



Farmers' Education and Farmers' Wealth in Bangladesh

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ABSTRACT

The impact of farmers' education is examined with a view to evaluate the actual situation of farmers' education in Bangladesh. Fifty samples were collected from two sub districts of the Gazipur district in Bangladesh. The selection of the study sites and collection of the samples such as the years of schooling of the farm household head, total income, farm size, number of earners of farm families, family size, years of farming experience of farm household head, number of times extension contacts and rice yield were done purposively. It is cleared from the study that education is necessary for farmers to raise their wealth. Results were derived through regression analysis. The study has also shown that size of family and years of farming experience contributed significantly to the wealth accumulation of farmers.

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Introduction

Education is a human right and an indispensable element for economic and social progress. Understanding this significance of education, the realization of educational expansion has been increasing worldwide (Hansen 2001). Recognizing this, like other continents during the last decades, investment of developed countries in their education systems were the largest determinants of economic growth. However, this interpretation is not always appreciated adequately by many lower development countries like Bangladesh. Owing to the lack of work based education, the education arena is not so developed in Bangladesh. Although agriculture is the main stream of her economy, education for scientific method of agriculture is still felt necessity in this country. It means that lack of productive education is too acute in her agriculture. Studies of farmers' education and wealth are probably found in Murphy et al (1997), Arrondel (2000) and Mishra et al. (2013). Most of the previous experiments of Bangladesh are relevant with farmers' education and productivity except Asadullah (2011) which recognized the relationship between education and wealth of farmers. Therefore, it is evident that studies of farmers' education impact on farmers' wealth are scant. It is noted that education of farmers increases wealth (Mishra et al.2013) as education is an indispensable element for economical and social progress.

Most of the villagers of Bangladesh are not educated and live on subsistence farming. Without education, it is

difficult for them to gear up wealth generating works. With this regard, the present study is conducted. The results will be useful for the development of education in Bangladesh or elsewhere.

Various approaches and data were used in the former studies. However, it is not easy to pinpoint the sources of the differences in the previous studies because of their model specifications. The present study recognizes universities, farm research institutes and industrial area in the selection of the study site. The importance of these infrastructures can be found in Begum (1998). Paying attention to these infrastructures, the current study differs profoundly from others reported in the relevant literatures.

Methodology

The wealth of a household is widely determined by wide variety of factors both technical and social (Murphy et al. 1997). Among the social factors, individual and family characteristics are also important. Their impacts are again affected by infrastructures facilities in the area and local institutions, as assumed in Rahman (1999). In the present exercise all these factors could not be taken into account as relevant data were not available. Explanatory variables were reviewed from the existing literatures. They are the education years of farm operator (ED), total income (TNC), actual size of the cultivated land that is the farm size (FS), number of family earners (FE), family size (FM), farm operators' farming

experience, that is, years of rice cultivation (EXP), the number of times extension contacts (ET) and per unit of rice production (YD). The estimated equation of household wealth is as $WEL = f(ED, TNC, FS, FE, FM, EXP, ET, YD)$. The ordinary least square (OLS) is used for wealth function.

In order to apply the above mentioned formula, a field survey was conducted in the Gazipur district, located at 30 kilometers in the North-East of Dhaka, the capital city of Bangladesh, between the months of August and September 2001. This area is an average farming district in the central and northern areas of the country regarding productivity, farm size and production conditions. In this paper, two areas Sadar and Sreepur sub districts of Gazipur district out of five sub districts were surveyed. A total of fifty farms were investigated through pre structured questionnaires. The selection of two sub districts and sample collection were done purposively.

Following is a brief explanation of the survey families. The average age of farm household head is 43.1 years, the number of years of schooling of farm household head is 5.5 years, the farm area is 1.4 ha and the size of family is 7.2 persons and the number of adult family members is 2.2 persons. As for the contact frequency with extension agents, the average number of times of extension contact is 0.8 times per year.

Results and Discussions

The results of the regression analysis are presented in table 1. As the sample is small, this implication implies that impacts of education and other explanatory variables should be viewed as explanatory and indicative. The adjust R^2 values indicate an excellent fit for the regression equation.

Table 1 Regression estimates with survey data

Variables	Wealth			
	Coefficient	S. Errors	T values	P values
Intercept	-798.27	1020.81	-0.78	0.44
ED	124.55 **	47.69	2.61	0.012
TNC	-0.1548	0.19	-0.806	0.42
FS	207.75	184.96	1.123	0.27
FE	-164.65	213.10	-0.773	0.444
FM	188.17***	60.05	3.133	0.003
EXP	28.20*	14.72	1.92	0.062
ET	-667.57	513.34	-1.300	0.200
YD	0.012	0.15	0.088	0.929

$R^2=0.529$, $AR^2=0.435$ ***, F statistics=5.624, Probability=0.000085

***, ** and * indicate level of significance at 1%, 5% and 10% respectively. Source: Author's calculation from survey data.

The years of schooling of farm household head has significantly positive impact on wealth. It implies that with the increase of the years of schooling of farmers, farmers' wealth increases. However, the regression coefficient of education is moderate since the level of significance is 5%. Murphy et al (1997) and Mishra et al (2013) found positive and significant effects of education on wealth where Asadullah (2011) found low mobility of wealth despite the significant effect of education on wealth.

The effect of the size of farm is positive. Usually large farmers can produce more crops and also store this crop for a certain period and sell it later at a higher price (Begum 1998). Thus it can induce farmers to raise wealth. However, the effect is weak as the magnitude of the coefficient is not significant. Probably small farmers are also ideal for farm management and can assist to accumulate wealth by increasing farm output.

The effect of total income on wealth is negative. One of the main causes is probably that the income of farmers is not relevant for the wealth accumulation. One reason is that past receipt of costly private credit from shops and money lenders prevents a household from accumulating wealth (Murphy et al. 1997). But the impact is weak since the regression coefficient of total income is insignificant. Thus it can be inferred that higher income can influence the ability of farmers to accumulate wealth by providing them on and off farm employment opportunities.

The number of family earners has negative effect on wealth. But the impact is weak because the coefficient is not significant. Incomes from on and off farm works in the rural or urban areas are inconsistent due to low price of farm products and lack of suitable jobs, high rent of house etc. Therefore numbers of earners of farm families hardly raise their wealth from their earnings whether they live in the rural or urban areas. More in depth analysis is necessary for this.

The size of family has significantly positive effect on wealth. Probably farm household head wants to accumulate more wealth in order to maintain the large size of family. For example, new house may be built with the increase of the size of family.

The coefficient for the experience of the head of the household is positive and significant. The accumulate experience of the farmer which is an important variable, is commonly determined either from the years of farming or the age of the farmers. According to several researches, such as Evenson and Mwabu (2001), there is a positive relationship between productivity, income and the amount of technical information possessed by the farmer. Therefore it is expected that the accumulation of farm experience has a great contribution in improving wealth.

The coefficient of the extension contact is negative and weak as the magnitude of the coefficient is not significant. It is noted that extension service is necessary to develop specific on and off farm knowledge and skills which can assist to accumulate wealth of farmers. However, the farmers of the study area had no regular relationship with it. It is observed that only 36 percent were provided extension service through extension contacts. Policy makers should take note of this.

Yield means the rice production per unit of farm land. The yield coefficient has positive contribution to raise the wealth of farmers. But the value of coefficient is very low and insignificant compared with the other independent variables in the model. The one reason is that the lack of appropriate price of rice in the rural areas of Bangladesh farmers fails to increase their wealth accumulation from the yield of rice.

Conclusion

It is cleared from this study that education of farmers has positive and significant contribution to accumulate their wealth. But the regression coefficient of education (124.55) which is the years of schooling of farm household head is particularly moderate compared to the regression coefficients of some other highly significant variables such as the size of family (188.17). It is assumed that farmers of the study are completed only primary school education. It is noted that despite the rapid increase in the enrolment in primary and higher education during the last decade, the quality of education remains a serious cause of concern in Bangladesh (Habibullah et al.2012; Bangladesh education sector review 2002). Low quality of education which includes qualities of teachers, infrastructures of schools etc. may be responsible for the significant but moderate effect on the wealth accumulation of the farmers (Francisco 2001). Anyhow, it is proven that education of farmers is rewarded. The government of Bangladesh is determined to develop the education of Bangladesh (Daily Star 2011). Considering the result of the study, policymakers should take necessary steps in order to accelerate the education either in Bangladesh or elsewhere.

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