Effects of Micro Credit on Rural Women Empowerment with Special Reference to Bandarapuliyankulama Village

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මෙම අධ්‍යයනයෙහි අරමුණ වන්නේ සුක්ෂම ණය, ග්‍රාමීය කාන්තාවන් සවිබල ගැන්වීම සඳහා ඔවුන්ගේ ආදායම, ඉතුරුම්, වියදම් හා ජීවන තත්ත්වය කෙරෙහි ඇතිකරන බලපෑම අධ්‍යයනය කිරීමයි. ප්‍රාථමික දත්ත හා ද්විතීයික දත්ත මේ සඳහා භාවිත කරන ලදී. ලබාගත් දත්ත විශ්ලේෂණය කිරීම සඳහා SPPS මෘදුකාංගය යොදාගත් අතර දර්ශක මගින් එම දත්ත ඉදිරිපත් කරන ලදී. මෙම අධ්‍යයනය තුළින් ග්‍රාමීය කාන්තාවන්ගේ ප්‍රාග්ධන මූලය හා සුක්ෂම ණය ඔවුන් ආර්ථික, දේශපාලනික හා සමාජීය වශයෙන් සවිබල ගැන්වීම සඳහා බලපාන ආකාරය සොයා ගන්නා ලදී.

Introduction

This is a study of the effects of micro credit on women's empowerment in rural areas in Sri Lanka .Sri Lanka, which a middle-income level country is going towards to achieve millennium development goals. But there can be seen low-income level people at a considerable percentage and among them majority are living in a rural areas. According to the central bank report in 2010, 76% are living in below the poverty line (daily income below U$ 2) out of total population. By doing this thesis considering the micro- credit with the participation of villagers of female in Bandarapuliyankulama which is situated in Anuradhapura district researcher hope to study the effect of micro-credit on their economical, political and social empowerment. In 1995 Human Development Report, the UNDP reported that 70% of the 1.3 billion people living on less than $1 per day are women. Also there are about 3 billion people, half of the

world's population living on the income of less than $2 per day. To enhance international development, the UNO announced the millennium development goals aiming to eradicate poverty by 2015. So through this research, the researchers' attempts to address the above key problems related to gaps in micro credit impact of women's empowerment and eradicate poverty rooted in their lives. By doing this research, the researcher hopes to analysis the effects of micro-credits on women economical, social and political empowerment in rural areas. Also only few studies have been undertaken to assess how micro-credit impact on poverty and women empowerment of the households in Sri Lanka. Even these studies, in general are confined to one or few sections which are poverty of economic empowerment like that. A comprehensive study covering all the dimensions of Micro-credit effects on women empowerment is an important, in evaluating the effectiveness of micro-credit in reducing poverty and empowering women in Sri Lanka. Therefore, this study attempts to fill some of these gaps in literature related to micro-credit by analyzing its outreach and impacts on rural women.

Research Problem

According to the Millennium development goals first place is taken to eradicate poverty and third place is taken to promote gender equality and empowerment women. So eradication of poverty and empower women is very important as they appear in the Millennium development goals. In Sri Lanka there are 2,805,000 poor persons. Among them the highest number of poor people records in rural areas as 2,303,000 while 168,000 poor persons are live in North Central province and 118,000 persons live in Anuradhapura district. (Number of poor persons and number of poor households by sector province and District, 2006/07, HIES-2006/07, Department of Census and Statistic). According to the Head Count Index by sex of the household head, poverty in rural sector female headed household is 15.2. By comparing the urban and rural, the poverty in female headed household is higher than the value of urban areas which records 9.3 and 15.2 in urban and rural sector respectively.(HIES,2006/07)Therefore it is cleared that the research problem is common to international level, to the domestic level and researchers study area. Therefore by considering the above all facts, it is clear that poverty in rural sector is predominant than other sectors and especially among women. Therefore empowering women by economically, socially and politically leads to eradicate the rooted poverty among female members to some context.

Objectives of the study

- ➢ General objective:-
  - General objective of this research is to investigate the effects of micro-credit on the women's empowerment.
- ➢ Specific objectives:-
  - To find out the relationship between women's income, expenditure and saving.
  - To find out how effect micro-credit on women's economical, social and political empowerment.
  - To find out impact of micro-credit on livelihood conditions.
  - To find out how micro-credit effects to value of household assets.
  - Providing some suggestions to the micro-credit implementers.

Methodology

- Study area

Researcher selected Bandarapuliyankulama village as study area. It is situated in Anuradhapura district and it possesses to 319, Gramasewa division. There are about 150 families live in this area. Most of villagers are engaging in agricultural activities.

- Sample Selection.

Firstly, the researcher visited a field survey on Bandarapuliyankulama village. Then researcher identified who are the beneficiaries of micro-credit and who are not. Then the researcher listed all the beneficiaries' name with a number. Then using the stratified random table, researcher selected the sample as 75 debtors, out of 123 debtors. As a percentage value, the sample takes over 60% representation of the sample. Also sample size is higher than the number of parameters to be estimated. (n>x).Therefore muiltcollinearity problem will not be arise.

- Data analysis method.

To analyses the data the researcher uses SPSS which is most popular software in social survey. All data are analysis, constructing Indexes, mean values and percentages. To test the hypothesis t-test, f-test is used. Ms excel also used to compare the variables .Linker method used to analyze qualititative data. Pearson correlation is used between income and savings after loan.

❖ Construct of index

Economic decision making empowerment index at household level after and before enter to the micro-credit.

Likert scale is used as follows.
Respondent alone	1
Jointly	0.5
Husband	0

Variables which are used to construct economic decision making empowerment index at household level are loans uses section, control of loans of women, household savings, basic domestic purchase of commodities, selection of business (Income generation activity),How to behave of the household budget, salary/income control, make large purchases, education expenses, bank transaction.

❖ Economic decision making empowerment index at household level

- $Tvij = \dfrac{(xij)-Min(xij)}{Max(xij)-Min(xij)}$

Where;
Ivij=Dimension Index
Xij=Actual value
Min (xij)=Minimum value
Max (xij)=Maximum value

(i)   Economic empowerment index, after and before enter to the credit. Likert scale is as follows.

Strongly agree   =   5
Agree   =   4
Neutral   =   3
Disagree   =   2
Strongly disagree   =   1

Variables which are used to construct the economic empowerment index as followers .Attention is a high level for national budget in each year, have a good idea about the effects of each parties policy prevail in the economy in various time periods, have a knowledge regarding the impacts of increasing prices of necessary commodities, interest rates for lending, acquisition of literacy and numerical skills, awareness of projects and state development activities.

❖   Economic empowerment index

• $Tvij = \dfrac{(xij)-Min(xij)}{Max(xij)-Min(xij)}$

Where;

$Ivij$=Dimension Index
Xij=Actual value
Min (xij)=Minimum value
Max (xij)=Maximum value.

(iii) Social empowerment index

Construct of social empowerment index after and before enter to credit.

Likert scale is used as followers.

Much decrease   1
Decrease   2
No change   3
Increase   4
Much increase   5

Variables which used to construct the social empowerment index are membership in social organization, membership in religious organization, harmony among the neighbors and villagers, contribution towards the public activity in village.

❖   Social empowerment index

•   Tvij = $\dfrac{(xij)-Min(xij)}{Max(xij)-Min(xij)}$

Where;

Ivij=Dimension Index

Xij=Actual value

Min (xij)=Minimum value

Max (xij)=Maximum value

(ii)   Political empowerment index

To construct the political empowerment index the likert scale is used as follows.

Strongly agree	5
Agree	4
Neutral	3
Disagree	2
Strongly disagree	1

Variables used in to construct the political empowerment index are voting is at a minimum level, vote for party by considering others opinion and preference, vote for the party by considering each parties policy, appreciation of any good work done in opposite party of your.

❖   Political empowerment index

•   Tvij = $\dfrac{(xij)-Min(xij)}{Max(xij)-Min(xij)}$

Where;

Ivij=Dimension Index

Xij=Actual value

Min (xij)=Minimum value

Max (xij)=Maximum value

Every empowerment indexes which are economic decision making empowerment index, social empowerment index, and political empowerment index are constructed by after and before enter to the credits by villagers.

(iii)   Cumulative women empowerment index (CWEI)

Analyze the women's empowerment after and before credit in all areas which are economic decisions making at household level, economic empowerment, social empowerment and political empowerment by constructing a cumulative women empowerment index.

CWEI= [1/4(EDMI) +1/4(EEMI) +1/4 (PEI) +1/4(SEI)]
Where
EDMI = Economic decision making index
EEMI = Economic empowerment index
PEI   = Political empowerment index
SEI   = Social empowerment index

❖   Regression analyze

Loan amount and income level after the credit.
$Y=\beta_0+\beta_1 x_{1i}+u_i$
Where,
Y=Dependent variable (Income level after the credit)
β_0=Intercept
x_1=Loan amount
u_i=Error term

❖   Hypothesis testing.

● T test is used to check the individual coefficients. The confidence level for t test is 95%.
● F test is used to test the overall significance of the model.

Data presentation.
The gathered and analyzed data are presented in tabular and graphical form.

Results

Hypothesis testing

Hypothesis 01:- Income, saving and expenditure of women has increased via Micro-credits.

Hypothesis 01:-Income has increased via Micro credit.

To test the significance of individual coefficients t test can be used.

H_0 ;β_1 = 0   Null Hypothesis.

H_1 ;β_2 ≠ 0   Alternative Hypothesis.

Calculated t value =4.523

Table t value (73 df) =1.994

In the significance test, a statistic is said to be statistically significant if the value of the test lies in the critical region. In this case the null hypothesis is rejected. By the same, a test is said to be statistically insignificant if the value of the test statistic leis in the acceptance region. In here table t value for 73 df is 1.994.Calculated t value under the 95% of confidence level is 4.523.in here calculated t value lies in the critical region. That means, Null hypothesis (H_0) is rejected and Alternative hypothesis (H_1) is accepted. It means that t test is significant for β_2.That means loan amount has significantly affected to income level.

❖   **Saving has increased via micro credit.**

To test the significance of individual coefficients t test can be used.
H_0 ; β = 0   Null Hypothesis.

H_1 ; β_2 ≠ 0   Alternative Hypothesis.

In here table t value for 73 df is 1.994.Calculated t value under the 95% of confidence level is 4.523.In here calculated t value lies in the critical region. That means, null hypothesis (H_0) is rejected and alternative hypothesis (H_1) is accepted. It means that t test is significant for β_2.That means loan amount has significantly affected to savings.

Total expenditure has increased via Micro credit

To test the significance of individual coefficients t test can be used.

T test for the β_2 coefficient.
H_0 ;β_1 = 0 Null Hypothesis.

$H_{1;\beta2}$ $\neq$ 0 Alternative Hypothesis.

      In here table t value for 73 df is 1.994.Calculated t value under the 95% of confidence level is 2.280 .in here calculated t value lies in the critical region. That means, Null hypothesis (H_0) is rejected and Alternative hypothesis (H_1) is accepted. It means that t test is significant for β_2.That means loan amount has significantly affected to total expenditure

Hypothesis 2:-There is a positive correlation ship between income and savings in Micro Credit beneficiary women in Bandarapuliyankulama village.

Correlations

		Income After	Savings After
Income After	Pearson Correlation	1	1.000**
	Sig. (2-tailed)		.094
	N	75	75
Savings After	Pearson Correlation	1.000**	1
	Sig. (2-tailed)	.094	
	N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

According to the table it is clear that there is highly positively correlated income and saving after the credit. Therefore hypothesis is accepted.

Hypothesis 3:-Micro Credit has affected to increased women's economic decision making empowerment at household level, social empowerment, political empowerment and economic empowerment.

Variable	Index Changes		Empowerment Position	
	Before the loan	After the loan	Before the loan	After the loan
EDMI	29.65	60.00	Minimum Level	Medium Level
SEMI	63.00	75.06	Medium Level	Medium Level
PEMI	59.00	82.60	Minimum Level	High Level
EEI	43.40	78.80	Minimum Level	Medium Level
CEMI	48.76	74.11	Minimum Level	Medium Level

Source :- Author computed.

Therefore by considering above all facts it is clear that Micro credit has affected to increase the, economic decision making at household level(EDMI), social empowerment index(SEMI), political empowerment index(PEI), economic empowerment index (EEI)and cumulative index(CEMI).Therefore third hypothesis is also accepted.

Hypothesis 4 : Micro-credit leads to increase the purchase of household assets.

Regression equation of Loan amount and total expenditure after the loan.

$\hat{Y} = 5775.77 + 0.10X_2$

According to the regression equation, the value of β_0 which is the intercept of the line indicates the total assets value when the loan amount is zero. In here when the loan amount is zero the women's assets value is

Rs.5775.77. The value of β_2 =0.10,which means the slope of the regression line, shows that when the independent variable which is loan amount increased by Rs 1.00 ,the estimated increase of the mean total assets value is to about 10 cents.

Hypothesis testing

Calculated t value for β_2 is 2.303

Table t value for β_2 is 1.994 (Two tail).

In here table t value for 73 df is 1.994.Calculated t value under the 95% of confidence level is 2.303 .in here calculated t value lies in the critical region. That means, Null hypothesis (H_0) is rejected and Alternative hypothesis (H_1) is accepted. It means that t test is significant for β_2.That means loan amount has significantly affected to total asset value.

Hypothesis 05

Living condition of women has increased via Micro credit

According to the data about 42% have used cadjan as their roofing material before to credit, but after accessed to credit it decrease up to about 13%. Also20% have used stroke as their roofing material before credit and it decrease up to 9.3% after credit. Micro – credit has affected to change the floor material of house in a high degree. Cement has used about 71% after use of credit. Before get the loan no one used tiles and terrazzo as floor material in their house,. but after they have got loan for persons and one person out of total respondents have used tiles and terrazzo by recording about 5% and 1% respectively.44% have used clay as their floor material before obtain the loan and it decrease up to about 13% .About 18% have used cow dung as their floor material, before the credit and it remains as about 9% after the credit. 84% have used wood as fuel for cooking before obtain the loan and it decrease up to 40% after they have obtained micro-credit. Gas usage was has increase up to about 31% after the credit. Number on respondents who used kerosene has increased to about 29%. Therefore by considering above facts it is clear that Micro credit has affected to increase the livelihood of women. So the 5th hypothesis is also accepted.

Conclusions

Following facts describe the findings of the study.

- ❖ 58 women out of 75, their initial capital source is Bank.
- ❖ Most borrowers have taken loans from Samurdhi Bank.
- ❖ The women have easily associated with the credit institutions which are mobilized to village.
- ❖ The private sector Micro credit supply banks have weakened in rooted in women's mind.
- ❖ The amount of credit they have taken has varied from below to Rs.5000 - Rs.50, 000
- ❖ Most of them have taken the loan amount between Rs.10, 000 to Rs.50, 000
- ❖ Women have utilized their credit to self employment, cultivation, and housing, purchase of assets, consumption and animal husbandry.
- ❖ Bank is the major source of 78% of respondents' initial capital and it is playing a significant role in helping poor to start their own business.
- ❖ 77% of women, who taken the loan their income and saving has increased and other 23%both are decreased.
- ❖ Income has increased 100% who utilized their loan amounts to self employment, housing, animal husbandry and fishery.
- ❖ Income has decreased after the credit women who used their loan with the purpose of consumption by recording 8% out of the total sample.
- ❖ Income has decreased in some extent of the women's who used it for cultivation by recording 15% out of the total sample. This is because of the bad climatic change.
- ❖ Micro credit has positively affected to the livelihood standard of the women.
- ❖ Basic need fulfillment has increased after join with the Micro credit than before.
- ❖ Women's economic decision making empowerment at household level has increased via Micro credit recording value of index by 29.65 to 60.Their empowerment status has gone up from minimum level to medium level of empowerment status.

- Social empowerment index has increased from 63 to 75.06 after obtained the credit.
- Political empowerment index increased from 59 to 82.6.Their political empowerment status has increased from minimum level to High level of empowerment.
- Economic empowerment index increased from 43.4 to 78.8 after they have obtained the credit. It indicates that their empowerment status has changed from minimum level to medium level.
- Overall empowerment index is increased from 48.76 to 74.15 by transferring the empowerment status from minimum level to medium level.
- Overall empowerment index is higher than the other institutions that got credit from Samurdhi bank, Berendina MFI, Prajamulya Micro credit institutions than the other institutions.
- Micro credit has affected to increase the income, saving and total expenditure, but not at very high level. When loan amount is increased by Rs.1.00,the income, saving and total expenditure is increased by 0.55,0.25 and 0.50 cents respectively.
- Micro credit has also positively affected to increase the health, education and food expenditures. That means, there are positive externalities of Micro Credit, to the society as well as individuals.
- In some extent, Micro credit has affected to reduce the unemployment level of the village. Therefore it has contributed to reduce the unrest among the villagers.
- Climatic change has badly affected to cultivation activities. Therefore farmers' income has decreased and it directly affected to increased their deftness.

Recommendations

There are some recommendations as follows.
- Private commercial bank must move to the village, to build their goodwill among the villager's mind.
- Should develop Inter-village communication and inter-member communication network and effective sharing of information among the members.

❖ Need based and local resources base training programmes for borrowers to enable them to collect raw materials, production and marketing?

Ex:-Aware the women who use their credit in self-employment area to focus not only local customers but also foreign customers. Should encourage them to produce some monuments to sell foreigners who visited in Mihintale, Anuradhapura sacred places at low cost.

Since most of the credit borrowers are housewives, home based production should be promoted so that the women can make optimum use of their time and get required assistance from her family members.

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