

Assessment of rural livelihood in Kyaukpadaung Township as affected by PACT microfinance program

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Abstract

This study was conducted to assess the livelihood of rural households as affected by PACT microfinance program in Kyaukpadaung Township. The data were collected through personal interview in sample six villages in October 2014. Sample households were differentiated into participant and non-participant households in PACT microfinance program. Comparison analysis and multiple regression model were used in the data analysis. In both types of households, although farming was the major source of occupation, non-farm jobs became the second source. Family size and income earning family members were higher in participant households. In addition, majority of the participant households were small holder farmers and landless. In the study area, most households were still suffered from poverty and food poverty, in the meantime, migration rate was rather high in both households. Analysis of income composition found that crop income dominated among the income of both households in the study area. Participant households utilized more credit sources and higher credit amount than non-participant households. While participant households suffered from more health and social shock, both categories of households had applied borrowed money as coping strategy if they faced shocks. By means of the income function analysis, household income was found to be more increased by older household head, larger family size, higher non-farm income and farming households. Although household income was increased by participation in PACT microfinance program but it did not show significant effects.

Key words: rural households, socio-economic status, livelihood, household income, microfinance program.

Introduction

One major issue facing poor people in developing countries is the lack of access to credit through formal lenders and financial institutions. Microfinance is a major developmental intervention for income generation and poverty alleviation (Panda, 2009). Microcredit programs provide small loans to the very poor in order to undertake self-employment and other financial and business activities giving them the ability to care for themselves and their families and thus, achieve a level of independence. Poverty reduction has been the main agenda of most developing countries. Microfinance has become a widely accepted and effective poverty-alleviation instrument for capital-deficient people in developing countries (Desilva & Denby, 1992).

In Myanmar, formal financial institutions are not allowed to provide uncollateralised credit. Over 80% of potential clients are excluded from formal access to credit, deposit and other financial services

such as insurances and remittances, and also the most common sources of loans are from relatives, friends, traders and moneylenders (IHLCA, 2010). Thus, several international non-government organizations (INGOs) such as Grameen Trust, GRET and Partner Agencies Collaborating Together (PACT) in the Delta area (Ayeyarwady Region), Dry Zone and Shan State and other donor projects provide uncollateralized credit to the poor. Among these microcredit programs, PACT is the largest semi-formal financial institution which started in the dry zone since 1997 with the title of "Sustainable Livelihoods through Microcredit for the Poor".

Many programs have both positive and negative impacts on borrowers. Positive impacts on borrowers are increase in income, initiation of small business, provision of job opportunities, empowerment of local people, enhancement of vocational skills, and so on. The negative impacts are increase in work-loads for women, repayment and indebtedness.

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Background of the study

Dry Zone is one of the poorest but most densely populated regions of Myanmar. According to United Nations Office for Project Services (UNOPS, 2005), average incomes are not sufficient to cover basic needs for food, clothing and shelter. Access to education and health services are likewise greatly restricted. Beyond this, employment and income opportunities are limited. Water is scarce, agricultural productivity is low and much of the natural environment is severely degraded. Study area, Kyaukpadaung Township is included in dry zone area of Myanmar. There are 109 village tracts which combined with 339 villages. Most of the households are landless, and depend upon seasonal farm labor to survive. So, their livelihood systems were different from each other and majority of the households in this area were sited below the poverty line. Therefore 'PACT Myanmar' (Dry Zone Microfinance Organization-DZMO) was implemented since 1997 with the title of poverty alleviation. Consequently, program implementation in the study area was about 17 years long and at this time, 333 villages (98%) out of 339 villages were participated in microfinance program. Some households were participated in PACT microfinance program, however 60 % of households within village did not participate. Therefore, it was proper time to investigate the impact of microfinance program on the livelihood of the rural households. Therefore the objectives of this study are:

- To compare demographic, socio-economic characteristics and livelihood of participant and non-participant households in the selected area; and
- To assess the determinants of the household annual income

Research Methodology

Survey design and data collection

In this study purposive and simple random sampling method was used to select the sample households. The direct face to face interview which is the most commonly used approach was used in this study. To reflect the objectives of the study, the data were collected from the 60 participant households who participated in PACT microfinance program and 129 non-participant households who did not participate in PACT microfinance program in October 2014.

Data analysis methods

To analyze the data, Microsoft Excel was used for descriptive analysis and Statistical Package for Social Science (SPSS) version 16 software was used for multiple regression analysis.

Descriptive analysis

To compare the socio-economic characteristics and livelihood of the rural household, the comparison analysis was applied. The comparisons were taken on outcome variables such as: demographic characteristics of household head, household assets and household livelihood characteristics.

Multiple regression analysis

Regression analysis is one of the most commonly used tools in econometric work. The general purpose of multiple regression analysis is to learn more about the relationship between several independent variables and dependent variables (Gujarati, 2003). In this study, multiple regression model was used to explore the influencing factors on the annual household income. The model was specified as:

$$\ln Y_i = \beta_0 + \beta_1 \ln X_{1i} + \beta_2 \ln X_{2i} + \beta_3 \ln X_{3i} + \beta_4 \ln X_{4i} + \beta_5 \ln X_{5i} + b_1 D_{1j} + b_2 D_{2j} + b_3 D_{3j} + e_{ij}$$

Dependent variable

Y_i = Amount of total income of the household in 2013 year (MMK/hh/year),

Independent variables:

X_1 = Household head's age (Year)
 X_2 = Household head's education (Year)
 X_3 = Household member (Number/hh)
 X_4 = Number of income source (Number/hh)
 X_5 = Amount of non- farm income in 2013 year (MMK/hh/year)

D_1 = Dummy for household head gender (Female = 1, Male = 0)

D_2 = Dummy for farm household (Farm household = 1, other = 0)

D_3 = Dummy for PACT participant household (Participant household = 1, other = 0)

e_{ij} = disturbance term

β_0 = constant

β_i, b_j = estimated coefficient; ($i = 1, 2, 3 \dots n$;
 $j = 1, 2, 3 \dots n$)

\ln = Natural logarithm

Note: MMK = Myanmar kyat, hh = Household

Results and discussion

Socio-economic characteristics and livelihood of the participant and non-participant households

In this study, the average age of participant household head was 49.45 years and that of non-participant was 53.7 years. Participant household heads were comparatively higher than the average of non-participants' schooling years, household members, income earning family members and income sources except average age and per capita income. In the selected area, per capita income of participant households was MMK 294020 whereas non-participant household earned MMK 3421 (Table 1).

Major occupation of the household heads

Some household heads were engaged in two occupations, primary and secondary. Primary occupation was the major earning of the household head and secondary occupation provided additional income. For primary occupation, farming was the most dominant occupation for 56.34% of participants and 61.24% of non-participants households. With regard to the secondary occupation, 33.33% of participant households and 27.90% of non-participant households had secondary occupation (Table 2).

Table 1. Socio-economic characteristics of sample households

Household characteristics	Unit	Non-participant	Participant
		households (N=129)	households (N=60)
Avg. age of household heads	Year	53.70	49.45
Avg. schooling year of household heads	Year	6.24	6.60
Avg. household members	Number	5.10	5.71
Avg. income earning family members	Number	3.18	3.64
Avg. income sources	Number	1.96	2.1
Avg. per capita income	MMK	342,161	294,020

Table 2. Occupation of the sample household heads

Household heads' occupation	Primary occupation (% of total households)		Secondary occupation (% of total households)	
	Non-participant households (N=129)	Participant households (N=60)	Non-participant households (N=129)	Participant households (N=60)
Farmer	61.24	56.34	-	-
Non-farm labor	20.93	35.00	17.06	18.33
Farm labor	2.33	2.00	-	-
Off - farm labor	-	-	8.52	15.00
Broker	2.33	-	2.32	-
Government staff	-	2.66	-	-
Dependent	13.17	4.00	-	-
Total	100.00	100.00	27.90	33.33

Land ownership status of the sample households

As an agrarian society, agricultural land is an important household asset for the livelihood. In the study area most households, 60% of participant households and 70.54% of non-participant households were farm households. About 40% of participant households and 29.46% of non-participant households were landless. In the sampled villages, 36.63% of participant households and 31% of non-participant households were small farmers that possessed 0.1 to 2.02 hectare of cultivated land. Therefore, most of the participant households were landless and small farm households (Table 3).

Labor migration status of the study area

Labor migration was relatively higher in participant households (58.33%) than non-participant

households (47.29%). International migration was common in both households indicating 53.33% for participant and 41.86% for non-participant households respectively (Table 4).

Income composition of the sampled households

Analysis of income composition showed that crop income was dominated in income composition of both households in the study area. For participant households, crop income and income from non-farm labor, remittance and home business led in the income composition by 31.39%, 15.05%, 14.43 and 13.90% respectively. In non-participant households, crop income and remittance income were dominated the household income by 43.18% and 15.13% (Figure 1).

Table 3. Land ownership patterns of the sample households

Household category	Unit	Percentage of households	
		Non-participant households (N=129)	Participant households (N=60)
Landless	Number	29.46	40.00
Farm households		70.54	60.00
- Small (≤ 2.02 ha)	Number	31.00	36.63
- Medium (2.03 to 4.04 ha)	Number	21.71	11.67
- Large (above 4.04 ha)	Number	17.83	11.67

Table 4. Labor migration status of the sample households

Migration status	Percentage	
	Non-participant households (N=129)	Participant households (N=60)
Without migration	52.71	41.67
Migration	47.29	58.33
- Internal (domestic)	41.86	53.33
- International	5.43	5.00

Table 5. Total household expenditures of sample households

Expenditures	Percentage	
	Non-participant households (N=129)	Participant households (N=60)
More than household income	51.16	53.33
Less than household income	48.74	46.67

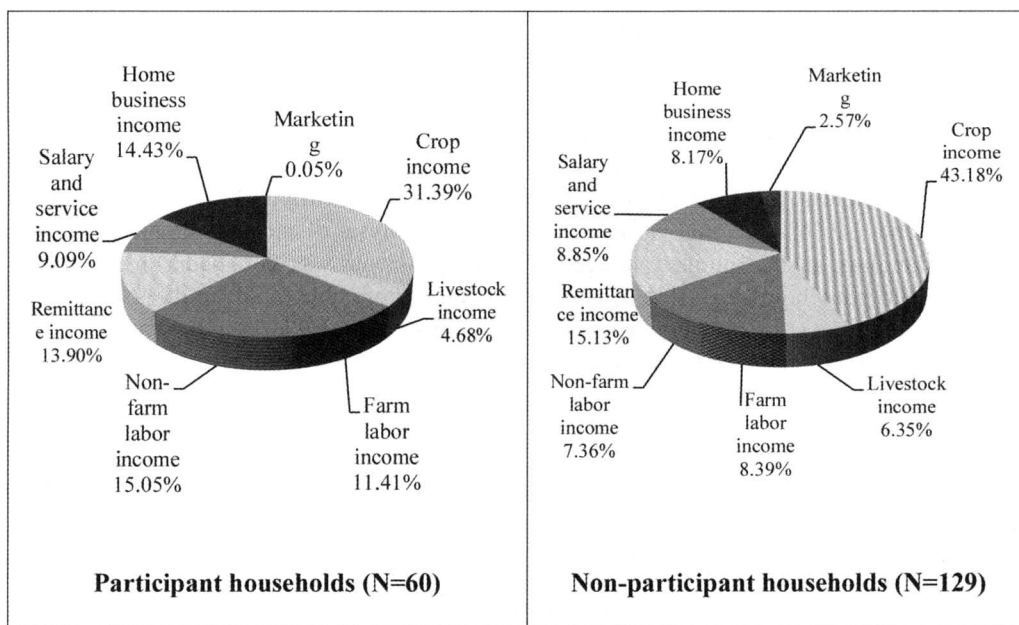


Figure 1. Income compositions of the participant and non-participant households

Household expenditure conditions

In this study, sampled households total expenditure condition was compared with their total household income (Table 5). About 53.33% of participant households and 51.16% of non-participant households' total expenditure were more than their household total income. Therefore, above half of both households did not have enough income to cover their household basic needs.

Poverty status of the sample households

The poverty and food poverty status of the selected households were explained in Table 6. According to UNDP poverty and food poverty line in 2010, 58.33% of participant households and 51.16% of non-participant households were below food poverty line. In relation to poverty status of the sample households, 76.67% of participants and 65.11% of

non-participants were under the poverty line. Although, poverty levels of both households were high, participant households were higher than that of non-participants in the study area.

Status of the credit received by the sample households

Among the selected households, 44.40% of non-participant households did not take the credit. In the study area, 43.33% of participant households and 51.90% of non-participant households took credit from only one source. Moreover, credit taken from two and three sources of participant households (36.67% and 18.33%) was higher than that of non-participant households (3.90% and 0.80%) respectively. However average credit amount of participant households were MMK 336,666 while non-participant households were MMK 190,000 (Table 7).

Table 6. Poverty situation of participant and non-participant households in 2014

Items	Percentage	
	Non-participant households (N=129)	Participant households (N=60)
Below food poverty line	51.16	58.33
Below poverty line	65.11	76.67

Note: Regional poverty line in 2010 = 379,951 MMK/person/year (UNDP 2013)
 Regional food poverty line in 2010 = 277,768 MMK/person/year (UNDP 2013)

Table 7. Credit sources and average credit amount of the sample households in 2013

Credit source	Unit	Percentage	
		Non-participant Households (N=129)	Participant Households (N=60)
No debt	Number	44.40	-
- One source of credit	Number	51.90	43.33
- Two sources of credit	Number	3.90	36.67
- Three sources of credit	Number	0.80	18.33
- Four sources of credit	Number	-	1.67
- Average credit amount	MMK	190,000	336,666

Frequency and types of shock

In this study, shock experiences in the past two years of the sample households were examined. Among the participant households, 43.33 %, 28.33 % and 3.34% faced with health shock, social shock and natural shock respectively. In non-participant households, health shock (34.12%), social shock (11.63 %) and natural shock (1.55%) were lower than participant households' shocks. So, health shock experiences of both households were rather high (Figure 2).

Factors influencing the annual household income

Table 8 showed regression results of the determinants of annual household income of the sample households. Based on the finding, household income was more increased by older household head, by increasing family member, by increasing non-farm income and by farming households. Moreover the annual household income was increased by means of PACT microfinance program but did not show significant effects. However household income was not influenced by number of income sources.

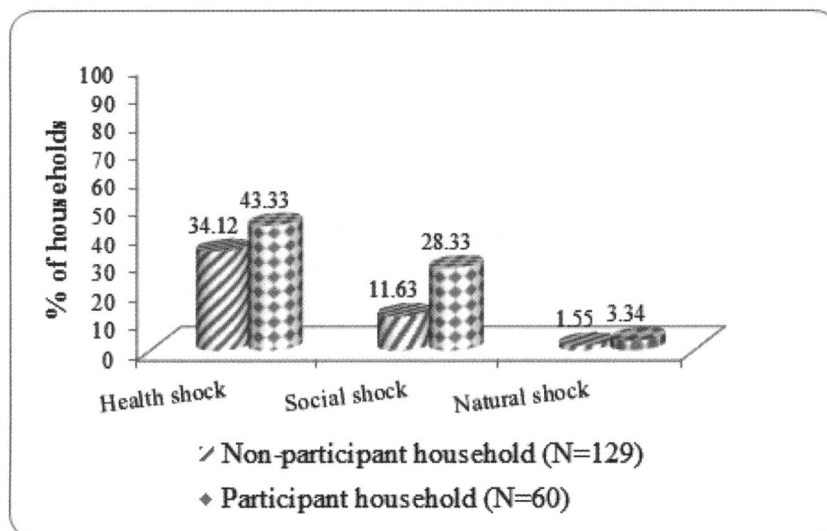
**Figure 2. Types of shock faced by sample households in the past two years**

Table 8. Results of the multiple regression analysis for the determinants of annual household income of the sample households

(N = 189)

Independent variable	Un standardized coefficient (B)	Standardized coefficient (β)	T-value	Sig.
(Constant)	11.478***	-	17.446	.000
Household head's gender (D)	-.139 ^{ns}	-.056	-.813	.418
Household head's age (year)	.274*	.115	1.742	.083
Household head's education (year)	.065 ^{ns}	.035	.526	.599
Household member (number)	.742***	.393	5.822	.000
Farm household (D)	.414***	.274	4.255	.000
Income source (number)	-.298 ^{ns}	-.094	-1.434	.153
Non-farm income (MMK)	.022**	.155	2.458	.015
PACT participation (D)	.025 ^{ns}	.016	.261	.794

Note: Adjusted $R^2 = 0.338$, $R^2 = 0.366$, $F = 12.981$, $Sig = 0.000$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$, ***, ** and * are significant at 1%, 5% and 10% level respectively and ^{ns}= not significant

Conclusion

Based on the findings of this study some recommendations are suggested as follow.

In the study area, participant household's heads were younger and higher education than non-participant household's head. In rural households, the higher the education level, the more potential to adopt the innovation. Therefore educating young generation is still needed to facilitate the technical adoption.

Crop income was the largest portion of the total household income in both households and second largest for participant households was non-farm labor income and for non-participant households was remittance. Moreover labor migration rate was relatively high in both households. So, programs on agricultural technology development and non-farm sector development should be accelerated simultaneously to increase the household income which can also reduce the migration rate in rural area.

Although, poverty reduction program is implementing by means of microfinance program in the dry zone area, most of the households were situated below the poverty and food poverty line. Therefore it pointed out that more effective poverty reduction programs should be performed in the study area.

In the selected area, although participant household's family members and income sources were higher, per capita income was lower than non-

participant households. Rural households who had big family members earned significant income; they still relied on microfinance program. In addition, number of sources for income did not influence the total household income. As a result, program on high income job opportunities which is demanding professional scales is essential to increase the rural household income significantly.

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