Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 2, Issue 5, pp: (19-26), Month: September-October 2015, Available at: www.noveltyjournals.com

Micro- financing Through Cooperative Development: A Road to Productivity

Jessie V. Alzate

[1]Associate Professor, Davao Oriental State College of Science and Technology

Abstract: **This study was conducted to find out the impact of hybrid rice, hybrid corn, ampalaya, and eggplant productions on some economic and crop productivity of 40 micro financing beneficiaries with 10 beneficiaries per crop in the Second District of Davao Oriental. It also determined the respondents' level of knowledge on the different policies imposed by their cooperatives in availing of micro financing, and adopting crop production technologies.The data were subjected to descriptive statistics using frequency counts, percentages, means and inferential analysis applying Chi-square. The respondents of hybrid rice, hybrid corn, and eggplant were more knowledgeable in terms of the policies implemented as a process in availing of micro financing than the respondents of ampalaya production. The micro financing program of crop productions increased some economic aspects of the respondents specifically their annual average income increased by 55%, 45% increase of their average income per cropping, and their amount spent for food by 43%. Likewise their crop productivity improved with 29.44% increase in their yield per cropping cycle. Policies imposed in availing micro-financing catalyzed the adoption of the respondents on crop production technologies on hybrid rice, hybrid corn and eggplant while these policies did not influence the adoption of the respondents on ampalya production technologies but of other factors like their perceived attributes of these technologies .**

Keywords: **Adoption, Crop productions, Micro-financing, Micro-financing policies.**

I. INTRODUCTION

Crop production is primarily the cultivation of crops that are utilized by man for human survival. Families in the villages cling to subsistence agriculture characterized by producing food for household consumption. Due to the increasing population, unabated extraction of the once bountiful resources available to rural societies persisted thus, traditional agriculture turned unsustainable prompting rural villagers to shift to diversify or mixed farming system. (Kottak, 1991 p172).

Since 1960s, the Philippine government launched various crop production programs. Along with these programs were the package of support services like capability building, organizational development, credit and marketing services. Legal representations of the beneficiaries to access credit from government financing institutions were the cooperatives in various types. Cooperatives are instruments by which the poor can participate in the development process. It served as vehicle to achieve social justice, self-reliance and economic development (Hermoso, 1997 p 123).

But one of the gaps of these programs is the provision of effective and timely credit services. This should be considered along with the diffusion of scientific farming methods thus, an essential ingredient of rural development (Rola, 1991).

Cognizant of rural organizations' lack of skills and capital, the Davao Oriental State College of Science and Technology (DOSCST) launched its Micro finance Program in 1999. With the seed money of 1.3 Million from the Cooperative Development Authority (CDA),DOSCST-MFP provided capital assistance to cooperatives and associations in the form of "soft" loan, capability building and enterprise development for re-lending to their members for income-generating activities. It can also be used as working capital, purchase of equipment and other capital outlay, except land. This system is patterned after the Self-Help Group (SHG) system in Bangladesh where the group is required to open a bank account that serves as direct channel of transaction between the financer and the group-client.

Since its establishment, DOSCST-MFP served more than 40 rural organizations some of which were cooperatives. However, no empirical data were established on its general level of success. Specifically, it was not documented whether the program has achieve its philosophy that it will serve as vehicle to uplift the living condition of the most vulnerable sector of the society i.e. the rural poor. Results of this study would reinforce scarce data, and validate the relevance of micro financing in the area of crop production through cooperative development. Extension workers and rural development facilitators can identify the factors associated with higher crop productivity as well as determine appropriate policies necessary in implementing micro-financing program.

II. OBJECTIVES

The study assessed the village crop production implemented under micro-financing program among the beneficiaries.

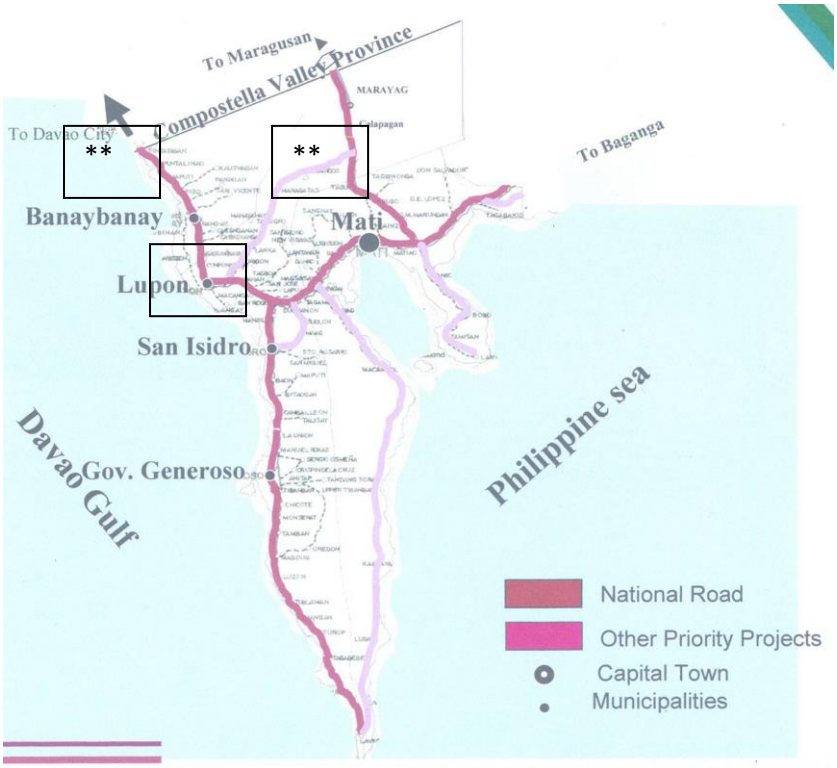
Specifically, it answered:

1. The respondents' knowledge level on the process of availing micro-financing program for crop productions in terms of the policies implemented by the cooperatives.
2. The respondents' level of adoption on hybrid rice, hybrid corn, ampalaya, and eggplant production technologies.
3. The consequences of micro financing program in terms of economics, and crop productivity.
4. The significant relationships between the respondents' level of knowledge on the loan policies of the cooperatives and their adoption of production technologies.

III. MATERIALS AND METHODS

Location of the Study:

Complete enumeration survey was done among the three cooperatives in the City of Mati, and municipalities of Banaybanay and San Isidro in Davao Oriental. These cooperatives availed the DOSCST Micro Financing Program and engaged in crop productions.



Legend:Study site **

Fig2. Map of Davao Oriental showing the study site

Data gathered were from some members of the Camansi Multi-purpose Cooperative (CAMCO) who were engaged either or both ampalaya and eggplant production while in San Isidro, La Union Multi-purpose Cooperative (LUMUPCO) who planted hybrid corn and in Banaybanay, the cooperative members of Saranay Farmers Cooperative who were hybrid rice farmers served as respondents.

Table 1: Distribution of the Respondents

Crop Produced	Cooperative	Frequency
Ampalaya	Camansi Multi-purpose Cooperative	10
Eggplant	Camansi Multi-purpose Cooperative	10
Hybrid Rice	Saranay Farmers Cooperative	10
Hybrid Corn	La-Union Multi-purpose Cooperative	10
Total		**40**

Materials and Instrumentation:

Data were collected through the questionnaires divided into: policies in availing of the micro financing program, and adoption level of the respondents on the technologies in crop productions.

The respondents' adoption on the technologies on the four crops was focused on the cultural management using the pattern of adoption established by Rogers (1962 p. 150) i.e Awareness, Interest, Evaluation, Trial, and Adoption answered through 3-point scale i.e. "Yes", "No", and "No knowledge".

Data on the economic and crop productivity impacts of crop productions were obtained through the answers of the respondents on the questionnaire comparing their statuses before with after availing of micro financing.

Data Analysis:

Statistical tools such as frequency counts, percentages, and means to analyze descriptively using the Statistical Package for Social Sciences (SPSS) software While the relationship between adoption level of the technologies in crop productions and policies implemented were computed using Chi-square.

IV. RESULTS AND DISCUSSION

Respondents' Knowledge on Policies in Availing of Micro Financing:

The respondents were knowledgeable about most of the micro -financing policies especially in the attendance of loan applicants to enterprise development seminar imposed by their respective cooperatives before they can avail of micro financing with overall means of 2.50, 2.50,2.38 and 2.68 respectively (Table2).

Attendance to enterprise development seminar is very important to give them capability to run their project productively and find market opportunities to gain substantial income (Fajardo, 1984 p. 36).

On the other hand, respondents of ampalaya production were less knowledgeable.quite lower knowledge of the beneficiaries of ampalaya production implies that their organization had less emphasized one of the cooperative principles that is continuing membership education as lifeblood of the cooperative (Garcia and Guanzon, 2004).

Table 2: Farmer-beneficiaries' Knowledge on the Process of Availing Micro Financing loan for crop production

Loan Policies	Hybrid Rice	Grand mean	Hybrid Corn	Grand mean	Ampalaya	Grand Mean	Eggplant	Grand Mean
Pre-loan Policies		2.40		2.40		2.38		2.68
Loan approval policies		2.48		2.52		2.38		2.68
Post loan policies		2.60		2.58		2.38		2.68
Overall Mean Knowledge		2.50		2.50		2.38		2.68

Legend:	Mean Scale	Description
3	2.5-3.00	Knowledgeable
2	1.50-2.49	Less knowledgeable
1	1.00-1.49	Not knowledgeable

Farmer-beneficiaries' Adoption on production technologies:

All the farmer-respondents had a high adoption level of the four production technologies.. Their high adoption level can be attributed to the policies imposed by the cooperatives that applicants must attend technical training in crop productions before their loans will be approved (Table 3).

This finding shows the usual pattern of the five process of adoption as proposed by Rogers(1962 p 150) namely awareness, interest, evaluation, trial, and adoption. However, this is not always linear since according to Madigan (1967) not all passes the 5 stages since farmers may skip or blend some on the basis of habit or tradition. And if the information came from an authoritative source, farmers tend to be more receptive and act unquestioningly upon receiving information.

Table 3: Summary of knowledge level of the respondents on the production technologies based on the adoption process

Adoption Process	Hybrid Rice		Hybrid Corn		Ampalaya		Eggplant	
	Grand mean	Remarks	Grand Mean	Remarks	Grand Mean	Remarks	Grand Mean	Remarks
Awareness	2.96	High	2.90	High	2.90	High	2.82	High
Interest	2.90	High	2.85	High	2.95	High	2.96	High
Evaluation	2.81	High	2.82	High	2.80	High	2.74	High
Trial	2..86	High	2.86	High	2.83	High	2.62	High
Adoption	2.87	High	2.57	High	2.05	Moderate	2.65	High
Overall mean	2.88	High	2.80	High	2.86	High	2.75	High

Legend:

1.00 – 1.69	Low
1.70 – 2.29	Moderate
2.30 – 3.00	High

Consequences of Micro-financing to Economic and Farming Practices:

The farmer-beneficiaries of the crop production under the micro financing program increased their annual average income by 55% , average income per cropping, 45%, and their amount spent for food 43%. Likewise, their crop productivity improved specifically on the increase of their yield per cropping cycle from an average of 3,923 kg. to 4,667 kg. or an average of 29.44% increase (Table 4). The increase in the average yield appears lower than the normal potential yield per hectare for corn and rice since the average yield of ampalaya and eggplant were lumped in the computation thus, affected the overall average yield.

These findings conform to the report of Garcia, (2004 p 39) whereby micro financing could significantly increased the income of beneficiaries which supports the report of the Department of Agrarian Reform-Foreign Assisted Project Office (2002) that credit availability would enable the beneficiaries increase their capital buildup. This can be attributed to the increase of their income who used their borrowed money for production.

Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 2, Issue 5, pp: (19-26), Month: September-October 2015, Available at: www.noveltyjournals.com

Finally, micro-financing enabled them to improve their farm productivity as evident in the increase of their average productions (Table 4). This finding supports the assertions of Lewis (1960) as cited by Todaro (2000 p 191) that there is a significant relationship between economic growth and funds for servitude.

Table 4: Consequences of Micro Financing Program to economic and farming practices

A.

Hybrid rice				Hybrid corn			Ampalaya			Eggplant					
Economic	before	After	Increase	Before	after	Increase	Before	After	Increase	Before	After	Increase	Grand Mean Before	Grand Mean after	OA % Increase
	Mean	Mean	%	Mean	Mean	%	Mean	Mean	%	Mean	Mean	%			
Annual Income	33,150.00	72,500.00	54.27	42,150.00	95.45.00	55.84	30,000	62,350.00	51.88	21,550.00	50,300.00	57.15	31,712	70,150	55
Income Farm per cropping	12,000.00	19,000,00	36.84	12,000.00	18,000.00	33.33	6,750.00	14,750.00	54.23	6,250.00	15,900.00	60.69	9,250	16,912.50	45
Amount spent for food per month	900.00	1,140.00	21.05	900.00	1,065.00	15.49	650.00	1,150	43.47	575.00	975.00	41.02	756.25	1082.50	43
Crop Productivity															
Yield per cropping cycle(rice,corn); per harvest (ampalaya, eggplant)	5,200	7,600	31.57	7,300	11,000	50.68	31.70	35	9.42	22.1	34.6	36.12	3,923	4,667	29.44

Knowledge on Policies in Availing Micro Financing versus Adoption of Technologies:

Significant relationships existed between level of adoption of hybrid rice production and beneficiaries' knowledge of the policies in availing micro financing specifically in filling up standard loan applications (PV=0.031), beneficiaries should give their capital share before approving their loan, provision of technical assistance (PV=0.031), setting a specific period of repayment (PV=0.031), and imposition of penalty in case borrower will fail to pay at the specified period of payment (P=0.035). This means that these policies catalyzes the beneficiaries to adopt the technologies in hybrid rice (Table 5.1).

In hybrid corn production, it was only the policy on giving penalty for failure to pay that was found to have significant relationship with adoption level (PV=.05). No significant relationship was obtained between knowledge and adoption level in ampalaya production technologies (Table 5.1).

As to eggplant production, the respondents should undergo pre-orientation seminar (PV=.002), seminar on enterprise development (PV.002), and setting a specific system of farming (PV=.002) were found to have high significant relationships with the adoption of the respondents (Table 5.2)

Above findings re-affirmed the experiences of DAR-FAPO (2002) that seminars and trainings are important pre-conditions among beneficiaries before they can avail of credit which resulted on their adoption of farming technologies and eventually increasing the farm productivity. The absence of stiff penalties in case of failure to pay is one of the reasons for poor repayment (Lirio, 2002)

Novelty Journals

ISSN 2394-9694

International Journal of Novel Research in Humanity and Social Sciences
Vol. 2, Issue 5, pp: (19-26), Month: September-October 2015, Available at: www.noveltyjournals.com

Table 5.1: Chi-Square test Between Adoption of Hybrid Rice and Hybrid corn Technologies and Micro Finance Policies

	Hybrid Rice		Hybrid Corn	
Statements	CV	P V	CV	PV
Pre-loan Policies				
1. Loan orientation seminar	7.33	0.119ns	0.635	0.728ns
2. Seminars on values formation	2.857	0.240ns	0.023	0.708ns
3.Seminar on enterprise development	2.857	0.240ns	0.023	0.708ns
4. Trained on financial management	2.857	0.240ns	0.023	0.708
5. Technical training on crop production	0.741	0.690ns	2.593	0.300ns
Loan Application and Approval Policies				
1. Filled up standard loan applications	10.625	0.031*	2.857	0.240ns
2. Required collateral	4.444	0.349ns	3.651	0.161ns
3. Required to Submit crop production proposals	6.667	0.155ns	1.905	0.386ns
4. Gave capital share before approving loan	10.625	0.031*	2.857	0.240ns
5. Inspected Farm before approving loan	6.190	0.185ns	3.537	0.171ns
Post Loan Policies				
1. Cooperative closely monitored the farm	4.722	0.317ns	2.857	0.240ns
2. Cooperative provided technical assistance	10.625	0.031*	3.651	0.161ns
3. Cooperative set specific system of farming	4.722	0.317ns	3.537	0.171ns
4. Cooperative set a specific period of repayment	10.625	0.031*	2.857	0.240ns
5. Penalties imposed in case failure to pay specified period of repayment	10.357	0.035*	5.918	0.05*

Table 5.2: Chi-Square test Between Adoption of Ampalaya and Eggplant Technologies and Micro Finance Policies

	Ampalaya		Eggplant	
Statements	CV	P V	CV	PV
Pre-loan Policies				
1. Loan orientation seminar	10.00	0265ns	10.00	0.002**
2. Seminars on values formation	17.50	0.354ns	0.741	0.389ns
3.Seminar on enterprise development	20.00	0.220ns	10.00	0.002**
4. Trained on financial management	20.00	0.220ns		
5. Technical training on crop production	10.00	0.265ns		
Loan Application and Approval Policies				
1. Filled up standard loan applications	10.00	0.265ns		
2. Required collateral	10.00	0.265ns		
3. Required to Submit crop production proposals	10.00	0.265ns	1.667	0.435ns
4. Gave capital share before approving loan	20.00	0.220ns		
5. Inspected Farm before approving loan	10.00	0.265ns		
Post Loan Policies	CV	PV	CV	PV
1. Cooperative closely monitored the farm	10.00	0.265ns		
2. Cooperative provided technical assistance	17.50	0.354ns		
3. Cooperative set specific system of farming	16.67	0.407ns	10.00	0.002**
4. Cooperative set a specific period of repayment	10..0	0.265ns		
5. Penalties imposed in case failure to pay specified period of repayment	10.00	0.265ns		

Legend: **-highly Significant

*-Significant

ns-Not Significant

CV-Chi-square Value

PV-Provability Value

Significance level: PV= less than .05

V. CONCLUSIONS AND IMPLICATIONS

The respondents of hybrid rice, hybrid corn, and eggplant were more knowledgeable on the policies on micro financing program than apalaya beneficiaries. Consequently, they have high adoption level on technologies of the four crops studied.

The Micro-financing improved some economic, and crop productivity of the respondents.

The knowledge of the beneficiaries on the process of availing micro financing had influenced their adoption on hybrid rice, hybrid corn, and eggplant technologies except for ampalaya beneficiaries.

Implications:

The highlights of findings imply that the respondents were knowledgeable about the policies in availing micro financing implies that their cooperatives imposed most of these policies especially to hybrid rice, hybrid corn, and eggplant farmers; ampalaya beneficiaries whose knowledge was low means some policies were not imposed to them rather their cooperative was selective of the policies they imposed. However, common policies given were the filling of standard form application; the giving of capital share, ocular inspection, close monitoring of the farm, setting of specific period of repayment and giving of penalties for those who fail to pay at the specified period of repayment.

The high adoption on the technologies implies that micro financing was effective in introducing adoption of technologies posed by Rogers (1962 p 150) still the prevalent pattern regarding the adoption of innovation.

Policies that were significantly related to the adoption of the respondents on the technologies implied that these policies served as catalyst to the high adoption of the respondents. Since there was no policy that had significantly related to the adoption of the respondents on the technologies in ampalaya production means that they were not influenced by the policies imposed; rather it is the influence of other factors like their perceived attributes to these technologies.

Micro-financing can improve the economic, and farm productivity of the farmers when package of interventions like technical and credit will be part of the services to the farmers through cooperatives.

REFERENCES

[1] Department of Agrarian Reform (DAR)-Foreign Assisted Project Office (DAR-FAPO), (2002). Farming Systems Development Approach in Agrarian Reform and Rural Development Innovative Approaches and Success Studies on Agrarian Reform Community Development.

[2] Fajardo, F.R. (1994). Entrepreneurship. National Book Store.

[3] Garcia, M.S. (2004). Pattern of Coastal Resource Use Among Micro Credit Clients in Selected Coastal Communities in Davao Oriental(Undergraduate Thesis), Davao Oiental State College of Science and Technology, Mati, Davao Oriental 58 p. (Available at R&E Publications Office).

[4] Garcia, G.Y. and Guanzon, M.N. 2004. Cooperatives. UST Publishing House, University of Santo Tomas, Espana, Manila. 304p

[5] Hermoso, R.R., (1997). An Introduction to Economics and Social Development Issues in the Philippines. ACSPPA and PCHRD and Bookmark Inc. pp. 123-130.

[6] Kottak, C.P. (1991). Anthropology. McGraw Hill Inc.

[7] Lirio, R.P. (1991). Promoting Microfinance Institutions in the Philippines. Bangko Sentral Review, Vol. IV No.1.

[8] Madigan, F. C. (1967). Human Factors in Philippine Rural Development. Xavier University Studies No.1, Cagayan De Oro City.

[9] Pava, H.M. and Abellanosa, A.L. (1995). Introduction to Crop Science. Central Mindanao University Town, Musuan, Bukidnon, Philippines.

[10] Rogers, E.M.(1962). Diffusion of Innovation. 3rd Ed., The Free Press, Mac Millan Publishing Co., Inc. New York.

[11] Rola, L.R. (1991). UPLB Rural Development Studies Team, Phil. Rural Development Problems, Issues, and Directions.

[12] Todaro, M.P. (2000) Economic Development (7th Ed.). Pearson Education Ptc. Ltd.