University of Economic Sciences, Tehran

Received: 16/7/2014               Accepted: 27/7/2014

Extended abstract

Introduction
The agricultural sector in national economy is very important because of the food supply and food security based on domestic resources and the conservation of basic resources for production and rural development. Due to key role of agriculture in Sistan region, in this research work effective variables on productivity of agricultural units are examined as well as farmer’s socio-economic condition considered. Required data for this study collected from 100 rural farmers according to the simple random sampling through related questionnaires and in this regard Eviews7 software was used for information weighing. Present study results showed that variables such as area under cultivation and farmers experience had a significant effect on performance and productivity. Therefore, Strengthen of the agricultural infrastructure to improve outcome and rural development in the Sistan region based on research results is recommended.

Introduction
Agriculture as one of the most important economic sector requires an integrated coherent plan to achieve development and challenge for economic, social, cultural and national crisis. Now a day, about 80 percent of food needed by people and raw materials needed for industry, nearly 20 percent of gross national product and almost

* Responsible Author: karimsistani482@gmail.com
25 percent labor force employment by means of this section including the Peerless is another index that its importance makes clearer. Although in lot of studies the role of education and extension for promoting agriculture and rural development has been forgotten but the evidence shows that extension and education creates farmers ability for necessary activities to overcome the troubles.

World Bank in 1975 has defined rural development strategy to improve economic and social life of a particular group of peoples that is poor villagers. This includes transfer of interest and profit to very poor people in rural areas with subsistent living which includes small farmers, tenant farmers and landless farmers. Therefore the purpose of rural development is rural poverty reduction and process should be with applicable design to increase agricultural production and improve economic power for villagers. In this direction experience and extension are important variables and inputs in human resources development, for improving of production, income, consumption, savings, investment and peasant’s life with rural development.

**Method & Materials**

For this study, Ordinary Least Square (OLS) method which is one of the red-hot models in econometrics estimation is used for required evaluation of unknown parameters in a linear regression manner. This model is one of the famous & appropriate which contains two variables and on main objectives for estimation of \( \beta_1 \) & \( \beta_2 \) in below equations. In this model \( Y \) is dependent variable and \( X \) is considered as independent variable, and other variables are \( D, X_1, X_2, X_3, X_4, \) and \( X_5 \) which are farmer’s productivity, literacy, and irrigation frequency, area under cultivation, age, seeds and experience consequently.

\[
y_i = \beta_1 X_i + \beta_2 X_i + u_i
\]

Required data are collected by cluster sampling method through questionnaire interview from 100 samples and including two steps that main cluster were villages and sub-cluster were farmers in study area, and below Cochran’s C test was used for appropriate estimations.
Discussion & Results

Research result indicated that social and economical characteristics of agricultural family in study area at average are: 444/8, 3/42, 55/9, 2/7, 2796/7, 0/49, 37/98 for seeds, irrigation frequency, age, area under cultivation, output, literacy and experience consequently. As well as, standard deviation along with minimum and maximum quantity of variables are shown in related tables.

This is worth mentioning that area under cultivation variables indicate positive signal and meaningful impact on farmer’s performance and productivity and implies that increase in area under cultivation will lead to increment in production per unit and total output. On the other hand, this is important to mention that experience variable also implicate positive signal and shows that more experience of farmers has effective impact on productivity growth and optimum utilization of resources by reduction in production costs. Literacy variable was not considered much meaningful since most of farmers are more or less illiterate and other variable were meaningless in related estimations.

Conclusions & Suggestions

Overall, with considering study results and conclusions few suggestions are recommended for better improvement: The village and villagers must be consider as the main sources of development process and should not be in margin of the development program. Appropriate respect is necessary for rural base with regard to status of the farmers and agricultural professions. Employment of experienced and literacy people in agricultural extension and promotion, make possibility and facilities to enable them for further and higher output as experts to improve operation efficiency. The experience and common Education must be encouraged oriented for farmers and according to their requirement of rural development. Ultimately, research analysis emphasizes on manner of resources use and accurate
planning for the optimum utilization of resources for sustainable agriculture. It is obvious that farmer’s experience and land consolidation will be positive and effective factors on total output. In this respect, accompaniment of research centers and researchers is serious necessity in the field of optimizing the use of resources and farmers experience in order to increase production and mitigate rural poverty.

**Keywords**: Factors, Productivity, Farmers, OLS, Sistan Region.

**References**

Association of Agricultural Extension and Education, 2010.


Mey Huang, F. & Hueih Luh, Y., 2009, *The Economic Value of Education in Agricultural Production: A Switching Regression Analysis of Selected East Asian Countries*, Department of Agricultural Economics, National Taiwan University.


