FACTORS AFFECTING PADDY FARMER HOUSEHOLDS' CREDIT, INCOME AND EXPENDITURE: A STUDY OF SAMMANTHURAI DIVISIONAL SECRETARIAT AREA

S.M.Ahamed Lebbe

Department of Social Sciences
South Eastern University of Sri Lanka, Oluvil, Sri Lanka

Key words: *Vicious Cycle, Unprofitability, Indebtedness, Low Productivity*

Introduction

Agriculture sector contributes 12 per cent to GDP and also it provides employment to about 34 per cent of the labour force in Sri Lanka. The paddy crop contributes 15 per cent of agricultural output, which is the highest contribution made by any single agricultural commodity. Since Ampara district is one of the major paddy cultivating regions of Sri Lanka, it contributes around 20 per cent of the total paddy production of the Island.Around 45 per cent and 35 per cent of total population are directly and indirectly involved in paddy cultivation in the district (Planning Secretariat,Ampara, 2010). Ampara District is in the dry zone and has two seasons of paddy cultivation, with the help of the Galoya River Valley irrigation infrastructures.

After the launch of the Liberalization Policy in 1978, the Sri Lankan paddy farmers have confronted several difficulties in generating sufficient income from paddy cultivation for their livelihoods. As a result, the increasing input cost of paddy cultivation in causes a serious question about the future progress of the sector. It is seen that laborers involved in paddy sector have been moving to other sectors for higher wages. According to Jayasena et al, (1996), the shifting of youth labour from agriculture sector to other sectors has become a notable feature in the agrarian economy in Sri Lanka. Low income and unprofitability of most of the small scale agricultural enterprises have become the major economic factors responsible for such transfer. The sustainability of paddy farming and paddy farmers is at a dangerous juncture with a major threat of the deepening financial crisis. Most of the farmers are getting into the vicious circle of indebtedness and are unable to meet their household expenditures with the inadequate accrual of income from paddy cultivation alone. Most of the paddy farmers are gradually being trapped into rising debt to high interest as they have to constantly depend on creditors. These situations are not exceptional to the farmers in Ampara district and Sammanthurai Divisional Secretariat Area.

Farmers are trapped in vicious cycle of poverty because they have low income and savings leaving them in a weak position. In the income model, academic qualification, land holding, agricultural expenditures and number of family members involved in agricultural activities affected income of small farmers. Family expenditure influences the income, including living style and consumption pattern of respondent (Ghafoor et al, 2010). Age structure of the farm household determines not only income but expenditure also of the farming family. Farmers with bigger families were less successful than those with smaller family sizes (Dlova *et al* (2004).

Small scale farming, non- commercial, traditional agricultural practices lead to low productivity, affecting levels of income and saving of farmers especially smaller ones and

pushing them in vicious circle of poverty (Todaro, 1997). Small farmers experience low production, which leads to low income and savings. This further leads to low investment per hectare again causing low production, income and savings, this circle continues and these farmers remained under the unbearable burden of poverty (Ghafoor et al, 2010).

In this background, study in hand was conducted to examine the major determinants of credit demand, income and expenditure of paddy farmer households in Sammanthurai Divisional Secretariat Area of Ampara District in Sri Lanka.

Methodology

This study is mostly based on primary data. The relevant data had been collected through interview schedules using a set of pre determined and structured questionnaire. The data were collected with the help of the pre-determined and structured interview schedule. The primary data was related to the year 2007-2008 (2007 *Yala* and 2007-2008 *Maha*). Two stage stratified sampling procedures were adopted to select 240 paddy farmers. At the first stage, Sammanthurai Divisional Secretariat (D.S) Division was selected out of 20 D.S. Divisions in the Ampara district. At the second stage, 240 sample households were selected from 52 Grama Sevega Niladari divisions (GSN). Hence, four paddy farmer households were selected from each GSN Division.

Information regarding households' Credit, income (Paddy farming and other income) and expenditure were collected from respondent household. In order to find out factors affecting credit, income and expenditure ordinary least square (OLS) method was used. For this purpose "SPSS" software packages was used.

Discussions and Conlcusion

Factors influencing Demand for Credit of Paddy Farmer Households, (Model -1)

According to the theoretical and field observation ten variables have been taken into account for regression analysis. However, area of cultivated paddy land, educated persons per household and assets of household have been found to have significance at 0.01 level, whereas the number of females per household is significant at 0.05 level while expenditure per household and number of persons between the ages of 15 and 54 have been found significant at 0.1 level. Therefore, finally, six variables said above have been identified as the determinant factors of demand for credit among the paddy farmers of the study area. All other variables are insignificant and dropped out from the equation. Hence, the econometric specification of the final regression model form is;

$$C_H = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$$

C_H = Household's Credit per month, β_0 = Intercept, X_1 = Area of cultivated paddy land (Acres), X_2 = Educated persons per household, X_3 = Assets, X_4 = Number of females per household,

X_5 = Number person between 15-54 years per household, X_6 = Household's expenditure per month.

Factors Affecting Income of Paddy Farmer Households, (Model - 2)

The factors influencing income of paddy farmer households of the study area are explained in this section. Despite nine variables have been considered for regression analysis, five variables have been found as significant. Four variables only have been found as significant at 0.01 level and only one variable has significance at 0.1 level. According to the results, the household expenditure, area of cultivated paddy land and number of males per family are

positively correlated with household's income. Of which, the household expenditure and area of cultivated paddy land are statistically significant at 0.01 level, while number of males per family is significant at 0.1 level. Since the assets and number of persons between 15 and 54 years have been insignificant, they have been dropped from the equation. Therefore, the final econometric regression model form is:

$$\mathbf{Y_H} = \beta_0 + \beta_1 Y_1 + \beta_2 Y_2 + \beta_3 Y_3 + \beta_4 Y_4 + \beta_5 Y_5$$

Y_H = Household income, β_0 = Intercept, Y_1 = Household expenditure, Y_2 = Area of cultivated paddy land (acres), Y_3 = Educated persons per household, Y_4= Number of children less than 14 years per household, Y_5 = Number of males per family

Factors Affecting Expenditures of Paddy Farmer Households, (Model - 3)

In spite of eight explanatory variables have been taken into regression analysis to find out factors affecting expenditure, only five variables namely, cultivated paddy lands, educated persons per household, the household income, family size and household assets have been found significant at 0.01 level. Thus, it is to be noted that every variables are highly significant. The other variables entered are insignificant. Hence, the final regression model form is;

$$\mathbf{E_H} = \beta_0 + \beta_1 E_1 + \beta_2 E_2 + \beta_3 E_3 + \beta_4 E_4 + \beta_5 E_5 + \beta_6 E_6$$

E_H = Household Expenditure, β_0 = Intercept, E_1 = Area of cultivated paddy land (in acres), E_2 = Educated persons per household, E_3 = Household income per month, E_4 = Family size of the respondent household, E_5 = Assets per household.

According to the regression results, adjusted R^2 for model 1, 2 and 3 were 42.2 per cent, 60.8 per cent and 70.5 per cent, respectively. The regression results are not adversely affected by the problems of multi-co linearity. Area of cultivated paddy lands and number of educated persons per household, in general, have been identified as the major determinant of the household debt, the level of income and expenditure. Household expenditure per month is another crucial factor determines household debt and household income. Further, assets is also found vital factor to determine credit and expenditure of paddy farmer household in the study area. Assets per family is positively correlated with household credit and expenditure. Interestingly, increases in assets of paddy farmer household increases their credit. Because, household who posses more assets seek more mortgage loan for their urgent needs in the study area. However, Number of females per household is positively correlated, while number person between 15-54 years per household is negatively interrelated with credit. But, number of males per family is positively interrelated while the number of children under 14 years per family is inversely related to the household income. Similarly, household income per month and family size of the respondent household are positively interrelated with expenditure.

Keeping in view the result of this study, the following suggestions are extended for the consideration of planners and policy makers:

- There should be an easy and enhanced access of paddy farmers to formal or institutional credit facilities.

- Farming households should be provided credit at minimum interest rate so that investment per acre can be increased which is necessary to enhance productivity and it leads to increase paddy farmers' income.
- As there is a mismatch between educational system of the government and employment opportunity for youth, the government will have to make sure that it provides professional courses for catering to the needs of the farming households, to compete in the employment market to secure jobs.
- Agricultural machinery like combined harvester, four and two wheel tractors which are most important tools for paddy cultivation are unaffordable for poor paddy farmers due to which production remains low, therefore government should give either subsidy or provide these instruments at easy installments. This will help them to increase their income and to reduce unnecessary expenditure and credit.
- Policy plan should be taken to provide technical education for paddy farmers to use of different types of agricultural machinery at grass root level, which will enhance capability, and capacity of paddy farmers.

References

Gujarati, D. N. 1995. Basic Econometrics. Third Edition, McGraw-Hill Publishing Company.

Ghafoor et al (2010), Factors Affecting Income and Serving of Small Farming Households in Sargotha District of the Punjab, Pakistan, Pak. J. Agri., Agril. Engg., Vet. Sci., 2010

Jayasena, et al. (1996), Shifting of agricultural labour in Sri Lanka, Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI), Colombo.

Sul tan Ali Adil et al. (2004) , Factors Affecting Gross Income of Small Farmers in District Jhang-Pakistan, Pak. j. life soc. sci. (2004), 2(2): 153-155

Todaro, P. M. 1997. Economic Development in the Third World, 4th Ed. McGraw Hill Ins. USA.