

# Impact of Credit on Poor Household's Income: Evidence from Rural Areas of Vietnam

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**Abstract** This study focuses on clarifying the relationship between credit and poor household's incomes in rural area of Vietnam. In this investigation we applied the combined Difference and Difference (DID) method and Ordinary Least Squares (OLS) to estimate the panel data. Two data sets such as Vietnam Living Standard Survey (VLSS) of 2010 and 2012 with the sample size of 244 poor families in rural area of Vietnam used to test our model. Results of experimental study showed that credit has helped income of poor household to increase by 30% as compared to the average income of households. Formal credit has an important role when compared with informal credits that formal credit will help to increase income of the poor householder by double. In addition, the study also found positive effect on education, gender, ethnicity, region, the proportion of non-agricultural income as well. There are some negative impact on health and household size of the poor householders.

**Keywords:** *credit, poor household's income, rural area*

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## 1. Introduction

Most of poor householders are living in Highland areas in the rural Vietnam; it has been increased in recent history. Total poor is 90% in this areas. In that 94% of total population of each family is suffering as poorest in these rural areas [1]. There are many reasons behind the poverty of rural Vietnamese householders. One of the important reasons is the lack of pre-conditions of the production such as, Lack of capital. Most poor population are the farmers (accounted 65% according to VLSS in 2010), Due to lack of efficiency and low productivity on their primary agricultural production they have become more and more poor. Therefore, support credit for poor households is necessary to empower them to invest, expanding and improving production efficiency in their farming. Also, support credits will help to diversification of employability contribution to increase their revenue, as well as reduce the poverty. In recent years, there have been introducing many credit support programs for the poor householders. However, should be investigated how these programmes has been impacted on poor householders income generation. There is a few research's has been done in this regard. Therefore, there should have a comprehensive investigation regarding the role of the credit support how was impact on poor household's income in rural areas of Vietnam. Also should be investigated that how formal and informal credits impact on their income generation.

## 2. Role of Credit for Income of Poor Households

In general, there are many different perspectives can be found regarding the role of credit for the poor' householders' income. Most of the opinion showed that credit has a positive impact on income of poor householder's income generation.

Many universal scholarly researches have emphasized the relationship in between poverty reduce and credits support. Following outcome can be traced on existing studies on credits and poverty: Providing Credit support for the poor householders that is crucially help them to promote their autonomy in production and business, as well as increase their income [2-8]. Capital is one of the significant factors for the any kind of production process. Incensement of capital will help to enhance production and will open new path to access new science and technology for the production process. Finally, this will help promote the production of goods, also, improve the accessibility to markets knowledge. On the other hand, it is contributing to the increase the income and improving wellbeing of the lives for poorest lives.

In addition, support credits will empower low income householders with regard accessibility of financial sector. Also, the service providers help them to improve their productivity, and potential for sustainable livelihoods and management skills as well. Also, it will give different benefits such as open new job opportunities, smooth

income, consumption flows, and enlarge diversify their businesses. Some of the other indirect factors like increase their income. Many scholarly investigations have been emphasized and confirmed in this regard. Scholars such as, Robinson (2001), Quach (2005) and Green (2006); Beside, Latifee (2003) they have found that the providing loans to the poorest to helped them to self sufficient capacity to work on themselves. Finally, these capital to make tiny business, it is a chance for them to escape from their poverty through increases their income.

Some other studies with regard Vietnam situation have indicated that: Credit and access to credit is an important condition to determining the ability to increase income for poorest household. Also have positively impact on increase income of the household and have improved their living standards. Therefore, they could escape from their poverty as well as could bring the rural areas in a new development phase. On the other hand, capital loans has caused to change of the poor conditions of production, such as increase development conditions for culture, arts, physical sport ext [9].

In now day, Vietnam has been changed the role of formal and informal credit: In the early 1990s, informal credit has been allocated more than 70% of total credit in rural areas. The proportion of informal loans has been decreased over time because of the growing role of formal credit. Most credit programs for the rural development in Vietnam are aimed to help for poor people improve their incomes, living expenses, housing, improve the level of access to education, health care, the environment so on [9,10,11,12].

Beside, rural credit in Vietnam is still in a very narrow frame work: According to Khan (2001): All of the rural poor have only limited access to financial capital and acquire it largely through informal agents. Borrowed capital is often costly and is used to maintain consumption during hard times or to buy supplies and equipment needed for farming [9,13,14]. In addition, Cuong (2008) found that: The non-poor also tend to receive larger amounts of credit compared to the poor. However, we also cannot deny the important role of credit for the creation income for poor households in general and contribute to poverty reduction in rural of Vietnam in particular in recent years.

### 3. Data and Methodology

#### 3.1. Data

In this research I used panel data from two surveys of VLSS of 2010 and 2012. VLSS in 2012 surveyed incomes and expenditure of 4746 households and VLSS in 2010 were 9399 households in which 2054 households were surveyed, in both of these two surveys, 628 households have become poor as classified by local in 2010. Because the sampling methods of two survey were randomly selected, so this have meet the sampling requirements of the DID method. In addition, based on Vietnam poverty line of 2010, poverty line was 400,000 Vietnam dong (VND) and in 2012 it was 530,000 VND for the rural area. The authors eliminated poor households with income exceeded the poverty line to remove the non-poor, but actually still be classified as poor in the locality. Since, the authors have selected 64 poor households base on local classified and these poor households had participated for loans in 2012 and did not participate for loans in 2010. These households called as group participants and selected 58 poor households as classified by local and did not borrow in both of these years (2012 and 2010),but have characteristics similar to those households with loans, called as comparison group.

#### 3.2. Methodology

To assess the impact of credit to income of poor household, this research is using DID method, in which credit is seen as a policy variable. For this research we selected randomly two groups of poor households consistent with the assumption of the DID method. Group 1 known as participating groups including the poor households classified by local, participated for borrowing capital within one year of VLSS in 2012 and did not borrow capital of 2010 VLSS. Group 2 called the comparison group including poor households didn't borrow capital in both surveys.

However, the living standards of poor households are multi-variable function, this is not only dependent on credit but also depends on many other factors such as: Household size, dependent rate, age, gender, ethnic, health care, education, nutrition, etc. [2-8,15,16]. Therefore, this researchers need to combine DID and OLS methods.

Table 1. Definitions of variables

Notation	Definitions	Unit	Sign expectations
<b>D</b>	Dummy variables of group, = 0 if the poor households belong to comparison group (not loans), = 1 if poor households belong to participating groups (with loans).		
<b>T</b>	Dummy variables in time of the survey, = 0 if time of the survey is 2010, = 1 if the time is 2012.		+
<b>T*CREDIT</b>	Variable interaction between group and time, the estimated coefficient of this variable is the impact of credit on income to poor household.		+
<b>HHSIZE</b>	Household size, by number of members in the poor household.	Person	-
<b>DEPRATE</b>	Dependency ratio of households, by number of dependents per worker.	Person	-
<b>HEADAGE</b>	Age of poor household head	Age	-
<b>HEADMALE</b>	The gender of the household head, = 1 if the household head is male, = 0 if the household head is female.		+
<b>ETHNIC</b>	Ethnicity of household head = 1 if the ethnic Kinh or ethnic Chinese, = 0 if the other ethnic		+
<b>AVERHHEDU</b>	Average education level of the household, by the average number of school years / 1 person in poor household	Year	+
<b>NONFARMINC</b>	The rate of non-farm income in total income of poor household.	%	+
<b>HEALTH EXP</b>	The rate of Health expenditure in total income of poor household.		%
<b>LANDPERCA</b>	The area of arable land per capita of poor household.	m <sup>2</sup>	+
<b>NORTH</b>	North = 1 if household in Northern, = 0 if household in other regions.		+/-
<b>SOUTH</b>	South=1 if households in Southern, = 0 if households in other regions		+/-

**a/ Model:**

$$Y_{it} = \beta_0 + \beta_1 D + \beta_2 T + \beta_3 D * T + \beta_4 C_{it} + \varepsilon_{it}$$

In which:  $Y_{it}$  is indicators reflecting income per capita of poor household at time  $t$

$D = 1$ : Survey Household belong to participation group;  
 $= 0$ : Survey Household belong to comparisons group

$T = 0$ : Survey Household in 2010;  $= 1$ : Survey Household in 2012

Cit Control variables: Household size, education, age, dependent rate, ethnic and so on.

=> Differences in income per capital between the two groups in 2010 are:

$$E(Y_{10}) - (Y_{00}) = \hat{\beta}_1$$

=> Differences in income per capital between the two groups in 2012 are:

$$E(Y_{11}) - E(Y_{01}) = \hat{\beta}_1 + \hat{\beta}_3$$

=> The impact of credit on the living standards of poor households is:

$$= \{E(Y_{11}) - E(Y_{01})\} - \{E(Y_{10}) - E(Y_{00})\} = \hat{\beta}_3 = DID$$

**b/ Variables:** Description and definition of the variables in the model

**Dependent variable:** Income per capita at current prices of poor household.

**Independent variables:** Below is a list and definitions of independent variables that the author intends to put into a regression model to explain the income per capita of poor households based on theory and the results of these studies experience.

## 4. Results and Discussion

### 4.1. Characteristics of the Two Groups and Rural Credit Market in Vietnam

#### 4.1.1. Characteristics of the Two Groups

Result of t-test of average value difference between the comparison group and participation group in 2010 showed that: the two groups had similar characteristics (\*) such as income per capita, household size, gender, ethnicity of the household head, average land area/household, dependency ratio, the ratio of non-agricultural income, spending for health care, and region. Besides, there are some different characteristics between the two groups which are: the average level of education of each person/household and age of household head. Therefore, it is pertinent to use these as control variables in regression model.

**Table 2. Characteristics of the two household groups in 2010**

Indicator	Unit	Comparisons group				Participation group				T – stat
		Obs	Mean	Std. Err	Std. Dev	Obs	Mean	Std. Err	Std. Dev	
Income per capital	1000VND/ person/month	58	346	20	150	64	340	18	148	0.125*
Household size	Person	58	3.87	0.27	2.069	64	3.8	0.197	1.58	0.199*
Head age	Age	58	51.1	2.4	17.9	64	41.1	1.8	14.4	3.43
Dependency ratio	Person/labor	58	0.44	0.035	0.26	64	0.42	0.032	0.25	0.474*
Head male	%	58	0.6	0.065	0.496	64	0.5	0.062	0.504	0.949*
Land per capita	M <sup>2</sup>	58	1645	209	1591	64	1699	148	1185	-0.210*
Kinh ethnic	%	58	0.24	0.05	0.43	64	0.38	0.06	0.49	-1.595*
Average education level	Year	58	3.29	0.25	1.9	64	3.926	0.26	2.11	-1.733
Non-farm income	%	58	7.5	1.6	12.5	64	8.4	1.7	13.7	-0.383*
Health expenditure per capita	%	58	26.2	7.8	59.6	64	20.7	2.8	20.5	0.668*
South	%	58	0.24	0.056	0.43	64	0.34	0.059	0.48	-1.236*
North	%	58	0.41	0.065	0.5	64	0.37	0.06	0.4	0.434*

Source: Author's calculations based on data from VLSS in 2010

Note: Hypothesis:  $H_0 = \text{mean}_0 = \text{mean}_1$ ;  $H_1 = \text{mean}_0 \neq \text{mean}_1$

\* Two groups had similar characteristics (hypothesis  $H_0$  is not rejected with statistically significant at 1%, 5% or 10%).

#### 4.1.2. Features of the Credit Markets for Poor Household in Rural Areas of Vietnam

Credit for the poor and other policy beneficiaries are the use these financial resources be mobilized by state for the poor and other policy beneficiaries concessional lending in order to serves for production and business, create jobs, improve their lives; contribute to the implementation national target program on hunger elimination, poverty reduction, social stability (Pursuant to Article 1 Number. 78/2002 / ND-CP in Decree of the Government about the credit policy for poor and other policy beneficiaries).

Similar to other developing countries, the Vietnam rural credit market is considered to be repressed, segmented and dual structured where formal and informal credits exist side by side [10,11,17,18]. The formal credit sector consists of the government's commercial banks, private

banks, and other organized credit institutions led by the Vietnam Bank for Agriculture and Rural Development and the Vietnam Bank for the Poor (restructured recently as Vietnam Bank for Social Policies). The informal credit sector includes private money lenders, relatives, friends, and local rotating savings and credit associations.

Although, this is a loan program to assist the poor households, but actually almost non poor households get this loan (accounted 58%). This is also true with the previous studies of Cuong (2008). The reason is: the credit policy of government for poor household usually at preferential interest rates or even zero. But to borrow these funds, the poor households have to go through from complex procedures; they must pass a lot of approval levels and wait for a long time to get their case approved. Moreover, the poor people often lack information, lower level of education, and also possess limited relations ability. Thus, the poor households face difficulties to

access concessional loans and majority of preferential loans become subsidies for wealthier households, who maintain close relationship with the ratification people.

However, based on the interest and investment of government, the credit policies for the poor people in recent time has achieved significant results: Dataset from the Table 3 showed that poor households borrowed in the formal sector with low interest rates having high percentage: 74% poor households had got loans from the formal sector in which mostly borrowed from banks of social and policies (accounting for 66%) and the loan

value is higher than other borrowed capital resource. The results of this study are consistent with the results of McCarty (2001), Barslund (2008): this means that there was a swap in the role of formal and informal credit for the poor households than before. Also, we also cannot deny the role of informal credit sector to poor households where the rate loans with high interest in the informal sector is still large (accounted for 16%). The poor are willing to pay double higher interest rates compare to formal sector to get the loan timely, quickly, and with simple procedures.

**Table 3. Source credit for poor households in rural**

Credit Source	Poor household		Non poor Household		Interest rate/month (%)	Loan term (month)
	%	Value (1000VND)	%	Value (1000VND)		
The proportion of household loans	42		58			
Total loans	100		100			
<b>Formal credit</b>	<b>75</b>	<b>13087</b>	<b>70</b>	<b>15994</b>		
- Vietnam Bank for Social Policies	67	12812	64	16456	0.65	1.7
- Credit Fund	8	9375	6	11000	0.95	2.0
<b>Informal credit</b>	<b>25</b>	<b>12364</b>	<b>30</b>	<b>23095</b>		
- Social and political organizations	9	9500	19	9615	0.7	1.5
- Friends, family, individual loans	16	14000	11	45000	1.49	1.4

Source: calculated of author base on VLSS in 2012.

## 4.2. The Impact of Credit to Poor Household's Income

This study used DID method combinations; OLS regression to estimate the dataset from VLSS in 2010 and 2012 by using STATA software. White test showed that data has phenomenon of Heteroscedasticity (Het) in the regression. To overcome the Het we will use regression with robust standard errors.

The results in model 1 showed that when using DID method to regression relationship between income per capita, credit, time, and interaction variable between credit and time showed that credits have a positive impact on the average income of poor households in the high reliability, at 1% significance level the poor households loaned capital will have higher income than the poor households non-loan capital is 136,000 VND/ person/month with other factors is constant.

However, previous studies showed that beside credit factor, there are many other factors affecting the income of poor households in rural of Vietnam such as education, household size, etc. [2,3,5] so the authors have added control variables in the model. Combining DID and OLS method to estimate the regression model 2 showed: When other factors are constant, the impact of credit has increased the income of poor households to 107,000 VND/person/ month at 1% significant level.

In addition, factors such as gender of household head, household size, ethnicity, non-agricultural income and regional also have effect on poor household income:

If the head of poor household are male there will be a higher income than female headed family which is 51,000 VND/person/month at 5% significant level. The reason is that production activities in rural areas are mainly agricultural and require large labor; women usually are paid less than men for the same kind of work. Women are subjected to prejudice and social inequality. Female lead

their families mostly alone, they have to take care their children, or look after for their sick husbands so they cannot devote time and effort to generate additional income. This is true in reality and has been supported by studies of Chaudhry (2009).

By contrast, household size has negative effects on the income of poor households, at 1% significance level, the increase in poor household by one more member decreases their income by 22,000 VND/person/month. This can be explained as follows: large-scale household families have to spend quiet high amount of their income for daily necessities while having low income. So the loans are mainly used to cover daily expenses and are not invested in manufacturing operations for profitability.

Besides, spending on health also have negative affect on poor household income but not considerable. At 5% statistical significance level if a poor household have to spend on health care their income will reduce by 2,057 VND/person/month.

Ethnic characteristics also have statistically significant at 1% level, Kinh households has higher income minority households of 61,000 VND/ person/month. Although poor households in rural receive almost equal assistance as loans, but the Kinh households generally have smaller household size, higher education level, get more information, often reside in delta or the center of the village, convenient traffic, etc. so they have more opportunities to expand production, business operations, and increase income. In contrast other minorities have many children, their childbirth rate is high, and no family planning so their income is always lower and insufficient.

Model 2 also showed that: proportion of non-agricultural income was having positive impact on the income of poor households; if other factors remain constant then households earned income from non-farm field will have higher income per capita as compared with the household who earn from agriculture only and it will be 6,400VND/person/month at 1% significance level. Although, this increase was not

considerably high, however if poor households could take advantage of idle time for diversified production such as retail (grocery stores), eateries, collection, handling waste, recycling scrap, wood manufacturing, goods products from wood, bamboo, etc. can improve poor household income.

In addition, characteristics of the regions inhabited of poor households also have impact on poor household income. If divide poor households living areas into three different regions, North, South, and Central let's call two dummy variables South and North, the regression results showed that only the regression coefficients of South dummy variable was positive at 1% statistically significant level, regression coefficients of North dummy variables didn't have statistically significant at 10%. From which, there are sufficient evidence to assert that if other factors are the same, the poor household living in the South have average incomes higher than poor households living in Central and North which is 69,000 VND/person/month. This has been supported by studies of Nu (2013).

**Table 4. Impact of credit on poor household income (Dependent variable: Income per capita; Unit: 1000 VND/person/month)**

Independent variables	Estimate Result		
	Model 1	Model 2	Model 3
Intercept	346.241 (0.000)	324.060 (0.000)	262.052 (0.000)
CREDIT	-3.398 (0.901) <sup>+</sup>	-21.854 (0.369) <sup>+</sup>	-38.120 (0.078) <sup>+</sup>
T	122.161 (0.000)*	127.656 (0.000)*	128.896 (0.000)*
T*CREDIT	136.488 (0.001)*	106.862 (0.001)*	103.272 (0.000)*
HEADAGE		-.073 (0.913) <sup>+</sup>	-.504 (0.422) <sup>+</sup>
HEADGENDER		50.921 (0.026)**	52.323 (0.011)**
HHSIZE		-21.666 (0.001)*	-18.886 (0.001)*
DEPRATE		-7.056 (0.761) <sup>+</sup>	
ETHNIC		61.055 (0.002)*	37.13132 (0.035)**
AVEREDU			26.255 (0.000)*
NONFARMINCO		6.411 (0.000)*	5.724 (0.000)*
HEALTHEXP		-2.057 (0.088)**	
LANDPERCAP		.006 (0.348) <sup>+</sup>	
SOUTH		68.641 (0.003)*	58.687 (0.001)*
NORTH		26.132 (0.166) <sup>+</sup>	
R <sup>2</sup> - squared	0.3111	0.6224	0.6666
N	244	244	244

**Note:** The value in parentheses is P-value, \* statistically significant at 1% level, \*\* statistically significant at 5% level, \*\*\* Statistically significant at 10% level, <sup>+</sup> No statistically significant at 10% level

According to previous studies, the dependency ratio is an important variable which affects the income of poor households [15,19,20,21]: The high dependency level among poor households also means that labor resources

are inadequate; this also contributes to reduce income per capita of Poor household. However, in this study it was not statistically significant at the 10% level. The reason is that the poor have done better family planning, fertility reduction, and diversification of occupations created more jobs and income for all household members.

The level of education is an important factor affecting the income of poor households and has been proven by many studies as Katsushi and Raghav (2007), Tuan (2008), Jiang (2014). So, the authors added this variable into the regression model 3 as a control variable, and based on the results of the Wald test we eliminated the variables which were not statistically significant in model 2. Statistical tests result on the suitability of the model showed that P-value (F-stat) = 0.0000 < 1% and R<sup>2</sup> of the regression model 3 is greater than two remaining regression model. This proves that regression model 3 is the optimal model to explain the average income of poor household in rural area of Vietnam.

Results in model 3 showed: at 1% significant, poor households with loans will have higher incomes than poor households without loans are 103,000 VND/person/month when other factors are constant. In addition, the education level of poor household (represented by the average year of school/person) has positive impact on their incomes. With 1% significance level, the one year increase in average years of schooling of poor households will increase their income by 26,000 VND/person/month. This can explain that higher education level would help poor household easily comprehend and apply new technologies in manufacturing, there are many opportunities to find good jobs with higher income levels and appropriate. Also, gender of household head, household size, ethnic composition, the ratio of non-agricultural income, and regional factors also affect income per capita of poor households at high statistical significance.

Summary, result of research showed that: credit has a positive impact on poor household's incomes. This positive impact will also an important contribution to improving the lives of the poor households, reduce vulnerability, inequality, and giving them more opportunities to integrate into community life. Therefore, improving policies to improve the efficiency of credit in order to serve the poor people in rural areas is really necessary.

### 4.3. The Impact of Formal and Informal Credit to Income of Poor Households

Literature review study showed that credit for the poor people in rural areas of Vietnam include formal and informal credit, so whether there are differences in the effects of two types of credit to poor households income? And if it does, how it will have impact? To answer this question the authors conducted regression model to reflect the impact of formal and informal credit to income per capital of poor households.

Results of regression after adjusting Het showed that: in regression model 1: formal credit has a positive impact on poor household incomes at 1% statistically significant level, while informal credit is not statistically significant at 10%. The reason is that credit policy for the poor households has been achieved more efficient, process, procedures of loan are simple and straightforward, so

many poor people can access formal credit system with low interest rates, increase their investment capital for productive activities, resolve abnormalities capital needs, and can contribute to increase their income. Besides, there are many poor households access to informal credit, but due to high interest rates so it is not really effective for poor households.

**Table 5. Impact of formal and informal credit on income of poor households**

Independent variables	Estimate Result	
	Model 1	Model 2
Intercept	346.241 (0.000)*	284.972 (0.000)*
T	126.786 (0.000)*	128.093 (0.000)*
FORMCREDIT	-6.725 (0.808) <sup>+</sup>	-38.671 (0.088)***
INFORMCREDIT	99.759 (0.000)*	-106.389 (0.004)*
T*FORMCREDIT	132.929 (0.004)*	96.795 (0.003)*
T*INFORMCREDIT	16.454 (0.726) <sup>+</sup>	156.106 (0.000)*
HEADAGE		-0.605 (0.360) <sup>+</sup>
HEADGENDER		45.669 (0.038)**
HHSIZE		-20.965 (0.001)*
DEPRATE		-7.206 (0.710) <sup>+</sup>
ETHNIC		34.233 (0.060)***
AVEREDU		25.883 (0.000)*
NONFARMINCO		5.660 (0.000)*
HEALTHEXP		-1.798 (0.093)***
LANDPERCAP		.004 (0.454) <sup>+</sup>
SOUTH		72.903 (0.001)*
NORTH		9.1499 0.592 <sup>+</sup>
R <sup>2</sup> squared	0.3076	0.6765
N	244	244

**Note:** The value in parentheses is P-value, \* statistically significant at 1% level, \*\* statistically significant at 5% level, \*\*\* Statistically significant at 10% level, <sup>+</sup> No statistically significant at 10% level.

$R^2 = 0.3076$  indicates that formal and informal credit is just explaining over 30% of the income variable; the remaining 70% is due to other variables. So author has added some control variables in the regression model 2. The results showed: formal and informal credit is having positive impact on the income per capita of poor households at 1% statistics significant level. In which formal credit raise incomes of poor households to nearly 2 times higher than informal credit.

Detail: If other factors are constant, poor household borrowed capital from the formal sector will improve their income by 97,000VND/person/month as compared with case of non-loans; if a poor household borrows capital

from informal sector will increase their income by 156,000 VND/person/month as compared with case of non-loans. In addition, some factors such as gender, ethnic composition of the household head, household size, the average level of education, the proportion of non-agricultural income, and region have affected to income of poor households and have statistically significant. This shows that, when considered separately (model 1), the informal credit does not affect poor household income, but when combined with some other factors, this variable has positive impact (model 2). So, to promote the effectiveness of informal credit not only for poor households credit loan but also must be combined with the improvement of the level of education, diversification of production activities, perform better family planning, etc. for poor people. This is contradictory results compared with previous studies that informal credit keeps an important role in credit markets for the poor households [19]. This shows that the simplifications of processes, loan procedures, reduction in processing time of loan application, as well as fit of capital amount, and interest rates are keys to help poor households to easily reach and promote the efficiency of loan capital.

## 5. Conclusions

Authors have used DID and OLS method by using STATA software to estimate the panel data with 244 poor households observations which are filtered from two datasets of VLSS of 2010 and 2012 representing poor households in rural of whole country. The study has found some important conclusions which are as follows:

Credit has helped increase the income of poor households to 103,000VND/person /month, equivalent to about 30.1% compared to the average income of households. Therefore, credit has contributed significantly to improving the poor household's lives. So credit support for the poor people is necessary.

Access to credit has helped raise the incomes of the poor by contributing to improving their lives whether it is formal or informal credit. However, formal credit has increased the income of poor households to nearly double as compared to the informal credit. Thus, there has been considerable role swap between two types of credit for poor household. This suggests that credit policies for poor people should focus on simplifying the loan procedures, processes, reasonable credit value, as well as interest rate and this will help poor households to easily access preferential loans for them, considerably contribute to improving their incomes as well as limiting the development of black credit markets, loan sharks and so on in rural area.

## References

- [1] Group, W.B., World Development Indicators 20122012: World Bank Publications.
- [2] Baulch, B., Poverty monitoring and targeting using ROC curves: examples from Vietnam2002: Institute of Development Studies at the University of Sussex.
- [3] Khandker, S.R., et al., Welfare impacts of rural electrification: evidence from Vietnam. 2009.
- [4] Armendáriz, B. and J. Morduch, The economics of microfinance2010: MIT press.

- [5] Beck, T., A. Demirgüç-Kunt, and R. Levine, Finance, inequality and the poor. *Journal of economic growth*, 2007. 12(1): p. 27-49.
- [6] Jalilian, H. and C. Kirkpatrick, Financial development and poverty reduction in developing countries. *International Journal of Finance & Economics*, 2002. 7(2): p. 97-108.
- [7] Vincent, G., Sustainable Microentrepreneurship: The Roles of Microfinance. *Entrepreneurship and Sustainability in Reducing Poverty in Developing Countries*, 2004.
- [8] Robinson, M.S., The microfinance revolution: sustainable finance for the poor. Vol. 1. 2001: World Bank Publications.
- [9] Nguyen, C.V. and M. Van den Berg, The impact of Informal Credit on Poverty and Inequality: The Case of Vietnam, 2011, University Library of Munich, Germany.
- [10] Barslund, M. and F. Tarp, Formal and informal rural credit in four provinces of Vietnam. *The Journal of Development Studies*, 2008. 44(4): p. 485-503.
- [11] McCarty, A., Microfinance in Vietnam: A survey of schemes and issues. Hanoi, Vietnam: Department for International Development (DFID) and the State Bank of Vietnam (SBVN), 2001.
- [12] Pham, T.T.T. and R. Lensink, Lending policies of informal, formal and semiformal lenders. *Economics of Transition*, 2007. 15(2): p. 181-209.
- [13] Jan, I., et al., Agricultural credit markets in northwest Pakistan: implications for the development policy. *Sarhad Journal of Agriculture*, 2012. 28(3): p. 521-529.
- [14] Khan, M.H., Rural Poverty in Developing Countries Issues and Policies. 2000.
- [15] Tuan, P.A. Vietnam Country Case Study. 2008.
- [16] Katsushi Imai, R.G., Poverty, Inequality and Ethnic Minorities in Vietnam. 2007.
- [17] Kovsted, J., et al., Financial sector reforms in Vietnam: Selected issues and problems. 2003.
- [18] Do, Q.-T. and L. Iyer, Land rights and economic development: Evidence from Vietnam. *World Bank Policy Research Working Paper*, 2003(3120).
- [19] Nu, P.T., Evaluate the impact of credit on poor reduce in rural of Vietnam. *Academic Journal of Hue university*, 2013. 72(3).
- [20] Chaudhry, I.S., The Impact of Socioeconomic and Demographic Variables on Poverty: A Village Study Imran Sharif Chaudhry, Shahnawaz Malik and Abo ul Hassan. *Lahore Journal of Economics*, 2009. 14(1): p. 39-68.
- [21] Giang, T.T., G. Wang, and D. Yan, Evaluation the Factors Leading to Poverty Issue in Central Highlands of Vietnam. *Modern Economy*, 2014. 2014.