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Multiple Borrowing and Living Standard: A Study in Bangladesh

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Abstract: The people in Bangladesh have no access to formal lending institutions. Consequently, they borrow from non government organizations (NGOs) where they do not need to show any collateral and for different reasons they borrow from more than one NGO. This study examines the impact of multiple borrowing on living standard of the borrowers and tries to find out the determinants of borrowers' income. Result shows that there is no significant difference in gross income between the groups of borrowers borrowing from single source and borrowing from multiple sources. But, in case of living expenses, savings and amount of non-land assets, there is significant difference between the groups. Borrowers who borrow from single source can spend more for quality life than those who borrow from multiple sources. Since the borrowers who borrow from multiple sources are to pay a larger amount of their income in their installments and they are to bear larger transaction cost, they can save less in spite of making less expense on quality of life. The borrowers borrowing from single source have significantly higher amount of savings and non-land assets than those who borrow from multiple sources. Policy makers should make policies in a way so that that the borrowers can get sufficient amount of loan from one source and they are encouraged to avoid loan from multiple sources which impose higher level of loan transaction costs & repayment burden.

Keywords: Multiple Borrowing, Living Standard, Income, Living Expenses

1. Introduction

No poverty and zero hunger are two goals of sustainable development goals (SDGs) set by the United Nations General Assembly in 2015. It is important to ensure the access of the rural poor to the capital which includes financial, social, natural and physical capital in order to achieve sustainable and developed living-standard of the rural poor. [1] The poor in developing countries have a lack of access to formal financial institutions. [2-4] In other words, conventional baking system has failed to provide financial services to the rural poor due to collateral requirements, higher transaction cost and lack of information. [5-6] Among the poor, women have less access to the formal financial market than men. [7] Bangladesh is called the motherland of microcredit program which requires no collateral for loan. It has emerged as one of the crucial weapons to alleviate poverty. [8-12] In Bangladesh, microcredit support has been being provided by the Government of Bangladesh (GoB) and non-governmental organizations (NGOs) to the poor (focusing on the women)

to improve their living standards by creating greater opportunities for income-generating activities. [2] Still, poverty reduction remains the most daunting challenge for Bangladesh. 23.2% people of Bangladesh live under poverty line. [13] They cannot earn enough money to meet basic needs like food, housing, clothing, education and health care.

Nowadays, collateral free microcredit access is available to the poor in Bangladesh and borrowers borrow from different microcredit institutions. Since rural poor women in Bangladesh have limited access to the productive resources as compared to their male counterparts due to existing patriarchal norms of the society most of the prominent microcredit institutions give emphasis to provide credit facilities to the women who make up half the population. [14-17] In most cases, women act as a medium of getting loans from microcredit institutions and the heads of households use the credits. They use microcredit in both unproductive way like marriage, to pay for dowry etc and productive way like small scale poultry or cattle rearing activities, cultivation of land etc. [18] But some problems are

being created; borrowers don't have land and other resources in order to utilize their borrowed loan. Possession of land is considered as a crucial factor for permanent income and consumption of rural households. The more the land possessed by households, the higher the advantageous position of the households in terms of negotiation, investment, production, and risk-bearings as compared to the households with no land or small pieces of land. In addition, quality of rural infrastructural facilities like roads, markets, cold storage etc. plays vital role to increase the rural people's participation in economic activities. [19] The poor people have low level of education and skill to pursue income generating activities. [20] Amount of microcredit from one NGO is not adequate to use properly. Lenders grant borrowers only one week after which borrowers are to start paying back their installments. [21] Consequently, they are to borrow from more than one microcredit institution. In some cases they can't cope with the required management of the loans, they become poorer and unable to pay back their installments. In recent years, concerns have been raised about the effectiveness of borrowing from multiple sources and borrowing from multiple sources, by and large, is considered as one of the evidences of failure.

Globally, there are a few studies on impact of borrowing from multiple sources on living standard of rural borrowers. Of them, some studies indicate that multiple borrowing has a positive effect on living standard while others show that it leads to over indebtedness and consequently default on loan trap. Prevalence of multiple borrowing at Iringa in Tanzania is very high- over 70% of the microfinance clients have at least two loans from different microfinance institutions (MFIs) at the same time, and they face serious problems in loan repayment because of multiple pending loans. [22] Almost 71% microcredit borrowers are somehow involved in multiple borrowing of them about 69% admit of being late in their loan repayments. They are facing more trouble in timely repayments. [23] About 91% respondents among microfinance networks and other industry players report that their sector is experiencing multiple borrowing while 73% report evidence of client over-indebtedness. 70% of respondents report that there is a correlation between multiple borrowing and over-indebtedness. [24] Multiple borrowing causes over-indebtedness, if this over-indebtedness is not checked, multiple borrowers are more likely to experience more hardships instead of leading better lives. [25] Clients with loans from multiple sources at the same time are found to be more likely to default than others. [26] Multiple borrowing increases irregularity of loan repayment and it increases over-indebtedness. [27-28]

On the contrary, this is evidence from a study that multiple borrowers have equal or better repayment records than their single borrowing peers in the same villages. [29] Repayment performance does not worsen in more competitive locations for most of the MFIs which suggests good risk management, screening and monitoring by those MFIs. Better repayment of loans indicates better livelihood of the borrowers. [29] There is no evidence of growing indebtedness for the overlapping households. Rather, self-employment is higher for the overlapping households. In addition, overlapping households are better off in total assets, net worth, savings, consumption, employment days and non-food expenditures, than the non-overlapping households. [30] There was no negative relationship between multiple borrowing and repayment performance. [31] Though overlapping has not contributed to over-indebtedness for any group of overlapping households, but there are areas of concern. First, overlapping households with five or more memberships have lesser growth in net assets than other groups. These households use a large part of their loans for lumpy expenditures and repayment of previous loans. Second, households with exposure to covariate shocks are more likely to be over-indebted because of their negative growth rate of net assets. [32]

It is the fact from the reviewed literature that studies on multiple borrowing and its impact on living standard of rural borrowers have not been well studied in the context of Bangladesh which raises demand for an attempt to bridge this knowledge gap. This study aims to: (1) examine the impact of multiple borrowing on living standard of rural borrowers, (2) determine the determinants of income of the borrowers and, (3) recommend appropriate policies in this regard.

2. Conceptual Framework

Theory of utility states that budget of consumers increases provided that income of the consumers increases, which ultimately helps them to purchase higher amount of goods and services to maximize their utility. It is the fact that sampled borrowers' households under this study are poor having low level of income. Access of the poor to microcredit program would help them to be engaged in income generating activities. Opportunity of borrowing from multiple sources will encourage the borrowers to borrow a big amount accumulated from different institutions at a time so that the amount can be invested to start a new business. The business or income generating activity is expected to ameliorate their financial condition by increasing income. Increased income will assist them to have higher level of expenditure resulting in higher living-standard for them. This economic behavior is consistent with the theory of utility maximization.
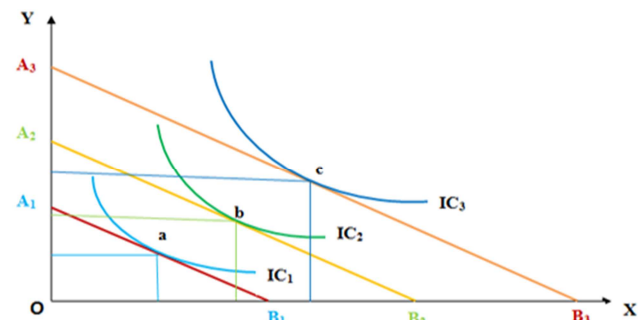

Figure 1. Graphical Presentation of Utility Theory.

This study has tried to examine whether the multiple borrowers are able to move from point a to point c comparing with the borrowers borrowing from single source who are expectedto move from point a to point b after receiving microcredit (figure 1).

3. Methodology of the Study

The methodology adopted for this study is exhibited as follows:

3.1. Study Area

There are 64 districts in Bangladesh from which Bogura district has been selected by using simple random sampling method.

3.2. Sample Size Estimation

The followingmethod of statistical estimation of sample size has been adopted in this study: [33]

$$S = X2\ NP\ (1 - P) \div d2\ (N - 1) + X2\ P(1 - P) \quad (1)$$

S = required sample size.
X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level.
N = *the population size.*
P = the variability in population (assumed to be. 50 since this would show maximum variability, provide the maximum sample size).
D = the degree of accuracy expressed as a proportion.
In this study, the confidence level has been considered as 95 percent and 5 percent is acceptable error. Te estimated sample size is 384 but at the conclusive stage the sample size has been made 400 with a view to avoiding any difficulty at the time of data analysis and interpretation.

3.3. Sampling Procedure and Data Collection

It can be noted that data have been collected from borrowers who borrow from various non-government organizations (NGOs) rather than formal banks (as the poor do not have access to). NGOs provide microcredit to the poor which requires no collateral. In Bogura there are 11 thanas. 2 thanas have been selected by simple random sampling. One union from each of the thanas has been selected randomly.

Then names of villages of the unions, where more than one microfinance institution work, have been collected. Randomly 5 villages from each union have been selected. Finally convenient sampling has been used to select the borrowers.

For convenient comparison among data, samples have been collected from borrowers who borrow from single source, two sources and more than two sources. From a pilot study in a village of study area, it is found that 52% borrowers borrow from single source, 30% borrowers borrow from two sources and 18% borrowers borrow from more than two sources. To be consistent with sample size, 208data set have been collected from borrowers who borrow from single source, 120 data set have been collected from borrowers who borrow from two sources and 72data set have been collected from borrowers who borrow from more than two sources. Structured questionnaires have been used for collecting the data by interviewing the clients.

3.4. Research Method

To see whether there is a statistically significant difference in income, living expenses, savings, amount of land and non-land assets of borrowers borrowing from different number of sources, ANOVA has been carried out. In addition to it, to find out which type of borrowers is to what extent different from other types, Tukey's post-hoc tests have been adopted. It can be noted that Tukey's post-hoc tests are like a series of t-tests and are more stringent than the regular t-tests.

Econometric analysis has been carried out to find out determinants of income of borrowers.

To find out the determinants of income of the borrowers borrowing from different number of sources, the following regression model has been run:

$$Y = \beta0 + \beta1A + \beta2E + \beta3L + \beta4BS + u \quad (2)$$

Here, Y = gross income of borrowers.
A = age of borrowers.
E= education of borrowers (Categorical variable).
L = amount of land in decimal owned by the borrowers.
BS = number of borrowing sources (Categorical variable).
$\beta_1, \ldots \ldots \beta_4$ = coefficients, β_0 = Constant, u = error term.
The table 1 shows how the values of the categorical variables have been handled.

Table 1. Categorical variables.

Variables		Frequency	Parameter coding	
			(1)	(2)
Source (s) of borrowing	Single source	208	.000	.000
	Two sources	120	1.000	.000
	More than two sources	72	.000	1.000
Borrowers' education	Uneducated	105	.000	
	Educated	295	1.000	

Kolmogorov-Smirnov test and Shapiro-Wilk test have been used to check normality in data. Values of Tolerance and the Variance Inflating Factor have been used to check multicollinearity problem among independent variables.

Scatter plot of standardized predicted value of the dependant variable (ZPRED) and standardized residual of the model (ZRED) has been used to check heteroscedasticity problem in data.

4. Findings and Discussion

4.1. Sources of Borrowing

Borrowers in the study area borrow from 8 different lending organizations. Table 2 shows the name of organizations and the ratio of borrowers borrowing from the different organizations.

Table 2. *Proportion of borrowers borrowing from various organizations.*

Sl. No.	Organizations	Borrowers
1	Association for Social Advancement (ASA)	64%
2	Grameen Bank	35%
3	Shomaj Kallan Shongstha (SKS)	20%
4	Basic Unit for Resources and Opportunities (BURO)	19%
5	United Development Initiatives for Programmed Actions (UDDIPAN)	15%
6	Bangladesh Rural Advancement Committee (BRAC)	7%
7	Rainbow Nari O Shishu Kallyan Foundation	6%
8	Small Farmers Development foundation (SFDF)	4%

4.2. Average Annual Income of Borrowers

Table 3 shows that the borrowers who borrow from more than two sources earn Tk. 1,72,403 yearly which is followed by the borrowers borrowing from two sources (Tk. 1,64,783). The borrowers who borrow from single source earn Tk. 1,45,808 yearly. It is seen that the higher the number of borrowing sources, the higher the income. In addition, to see whether there is a significant difference in income of borrowers borrowing from different number of sources, ANOVA has been carried out. The result is statistically insignificant and it refers that there is no statistically significant difference in income of borrowers borrowing from different number of sources. In other words, there is no statistically significant effect of number of borrowing sources on income of borrowers. ($F = 1.408$, $p=.246$).

Table 3. *Average annual income of borrowers.*

Sources of borrowing	Income (Tk.)	ANOVA (Income)					
			Sum of Squares	df	Mean Square	F	Sig.
Single	1,45,808	Between Groups	5.020E10	2	2.510E10	1.408	.246
Two	1,64,783	Within Groups	7.078E12	397	1.783E10		
More than two	1,72,403	Total	7.128E12	399			

To find out which means are to what extent different from other means, Tukey's post-hoc tests, which are like a series of t-tests and are more stringent than the regular t-tests, have been considered.

The Table 4 shows mean differences among the borrowers borrowing from different number of sources. These mean differences are statistically insignificant.

Table 4. *Tukey's Post-hoc tests (Total income in Tk.).*

(I) No. of sources of borrowing	(J) No. of sources of borrowing	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Single	Two	-18975.641	1.531E4	.430	-54983.92	17032.64
	More than two	-26595.113	1.826E4	.313	-69545.67	16355.44
Two	Single	18975.641	1.531E4	.430	-17032.64	54983.92
	More than two	-7619.472	1.990E4	.922	-54444.87	39205.92
More than two	Single	26595.113	1.826E4	.313	-16355.44	69545.67
	Two	7619.472	1.990E4	.922	-39205.92	54444.87

This study indicates that there are no significant differences in income among the borrowers borrowing from single, two and more than two sources.

4.3. Average Annual Living Expenses of Borrowers

Table 5 shows that the borrowers who borrow from single source spend Tk. 56,186 yearly for their living which is followed by the borrowers borrowing from two sources (Tk. 50,454). The borrowers who borrow from more than two sources spend Tk. 45,958 yearly. Data on various items of living expenses show that almost in all cases, single source borrowers spend more than those who borrow from two and more than two sources. It is seen that the higher the number of borrowing sources, the lower the expenditure for quality life. It should be mentioned that living expenses does not include expenditure for repayment of loans in their installments.

Table 5. *Average annual living expenses of borrowers.*

No. of sources of borrowing	Living Expenses (Tk.)	Expenses on Food	Expenses on Education	Expenses on Clothing	Expenses on Medicine	Expenses on Others
Single	56,186	28,103	5,936	8,584	3,990	9,573
Two	50,454	25,008	5,740	8,604	3,062	8,040
More than two	45,958	22,402	5,551	7,639	2,368	7,998

ANOVA result is statistically significant (Table 6) and it refers that there is a statistically significant difference in living expenses of borrowers borrowing from different number of sources. In other words, there is a significant effect of number of borrowing sources on living expenses of borrowers. (F = 6.552, p =.002).

Table 6. *ANOVA (Living expenses).*

Living Expenses (Tk.)	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.402E9	2	3.201E9	6.552	.002
Within Groups	1.940E11	397	4.886E8		
Total	2.004E11	399			

Tukey's post-hoc tests (Table 7) reveal that there is a significant difference in living expenses only between the borrowers borrowing from single source and those borrowing from more than two sources. There is no significant difference in living expenses between the borrowers borrowing from single source and those borrowing from two sources.

Table 7. *Tukey's Post-hoc tests (Living expenses in Tk.).*

(I) No. of sources of borrowing	(J) No. of sources of borrowing	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Single	Two	5731.410	2533.893	.062	-229.67	11692.49
	More than two	10227.244*	3022.419	.002	3116.89	17337.60
Two	Single	-5731.410	2533.893	.062	-11692.49	229.67
	More than two	4495.833	3295.091	.361	-3255.99	12247.66
More than two	Single	-10227.244*	3022.419	.002	-17337.60	-3116.89
	Two	-4495.833	3295.091	.361	-12247.66	3255.99

*. The mean difference is significant at the 0.05 level.

4.4. Average Annual Savings of Borrowers

Table 8 shows that the borrowers who borrow from single source have the highest amount of savings (Tk. 29,980) yearly which is followed by the borrowers borrowing from two sources (Tk. 18,080). The borrowers who borrow from more than two sources have yearly savings worth Tk. 11,100. It is seen that the higher the number of borrowing sources, the lower the savings. It should be mentioned that though the borrowers who borrow from more than two sources earn the highest amount, they have the least amount of savings due to the fact that they are to repay the highest amount in installments. ANOVA result is statistically significant (Table 8) and it refers that there is a statistically significant difference in savings of borrowers borrowing from different number of sources. In other words, there is a significant effect of number of borrowing sources on savings of borrowers. (F = 2.673, p=.070).

Table 8. *Average annual savings of borrowers.*

Sources of borrowing	Savings (Tk.)	ANOVA (Savings)					
			Sum of Squares	df	Mean Square	F	Sig.
Single	29,980	Between Groups	5.809E9	2	2.905E9	2.673	.070
Two	18,080	Within Groups	4.313E11	397	1.086E9		
More than two	11,100	Total	4.371E11	399			

Tukey's post-hoc tests (Table 9) indicate that there is a significant difference in savings only between the borrowers borrowing from single source and those from more than two sources. There is no significant difference in savings between the borrowers borrowing from single source and those borrowing from two sources.

Table 9. *Tukey's Post-hoc tests (Savings in Tk.).*

(I) No. of sources of borrowing	(J) No. of sources of borrowing	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Single	Two	11900.385	3778.551	.258	-2938.80	14839.56
	More than two	18880.385*	4507.043	.049	-1162.60	20043.37

(I) No. of sources of borrowing	(J) No. of sources of borrowing	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Two	Single	-11900.385	3778.551	.258	-14839.56	2938.80
	More than two	6980.000	4913.652	.758	-8069.55	15049.55
More than two	Single	-18880.385*	4507.043	.049	-20043.37	1162.60
	Two	-6980.000	4913.652	.758	-15049.55	8069.55

*. The mean difference is significant at the 0.05 level.

4.5. Average Amount of Land

From table 10, it is seen that all types of borrowers borrowing from different number of sources have almost same amount of land. There is no difference in amount of land owned by the borrowers borrowing from different number of sources.

Table 10. Average amount of land.

Sources of borrowing	Land (Decimal)	ANOVA (Land)					
			Sum of Squares	df	Mean Square	F	Sig.
Single	29,980	Between Groups	340.48	2	170.240	.264	.768
Two	18,080	Within Groups	256225.44	397	645.404		
More than two	11,100	Total	256565.92	399			

ANOVA shows statistically insignificant result (Table 10) and it refers that there is no statistically significant difference in amount of land owned by the borrowers borrowing from different number of sources. In other words, there is no significant effect of number of borrowing sources on amount of land ownership of borrowers. (F = 0.264, p=.768).

The following table 11 indicates that there are no significant differences in amount of land among the borrowers borrowing from single, two and more than two sources.

Table 11. Tukey's Post-hoc tests (Land in decimal).

(I) No. of sources of borrowing	(J) No. of sources of borrowing	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Single	Two	1.23359	2.91226	.906	-5.6176	8.0848
	More than two	-1.49947	3.47374	.902	-9.6716	6.6726
Two	Single	-1.23359	2.91226	.906	-8.0848	5.6176
	More than two	-2.73306	3.78712	.751	-11.6424	6.1763
More than two	Single	1.49947	3.47374	.902	-6.6726	9.6716
	Two	2.73306	3.78712	.751	-6.1763	11.6424

4.6. Average Non-land Assets of Borrowers

Table 12 shows that the borrowers who borrow from single source have highest amount of non-land assets (furniture, tv, refrigerator etc. excluding gold ornaments) worth Tk. 74,208 which is followed by the borrowers borrowing from two sources (Tk. 71,236). The borrowers who borrow from more than two sources have non-land assets worth Tk. 57,360. It is seen that the higher the number of borrowing sources, the lower the amount of non-land assets. ANOVA shows statistically significant result and it refers that there is a statistically significant difference in amount of non-land assets of borrowers borrowing from different number of sources. In other words, there is a significant effect of number of borrowing sources on non-land assets of borrowers. (F = 3.275, p=.039).

Table 12. Average non-land assets of borrowers.

Sources of borrowing	Non-Land Assets (Tk.)	ANOVA (Non-Land Assets in TK.)					
			Sum of Squares	df	Mean Square	F	Sig.
Single	74,208	Between Groups	2.511E10	2	1.256E10	3.275	.039
Two	71,236	Within Groups	1.522E12	397	3.833E9		
More than two	57,360	Total	1.547E12	399			

Tukey's post-hoc tests (Table 13) show that there is a significant difference in non-land assets only between the borrowers borrowing from single source and those from more than two sources. There is no significant difference in non-land assets between the borrowers borrowing from single sources and those from two sources.

(I) No. of sources of borrowing	(J) No. of sources of borrowing	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Single	Two	-13875.534	8465.753	.230	-33791.53	6040.46
	More than two	16847.756[*]	7097.397	.047	150.87	33544.65
Two	Single	13875.534	8465.753	.230	-6040.46	33791.53
	More than two	-2972.222	9229.501	.944	18740.52	-24684.97
More than two	Single	-16847.756[*]	7097.397	.047	-33544.65	-150.87
	Two	2972.222	9229.501	.944	24684.97	-18740.52

*. The mean difference is significant at the 0.05 level.

4.7. Determinants of Income

Table 14 shows that Kolmogorov-Smirnov test and Shapiro-Wilk test are insignificant at 21% and 59.1% level respectively which accept the null hypothesis of normality in data. It means that the data are normally distributed.

Table 14. Normality test.

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total Income	.303	208	.210	.559	208	.591

Table 15 shows that the values of VIF are less than 3 and the values of tolerance are more than. 20 which reveal the fact that there is no multicollinearity problem among the explanatory variables.

Table 15. Multicollinearity test.

Model	Tolerance	VIF
Age	.702	1.424
Land	.929	1.077

The figure 2 shows that the residual plots do not have any systematic pattern. It means that the data do not have heteroscedasticity problem.
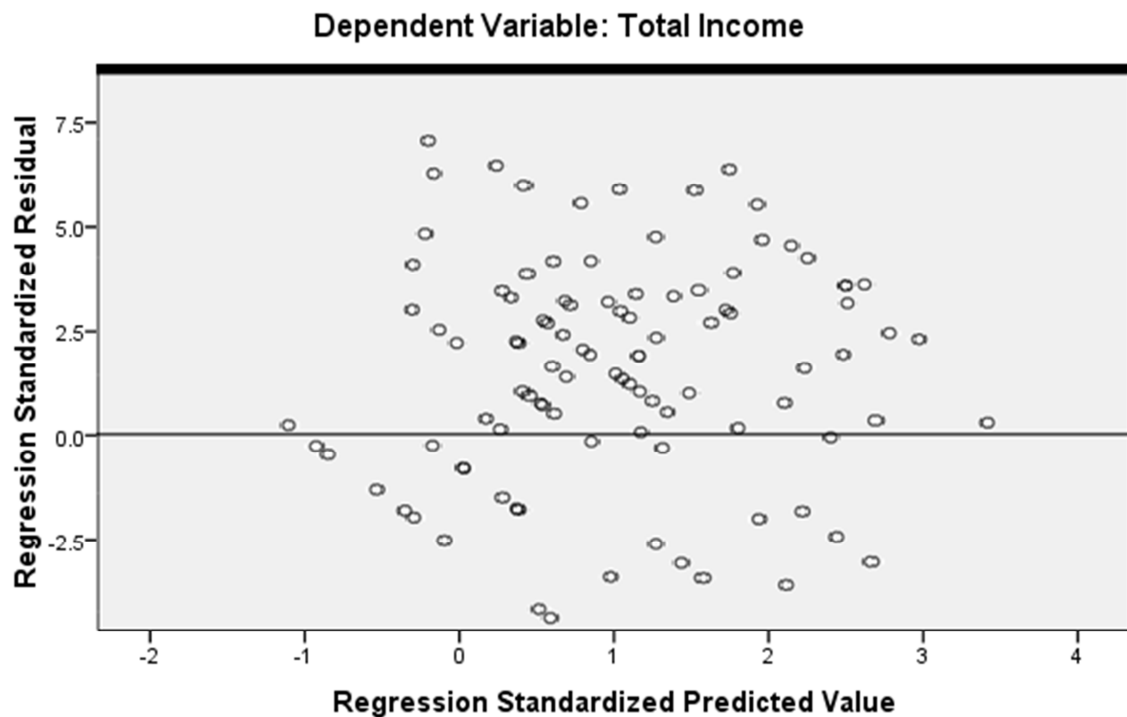

Figure 2. Test for homoscedasticity in data.

Table 16 shows that the value of coefficient of determination (R^2) is. 732. It means that 73.2 percent of the variation in income of the borrowers (dependent variable) can be explained by the independent variables included in the model.

Table 16. *Model summary.*

R	R Square
.821	.732

ANOVA table shows that the F statistic is highly significant. It means that the independent variables are jointly significant to explain the dependant variable.

Table 17. *ANOVA.*

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	8.543E11	5	1.709E11	19.000	.000
Residual	1.817E12	202	8.993E9		
Total	2.671E12	207			

It is found (Table 18) that coefficient for education is. 077 which is significant at 2.1% level. It means that if the borrowers are educated rather than uneducated, income of borrowers increases by 7.7% remaining other variables constant.

The coefficient for land is. 318 which is highly significant. It means that if amount of land increases by 1 unit, income of borrowers increases by 31.8% remaining other variables constant.

Table 18. *Coefficients (dependant variable: income).*

Model	Coefficients	t	Sig.
Age	.086	1.239	.217
Education	.077	2.450	.021
Land	.318	5.278	.000
Borrowing from single source	-	6.233	.000
Borrowing from two sources	.210	7.355	.000
Borrowing from more than two sources	.251	10.112	.000

Overall borrowing from different number of sources is highly significant. If borrowers borrow from two sources rather than single source, income of the borrowers increases by 21%. If borrowers borrow from more than two sources rather than single source, income of the borrowers increases by 25.1%. The results indicate that the more the borrowing, the more the income. It may be explained in the way that borrowers should be lent bigger amount to earn more.

5. Conclusion and Recommendation

Borrowers borrow from multiple sources due to unavailability of sufficient amount of credit from one source. Borrowers' living expenses on food, clothing, quality of shelter, level of health care show that the borrowers who borrow from single source are leading better lives than those who borrow from multiple sources. Analysis shows that there is no significant difference in gross income of the borrowers borrowing from different number of sources. But, in case of living expenses, savings and amount of non-land assets, there is significant difference between the groups of borrowers borrowing from single source and multiple sources. Borrowers who borrow from single source spend more for quality life than those who borrow from multiple sources. Since the borrowers who borrow from multiple sources are to pay a larger amount of their income in their installments and they are to bear larger transaction cost, they can save less in spite of making less expense on quality of life. The borrowers borrowing from single source have significantly higher amount of savings and non-land assets than those who borrow from multiple sources.

The study also shows that borrowers' education, amount of land and number of borrowing sources are significant factors of income. If borrowers borrow from two sources rather than single source, income of the borrowers increases by 21%. If borrowers borrow from more than two sources rather than single source, income of the borrowers increases by 25.1%. The results indicate that the more the borrowing, the more the income. It may be explained in the way that borrowing from multiple sources provides a bigger combined loan which generates more income. It appears that amount of loan from single source should be increased to improve the condition of borrowers.

Policy makers should take necessary steps to make policies so that the borrowers can get sufficient amount of loan from one source and they are encouraged to avoid loan from multiple sources which impose higher level of loan transaction costs & repayment burden.

Acknowledgements

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