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Relationship of financial Sustainability and Outreach in Ethiopian Microfinance Institutions: Empirical Evidence

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Abstract
The study aimed to investigate the association between financial Sustainability and Outreach in Ethiopian Microfinance Institutions empirically. To achieve this objective the researcher developed a hypothesis entitled "there is no relationship between outreach and financial sustainability of microfinance institutions in Ethiopia". To test this hypothesis I selected three outreach indicators and two financial sustainability indicators and this was tested by using secondary data for the year 2011 from Mix market data of five microfinance institutions and found that data supports the hypothesis. Therefore, the study concluded that there is no statistically significant relationship between outreach and financial sustainability in Ethiopia. I suggest others to conduct further study by taking more institutions.
Keywords: Microfinance, Financial Sustainability, outreach

1. Introduction

The primary objective of Microfinance institutions is the outreach to the poor by providing financial services in a sustainable base. However, in the last two decades or more there has been a major shift in emphasis from the social objective of poverty alleviation towards the economic objective of sustainable and market based financial services. More specifically, MFIs are expected not only to reach the poor but also to become financial viable. Indeed, MFI have been increasingly pressured to adapt more "business" practices and to become more self-sufficient (Mordich, 2006; Ledgerwood, 1999; Christen,1998). The shift in emphasis of MFIs into viable financial institutions while maintaining greater outreach to the poor has give rise to a debate over trade- off between outreach to the poor and financial sustainability.

The institutionist approach contends that commercial profitability is necessary so that MFIs can generate the funding they need from capital markets to expand the coverage of financial services to the poor. The Welfarists emphasizes making subsidized credit available to the poorest of the poor (Robinson, 2001). The advocates of the Welfarists approach would argue that the poor cannot afford higher interest rates; hence that financial sustainability ultimately goes against the aim of serving large groups of poor borrowers.

However, the prevalence of tradeoff between in depth outreach and financial sustainability is not supported by cases and empirical evidences. In line to this, therefore, the objective of this paper is to examine a tradeoff between outreach and sustainability and thereby to contribute to the ongoing debate on whether outreach and sustainability are substitutes or complements by focusing on Ethiopian MFIs as a case.

The remainder of the paper is organized as follows. In section two, the paper tried to present a brief review of related literature. Section 3 presents data source and Analysis. Section 4 presents results and discussions and ends up with conclusions.

2. Review

2.1 Concepts of Microfinance

Microfinance has been defined differently by differently by different people / agencies / institutions (for instance Woller & Schreiner, n.d; Nara, 2013; kinde, 2012; Tehulu, 2013). But the comprehensive definition is provision of financial and non financial to low-income households and enterprises in both urban and rural areas, including employees in the public and private sectors and the self-employed (Robinson, 2001).

2.2 Financial sustainability

Vento and Torre (2006) describe sustainability as the ability of MFIs to repeat loans over time (substantial financial sustainability), regardless of how the financial stability of the project or institution is achieved. Similarly, Pollinger et al (2007) defined sustainability as the ability to cover annual budgets including grants, donations, and other fundraising. Financial sustainability indicates that income from the microfinance services should be greater than the cost of providing services. Financial sustainability indicates that income from the microfinance services should be greater than the cost of providing services.

According to Vento and Torre (2006) financial sustainability can be measured in two stages namely operational self- sustainability and financial self-sufficiency. Most studies (for instance: Nara, 2013; Woller and Schreiner, n.d) used operational self- sustainability and financial self-sufficiency as an indicator to measure financial performance. According to Nara (2013) these indicators are calculated as follow and I used these for this study.

Operational Self-Sufficiency =Financial Revenue / (Financial Expense + Impairment Losses on Loans + Operating Expense)

Financial Self-Sufficiency= Adjusted Financial Revenue / Adjusted (Financial Expense + Impairment Losses on Loans +Operating Expense)

2.3 Outreach

Outreach refers to MFI's ability to provide high quality financial services to a large number of clients. Most MFIs have set extending financial services to poor and disadvantaged group as their goals and commonly used outreach indicators are focused on capturing different dimensions (i.e. quality, cost, depth, breadth, length and variety) of outreach(Nara,2013). Different researchers use different indicators to measure outreach. For instance while Zerai and Rani(2012) used average loan balance per borrower, Number of active borrowers and Percentage of women borrowers others(for instance , Woller and Schreiner, n.d ;**Nara, 2013) used** the number of borrowers, The average loan size and Ratio of the average loan size to GNP per capita. In this study I used the variable used by Nara (2013). According Nara (2013) these variables are defined as follow:

The number of active borrowers is an indicator of both breadth of outreach and scale. Convention holds that scale is inversely related to costs and positively related to profitability, because the fixed costs of production are amortized across a larger number and value of outputs. The number of borrowers is thus hypothesized to be positively associated with financial self-sufficiency.

Average loan balance per borrower (Adjusted Gross Loan Portfolio/Adjusted Number of Active Borrowers) is a proxy for depth of outreach. Smaller loans are generally taken to indicate greater depth of outreach. The hypothesis is that the average loan size is inversely associated with financial self-sufficiency.

Average Loan Balance per Borrower/GNI per Capita (Adjusted Average Loan Balance per Borrower/GNI per Capita) normalizes the variable for different price and income levels found in different countries, thereby making cross-country comparisons more valid. The hypothesis is that the average loan to GNP ratio is inversely associated with financial self-sufficiency.

2.4 Relationship between financial sustainability and outreach

Tehulu(2013) empirically investigated the effect of seven determinants(Breadth of outreach and deposit mobilization, management inefficiency, portfolio at risk, loans intensity, and size) on financial sustainability of microfinance Institutions in East Africa by using probit model by taking unbalanced panel data collected from 23 micro finance institutions consisting of 121 observations from the period of 2004 to 2009 and found that two variables(loans intensity and size) affect positively, two variables (management inefficiency and portfolio at risk)affect negatively, and the remaining two does not affect(Breadth of outreach and deposit mobilization) sustainability of microfinance institution in East Africa. The study concludes that while management inefficiency, portfolio at risk, loans intensity, and size are important determinants ,Breadth of outreach and deposit mobilization are not important determinants of financial sustainability of microfinance institutions in East Africa. The study keeps silent about the effect of the seventh determinants of MFI financial sustainability leverage. Similarly Kipesha and Zhang(2013) examined the presence of tradeoffs between sustainability, profitability and outreach using a panel data of 47 Microfinance institutions for four years of 2008 to 2011 from Mix market Data using unbalanced panel regression analysis model. Using Welfarists approach the study found the presence of negative tradeoffs between profitability and outreach to the poor and did not show presence of tradeoffs between financial sustainability and outreach measures. Under Institutionalist view, the study found that outreach to the poor has a positive relationship with both sustainability and profitability measures.

However, by multivariate regression model called ordinary least square, Kinde (2012) tried to identify factors affecting financial sustainability of MFIs in Ethiopia by using balanced panel data set of 126 observations from 14 MFIs over the period 2002-2010 from mix market and found that microfinance breadth of outreach, depth of outreach, dependency ratio and cost per borrower affect significantly but capital structure and staff productivity has insignificant impact on financial sustainability of MFIs in Ethiopia. The study did not show clearly and kept silent about the direction of independent variable (financial sustainability) and significant dependant variables (breadth of outreach, depth of outreach, dependency ratio and cost per borrower)

Further, Ayayi and Sene(2010) tested the effect of selected independent variables(portfolio at risk, interest rate, good management, productivity ratio, client outreach, age of microfinance)on financial sustainability of MFIs in the world by Using data on a sample of 217 MFIs with 5 diamond ratings from MIX Market database over a period of 9 years, namely from 1998 to 2006 and found the following:

- ✓ High quality credit portfolio, coupled with the application of sufficiently high interest rates that allow a reasonable profit and sound management are instrumental to the financial sustainability of MFIs.
- ✓ The percentage of women among the clientele has a weak statistically non-significant negative effect on financial sustainability of MFIs.
- ✓ The client outreach of microfinance programs and the age of MFIs have a positive but lesser impact on attainment of financial sustainability.

Similarly, Paxton (2002) examined the relationship between depth of outreach and financial sustainability 18 MFIs (in Africa and Latin America) and found strong correlation between outreach and financial sustainability in Latin America and weak correlation in Africa. The study concludes that outreach and financial sustainability are not mutually exclusive concepts. In support of this, Quayes (2012) studied the Depth of outreach and financial sustainability of microfinance institutions by utilizing data from 702 MFIs (from Mix market) operating in 83 countries and found empirical evidence that shows positive complementary relationship between financial sustainability and depth of outreach.

From the above empirical evidence the researcher concludes that firstly on this issue there was no enough study conducted secondly even the few studies conducted does not provide clear information about the relationship between financial sustainability and outreach of microfinance institutions (from no relation to some relation to positive relation). In addition in Ethiopia there was no previous study conducted on this issue. As the result in Ethiopia what relation exists between financial sustainability and outreach of microfinance institutions is not known. Therefore I developed a hypothesized as “there is no relationship between outreach and financial sustainability of microfinance institutions in Ethiopia”. Therefore this empirical study fills the gap by testing the above hypothesis.

3. Data source and Analysis

3.1 Data source

Data required for this research were obtained from the latest database maintained by Microfinance Information Exchange (miX). The database has information on micro finances institutions around the globe and provides microfinance institutions information to public and private funds that invest in microfinance, MFI networks, advisory firms, and governmental and regulatory agencies. In the data base there are 13 Ethiopian MFIs which have statement report in the study year (2011), however due data incomplete 8 MFIs are excluded and thus the study is based on 5 MFIs(ACSI, PEACE, SFPI, Wasasa and Wisdom).

3.2 Data Analysis

Information on outreach and self-sufficiency that are available in the mix database were used to establish relationship between outreach and sustainability of the Ethiopian MFIs. Indicators on outreach and sustainability were computed for all MFIs. These indicators are in the form of ratios i.e. a comparison of one piece of financial data to another. Various indicators used in this research were grouped into outreach and self-sufficiency.

Correlation analysis was done between key indicators on outreach and self-sufficiency. More specifically, simple correlation between the number of borrowers, the average loan size and adjusting average loan size by GNP per capita (proxy of outreach) and operational/financial sustainability(proxy of financial sustainability) were worked-out to identify the nature of relationship between these indicators and to assess if there is a relationship between outreach and financial sustainability among Ethiopian MFIs.

4. Findings and Conclusions

As depicted in table 1, the descriptive result of Ethiopian MFI showed that the average loan balance per borrower is about 156.2 dollar with the with a standard deviation of 44.5, Average loan balance per borrower / GNI per capita is .4 with standard deviation of .11, the average loan number of active borrowers is 188068 with standard deviation of 328754, the average loan Operational self sufficiency is 1.57 with standard deviation of .54 and the average loan Financial self sufficiency is 1.37 with standard deviation of 0.29. The institutions’ outreach is very encouraging as the average number of active borrower is 328754.

There have been three different arguments in literature between MFIs financial sustainability and the outreach. The first argument is there is inverse relationship between MFIs financial sustainability and the outreach because as get more vulnerable group the transaction cost will increase as the result there is a decrease on financial performance. The second group argues that MFIs financial sustainability and the outreach has a complementary relationship in the sense that these larger numbers of clients enable MFIs to boost economies of scale and reduce costs. The third group argues that MFIs financial sustainability and the outreach has no significant relationship. In this regard this study finding does support the third argument that is there is no significant relationship between outreach and financial sustainability more specifically, the correlation between proxy to outreach and financial sustainability is weak as shown in table (2).

The study revealed that there is no significant correlation between outreach and financial sustainability of microfinance institutions in Ethiopia. As the result of this, the study accepts the initial hypothesis which was “there is no relationship between outreach and financial sustainability of microfinance institutions in Ethiopia”. The result of this study supports the finding of Zerai and Rani(2012)which was conducted in India. Therefore, it can be concluded that the study do not find a statistically significant relationship between outreach and financial sustainability in Ethiopia. Finally I suggest others to conduct further study by taking more institutions.

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Annex 1

Table 1:Descriptive Statistics

	Mean	Std. Deviation	N
Average Loan balance per borower	156.2000000	44.48820068	5
Average loan balance per borrower / GNI per capita	.3997000	.11377372	5
Number of active borrowers	188068.8000000	328754.59503435	5
Operational self sufficiency	1.5704800	.54208188	5
Financial self sufficiency	1.3775648	.29921987	5

Table:2 Correlations

		Average Loan balance per borower	Average loan balance per borrower / GNI per capita	Number of active borrowers	Operational self sufficiency	Financial self sufficiency
Average LOan balance per borrower	Pearson Correlation	1	1.000**	.790	.457	-.163
	Sig. (2-tailed)		.000	.112	.439	.793
	N	5	5	5	5	5
Average loan balance per borrower / GNI per capita	Pearson Correlation	1.000**	1	.787	.453	-.166
	Sig. (2-tailed)	.000		.114	.444	.790
	N	5	5	5	5	5
Number of active borrowers	Pearson Correlation	.790	.787	1	.877	.315
	Sig. (2-tailed)	.112	.114		.051	.605
	N	5	5	5	5	5
Operational self sufficiency	Pearson Correlation	.457	.453	.877	1	.702
	Sig. (2-tailed)	.439	.444	.051		.186
	N	5	5	5	5	5
Financial self sufficiency	Pearson Correlation	-.163	-.166	.315	.702	1
	Sig. (2-tailed)	.793	.790	.605	.186	
	N	5	5	5	5	5

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

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