

# Impact of Ineffective Usage of Credit by Small Scale Paddy Farmers in Thamankaduwa Cultivation Area

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## ABSTRACT

Ineffective usage of credit is a major problem in rural financial sector. That results higher rate of credit default which is directly affect to the recoverability and sustainability of loan schemes. In this study, an attempt was made to identify the major factors that are associated with the ineffective usage of agricultural credit. A questionnaire survey was carried out among borrowers and financial institutions in Thamankaduwa cultivation area. Chi-square analysis showed that the recoverability of agricultural credit was associated with number of family members, purpose of credit utilized, credit purpose with type of credit and usage of formal and informal credit. Binary logistic regression expressed that the increased land extent was associated with credit recoverability of farmers who used the credit only for actual purposes.

Chi-square analysis revealed that the ineffective usage of credit was a major reason for lower recoverability rate of agricultural credit. Recoverability rate can be increased by providing the farmers with close supervision and implementing more beneficial and fair policies, rules and regulations.

**KEY WORDS:** Agricultural credit, Effectiveness and efficiency, Rural credit, Rural financial market.

## INTRODUCTION

Sri Lanka has an agricultural based economy. The agriculture sector of Sri Lanka plays a significant role by contributing 17.9% to the total Gross Domestic Production (GDP) and generating 32% of employment opportunities (Anon, 2004). About 78% of the total population of Sri Lanka lives in rural areas (Bandarathilaka, 2002). Almost 90% of this portion is considered poor in which most of them are farmers (Anon, 2004).

Many farmers, especially who involved in paddy cultivation are poorer, and resort to some subsidies from government or loans from various financial institutes, pawning their properties. They are still in poverty cycle which does not allow some to develop beyond the poverty line. Incentives and subsidies from government or loan at lower interest rate have been identified as better helping hand to break the poverty cycle of poor paddy farmers. In 2004 several banks have granted Rs. 812 million for paddy farmers as short term agricultural credit and loan term agricultural credit (Anon, 2004).

The cost of production of agricultural commodities has been dramatically increased in Sri Lanka due to the inflation within the country (Anon, 2004). The shortage of capital is a major problem in the sector. Agricultural credit plays a major role as financial input in cultivation. With the introduction of credit facilities for the agriculture sector in 1947, the government has been trying to develop and expand its availability (Edirisinghe, 2005).

Rural financial sector is consisted basically of two parts as formal and informal rural financial markets (sanderathne, 2002). Most important formal institutions are banks, saving and loan associations, insurance companies etc. Similarly informal financial

intermediaries include money lenders, boutique keepers, or shops, pawn brokers, land lords, richer individuals etc. They perform this function either professionally or in a personal manner; as a full time occupation, part time activity or infrequently. Only 10% of credit requirement of farmers is fulfilled by formal financial market while informal financial market contributes to the rest (Sampath and Sanderathne, 2001).

Sri Lankan small farmer credit program since 1963 have had high rate of default. Less than 55% of funds loaned for paddy and food crops have been recovered in Sri Lanka since 1973/74. Several studies have pointed out that there is no conclusive evidence that the repayment record of smaller farmers is worse than those larger holdings (Sanderathne, 2004). The main reasons for the high rate of default are lower family income, high number of family members, credit ineffectively usage, high rate of credit interest etc. (Hemasinghe, 2005).

However it is suspicious whether those poor farmers are effectively utilizing these loans for the improvement of their farming conditions or living standards. The effectiveness of such loans has to be surveyed and analyzed scientifically, to decide whether the loans have been used effectively. The effectiveness can be measured in terms of increased land extent, fertilizer amount, and yield as well as bought agricultural equipment etc.

In the point of view from the lender's prospective recoverability of loans is the most important factor in determine the effectiveness of any loan schemes. The average recover percentage of loan granted in 2004 was only 84% (Anon, 2004).

These sorts of scientific analysis on the effectiveness of loan schemes are much of importance for banks.

The objective of this study to examine credit usage and effectiveness on small scale paddy farmers and credit recoverability by banks .Specific objective is facilitating to the government to decision making regarding alleviation of poverty within the country. Scientific findings help government sector firms to make policies, rules and regulations in an effective and efficient manner to cater the general public in a more beneficial and a fairly way.

**METHODOLOGY**

This study was carried out at Thamankaduwa cultivation area from January 2006 to July 2006. Thamankaduwa is an area with high production in paddy cultivation. So there are large numbers of paddy farmers with well experiences. Therefore it was a well selected area to find the poor repaying farmers and to determine the causes for default of the credit.

The sample consisted of 60 paddy farmers, who obtained loans from the Rajarata Development Bank (RDB), People’s Bank and Samurdhi Bank in Polonnaruwa district which would mainly offer loans for rural development, were randomly selected for the study. A pre tested questionnaire was used to collect the relevant information through personal discussion with the farmers selected. Then the each of the factors which were affected to the credit usage and effectiveness was analyzed separately as changing percentage of family income, number of family members, education level, purpose of credit utilized, usage of various type credits and utilized land extent using Chi-square technique.

Fifteen branches of bank of RDB, People’s Bank and Samurdhi Bank were randomly selected and a pre tested questionnaire was used to collect the information from them for the study. Credit recoverability from people who obtained both formal and informal credit facilities related to the purpose of credit in 2004 and 2005 were described in descriptive analytical technique.

Chi-square technique was used to identify the association between selected factors and recoverability rate of agricultural credit.

$$\chi^2 = \frac{\sum (X_{ij} - M_{ij})^2}{M_{ij}}$$

Where,

- $\chi^2$  =The Pearson’s chi-square statistic value
- $X_{ij}$  =Stands for observed cell count
- $M_{ij}$  =Expected cell count in  $i^{th}$  and  $j^{th}$  column

P=0.000\* significant probability value of 95% confidence interval.

Selected factors were categorized as below.

1. Family members
  - Group 1 =2 members in family,
  - Group 2 =3 members in family,
  - Group 3 =4 or more members in family
2. Family income
  - High => Rs10, 000
  - Low =</= Rs10, 000
3. Purpose of credit
  - Paddy =credit use only for the paddy cultivation
  - Other =credit for fulfill other needs (not related to paddy)
4. Informal credit
  - Informal credits= Land loads/ Pawn Jewerlies /Money on interest.
5. Education level
  - Primary = Grade 1-11 (O/L)
  - Secondary = Grade 11-13 (A/L)
  - Tertiary = Grade 13-17 (University/Other higher education)

There are some developed criteria as increased land extent, increased fertilizer amount and bought equipment to measure the effective and efficient usage of credit. It was analyzed helping with binary logistic regression.

$$D = \beta_0 + \beta_1 * LXT + \beta_2 * FRT + \beta_3 * EQT + \beta_4 * EDU + \epsilon_i$$

- Where, LXT = Land extend
- FRT = Fertilizer
- EQT = Equipment
- EDU = Education and
- $\epsilon_i$  = Error part

**RESULTS AND DISCUSSION**

**Table 1 - Family Income:**

	Recover %	Non recover %
High	70	30
Low	58	42

$\chi^2=3.12, P=0.077.$

Family income was not associated with recovery of the agricultural credit. In low family income level, 42% of farmers had not paid loan and in high income level it was only 30% (Table 1). Generally with increase of income from production, the repayment ability also increase.

Accordingly study it has been proved that there was no any association between family income and credit recoverability.

There was an association between number of family members and recoverability of the agricultural credit at 95% confidence level. Group 01 showed high recoverability rate compare with others (Table 2).

In general, with the increase of family members, cost of living increases. It results poor recoverability

of credit. Study proved that there was an association of the number of family members and recoverability of agricultural credit.

**Table 2 - Number of Family members:**

	Recover %	Non recover %
Group 01	72	28
Group 02	50	50
Group 03	58	42

Significant association at P<0.05\*.

**Table 3 - Education level:**

	Recover %	Non recover %
Primary	56	44
Secondary	60	40
Tertiary	66	34

$\chi^2=2.123, P=0.346$ .

There was no association between education level and recoverability. Accordingly study, it showed when the education level high recoverability rate also high.

**Table 4 - Purpose of Credit utilized:**

	Recover %	Non recover %
Paddy	76	23
Other	22	78

Significant association at P<0.05\*.

Purpose of credit utilized was associated with the credit repayment of paddy farmers. Recoverability rate of farmers who utilized credit only for paddy cultivation, was only 76% and farmers utilized credit for other purposes resulted 22% recoverability rate (Table 4). Poor recoverability rate of credit can be due to the ineffective usage of agricultural credits by the paddy farmers.

Accordingly study, it is proved that there was an association between purposes of credit utilized and credit recoverability.

**Table 5 - Purpose of Credit utilized and Type of Credit obtain:**

	Informal credit %	Formal credit %
Paddy	85	15
Other	58	42

Significant association at P<0.05\*.

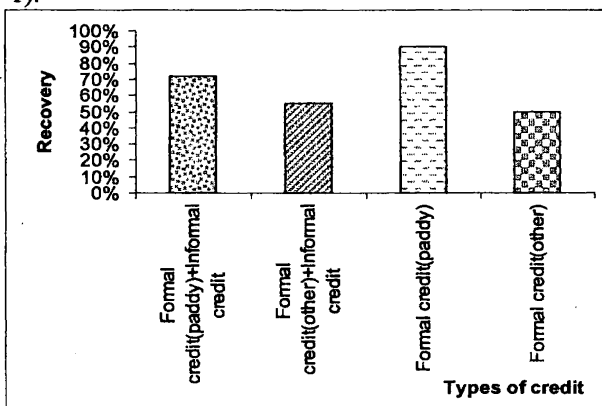
Purpose of credit utilized was an associated with farmers who obtained formal and informal credits. Most of the paddy farmers obtained informal credits other than formal (Table 5). Study proved that farmers especially paddy farmers have been highly trended to informal credits.

**Table 6 - Usage of Formal and Informal Credits:**

	Recover %	Non recover %
Formal Credit (paddy) +Informal Credit	72	28
Formal Credit (other) +Informal Credit	55	45
Formal Credit (paddy)	90	10
Formal Credit (other)	50	50

Significant association at P<0.05\*.

There was an association between usage of credit types and credit recoverability rate from farmers. Recoverability rate has been increased due to the effective usage of credits (table 6). However study showed that usage of formal and informal credits are affected directly to the credit repayment of farmers. Recoverability rate of farmers who obtained formal credit for real purpose was 90%. Farmers who used both formal and informal credits only for paddy cultivation, recoverability rate were only 72% (Figure 1).



**Figure 1 - Types of credit and recoverability:**

Sources-Authors

**Table 7 - Number of Family members Vs Land extent:**

	Land extent		
	<2 Ac	2-3 Ac	>3Ac
Group 01	70%	20%	10%
Group 02	36%	43%	21%
Group 03	28%	44%	28%

Significant association at P<0.05\*.

Land extent was associated with number of family members. According to study, group 01 consisted high percentage of farmers with less than 2 Acers. In group 02 and 03, it was between 2-3 Acers. In general, when land per head ratio increase, the recoverability rate should be increased due to the high earning rate. Study proved that numbers of family members are related to the land extent.

Recoverability can be analyzed using some developed factors i.e. increased land extent, increased

fertilizer amount, bought equipment etc. It was resulted as below under binary logistic regression technique.

**Table 8 - Probability Values of Development factors:**

Predictor	Coefficient	Std Dev	Z	P
Constant	0.0606	0.3483	0.17	0.862
Land extent	2.2420	1.1050	2.03	0.042
Fertilizer	0.1625	0.7559	0.22	0.830
Equipment	0.2271	0.8394	0.27	0.787

According to the result, it showed land extent was associated with credit recovery (Table 8).

#### CONCLUSIONS AND RECOMMENDATIONS

The results of this study revealed that the number of family members, purpose of credit utilized, usage of formal and informal credit and land extent were associated with credit recovery rate. While family income, fertilizer amount, bought equipments and educational levels were not associated with the credit recovery rate.

When number of family members increase in a family cost of living also increases. Due to this the credit repayment rate decreases.

People who used credit only for actual purposes showed high rate of credit repayment due to the high production. Study further revealed that most of the farmers were tended to borrow credit from informal financial sector due to some barriers in formal financial sector i.e. time wastage, needs of government bailers etc. In the case of land extent, when it increased repayment rate also increased. As a result of high land per head ratio there was a high production earning point.

Borrowers were enabled to repay their loans owing to the use of credits for other purposes. To reduce the rate of ineffective usage of agricultural

credit, closer supervision on farmers by financial organizations, from the time of granting to full recovery is necessary.

Providing more beneficial loan schemes with fair interest rate and implementing effective financial policies, rules and regulations credit recoverability rate could be increased.

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