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THE ROLE OF MICROFINANCE IN REDUCING POVERTY RATE IN SUDAN (A CASE STUDY OF SAVING & SOCIAL DEVELOPMENT BANK)

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Abstract: This paper is an attempt to examine the impact of microfinance (MF) on poverty reduction in Sudan. The study objects to assess performance and interventions of MFIs in three dimensions; outreach, sustainability, and business development. Although there are many Sudanese intuitions are working in microfinance field, the study used a case study of the earlier major bank involved in microfinance programs, Savings and Social Development Bank (SSDB).Data has conducted through questionnaire , personal interviews and records. Primary data collected by a semi-structured questionnaire. Both quantitative and qualitative data been used for assessment. Findings of the study showed positive impact on business development in term of increased employment, on other hand moderate impact observed on outreach to poor people and sustainability.
Keywords: Microfinance, Impact, Livelihood, Poverty.

1-Introduction

Poverty phenomenon exists in all societies rich and poor, but in different proportions. It is a multidimensional embedded in a complex and interconnected economic, political, cultural, and ecological system. Ledgerwood(1999) defines microfinance as the provision of finance services to low –income clients including small traders ,street vendors, small farmers, service providers(hairdressers, rickshaw drivers) artisan and small producers.

1.1 Microfinance in Sudan

Sudan has witnessed in the last decade, significant progress in understanding and providing financial services to better advance development and eradicate poverty. Where it represents in the establishment of the microfinance unit in March 2007 as an arm of Central Bank of Sudan (CBOS), to implement a development strategy for microfinance sector. Plan has developed to expand the extension of financial services through the establishment of institutions to offer microfinance services. This includes creation of financial products fit microfinance clients potential, addition to work in institutional development and capacity

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building for workers in MFIs and microfinance clients. In order to provide enabling environment COBS issued numbers of regulations, polices and publication supporting the development of microfinance in Sudan. For example and not as limitation they include:

-Directors of microfinance banks in 2007.

-Guarantees of non-conventional in 2008.

-List of licensing requirements for banks and MFIs in 2008.

-Regulatory and supervisory framework of MFIs that accept and not accept deposits in 2011.

-Banks allocation of 12% of the total portfolio funding for microfinance.

1.2 SSDB's Microfinance Programs

Sudanese Saving & Social Development Bank opened in the World Savings Day, corresponding 31/October/1974. Selection based in the city of Wad Medani (The capital of Gezeria province) for the presidency of the bank, because the area of Gezeria is consider the center of the area and boasts artisans and those with medium and limited access. Bank started with a capital of (500,000) SDG. In the year 1982, because of expansion in the branches of the bank rose capital to (3 million Sudanese pounds). In 1995, the bank transferred to Khartoum; within devolve ownership of 100% to the central government.

The main objectives of the bank represented in:

1-Strive to improve living conditions of the various sector of society to help ease the effects of the structure of economic and economic policies.

2- Dealing with the poor of small producers, artisans and productive families who do not own real estate collateral qualify for financing from commercial and specialized banks.

3-Cooperate with local and foreign organizations and institutions of the United Nations in the anti-poverty framework.

The bank strategy operates in accordance with the policy of the state, to alleviate poverty, through the following:

-Develop the concept of banking business with target audiences through training on how to manage the business, hiring and saving money.

-Interest in community participation in planning, implementation and project management for the individual and community level.

-Target and interest sector of women in training and funding.

SSDB obtains financial resources from what shall devolve upon the net facilities and its subsidiaries profits, income and profits obtained because of its operations, savings and investment deposits. Additional to subsidies, donations, and bequests. SSDB operates through two windows complementary first commercial investment window in accordance with policy of the central bank. Second social investment expectance window of the central bank policy, to enter the largest segment in the national economic cycle. The bank has set up three conservative portfolio of widows, women, and graduates.

1.3 Conceptual Framework

The conceptual framework subject to assess the impacts of microfinance programs based on implement the thought of two schools. First, the intermediary school, which assess MFI overall performance evaluation with a focus specifically on; outreach and self-sustainability. Second, the intended beneficiary school; partially by assessing social impact as direct result of microfinance interventions. The conceptual framework (Figure-1) shows the correlation between the microfinance interventions and clients status on one hand and between the client's performance and MFI outreach and sustainability on the other hand. So the mixed framework targeted to measure the variables performance of MFI in terms of outreach & sustainability, in addition with measuring social impacts of microfinance interventions with lower cost.

1.4 Objectives of the study

The overall purpose of the study is to measure the impact of SSDB microfinance operations on poverty reduction, beside the following sub objectives:

1-Evaluate the overall performance of SSBD relating to sustainability and outreach.

2-To identify options to change current SSDB microfinance practices, in order to maximize social impacts.

3-Work out a mechanism for SSBD microfinance leads to reach all target segments.

1.5 Hypothesis of the study

To attain the objectives of the study, the following testable research hypotheses have been set, based on the revelation in the review of literature concerning relationship between microfinance and poverty reduction. The study consists of the following two testable hypothesis:

H1: SSDB operations have good financial sustainability and outreach performance.

H2: SSDB interventions have remarkable social impacts.

2-Literture Review

Although of considerable debate about the impact of microfinance on poverty reduction, but still there are many studies that proved and advocated the role of MF in poverty alleviation. Johnson & Rogaly (1997) stated that Microfinance has obtained a universal avowal as important tool for poverty alleviation in many developing countries. In an early study conducted by Panjaitan, Drioadisuryo & Cloud (1999) in Lombok, Indonesia, found that 90% of sample clients of Bank Rakyat Indonesia (BRI) increased their income by 112% and exceeded the poverty line. Murdock and Haley 2002 ascertained the positive impacts of microfinance on poverty reduction “as it relates to (the first six of the seven) Millennium Development Goals”. These observations supported by findings of study conducted by Asian Development Bank (ADB) in 2007, on the effect of microfinance operations on rural households and status of women in of Bangladesh, Philippines, and Uzbekistan. The study ensured the microfinance projects positive impacts that implies in, generating higher volume of cash in household, greater involvement in making major expenditures decisions and making savings. Beside their ability to generate more income on their own and greater role business decision-making, acquisition of more skills, expanding their network of friends and support system, and increased acquisition of assets. Simanowitz and Walter (2002) considered microfinance perceived as a vital dynamic mechanism for achieving millennium target of reducing poverty and hunger by 2015. Swope (2005) asserted that, microfinance clients could increase their household income, decreased economic vulnerability. They could wipe out poverty completely in some cases. In addition, they have been enjoying better nutrition, health facilities and greater empowerment. Participation in an agricultural credit program was able to raise the cropping share for hybrid maize and tobacco, and membership in credit programs had a sizable effect on crop income in Malawi (Zeller, Diagne, and Mataya, 1998). Fengxia et al, 2010 argued that access to credit is always a key factor for improving farm profits and rural living standards in developing countries, such as Nicaragua. Available literature concluded that microfinance has varied impacts on the livelihood of poor people. Glazer,_2010, stated that microcredit have brought millions, especially women, out of poverty and prompted economic sustainability. Professor Mohammad Yunus, 2004, the founder of Grameen Bank in Bangladesh and the originator of the concept of microfinance, believes that 5% of Grameen Bank’s clients exit poverty each year. Despite the positive role of microfinance in developed some innovative management and business strategies, which led to provide safety net and consumption smoothening, but its impact on poverty reduction remains in doubt. Early set of studies collected by Hulme, D & Mosley, P, 1996, found that only non-poor borrowers could well benefit of microfinance. However, some recent studies suspect on microfinance effectiveness. Adams and Bartholomew, 2010, argued that microfinance efficacy might be less attractive than promise. The MIT study by Banerjee, Duflo, Glenerster, and Kinnan 2009, found no impact on measures of health, education, or women decision-making among the slum dwellers in the city of Hyderabad, India. Similarly, the study by Okpara 2010, on microfinance bank and poverty alleviation in Nigeria, stated, “Microcredit in recent times picked up momentum in the drastic reduction of poverty. But ten years after the introduction in Nigeria, poverty was still increasing though at a decreasing rate with the increase of microcredit.”

3-Methodology of the study

Different methods applied in different researches to measure the impacts of microfinance interventions and operations. Earlier in 1980s a method known as “before and after” scenarios analysis of borrowers were used. Later some authors have used another method to measure the impact by using member perception. More recently, two main schools of thought are used; these are termed the intended beneficiary school and the intermediary *school*. The intended school, building on the ideas of conventional evaluation focusing on impact chain (in terms of budgets and techniques) to assess its impact on intended beneficiaries (individual or households). In this study, a new framework developed which combined between the two schools. That measuring full performance of microfinance outreach and sustainability (intermediately school) and partially measuring performance of social impacts of microfinance outcome (intended beneficiary school). Data collection has conducted from primary and secondary resources. The secondary data resources were library researches, published material and World Wide Web. While primary data was collected via questionnaire, that designed to assess the impact of microfinance operations on the livelihood of the (SSDB) beneficiaries. The target population of this study made up of all (SSDB) clients participated in microfinance operations at least for three years. Respondent’s sample of (220) randomly selected out from the bank record list. (220) of total questionnaire were distributed, (200) valid ones was returned with response rate of 91%. Overall (50) questions developed to be answer based on Five Point Liket Scale., as it is considered to be an easier approach to collect data (Yu & Egri, 2005). Reliability test is conducted based on Cronach Alpha to measure internal consistency of questionnaire, results was fall between (0.75) and (0.85), which is valid value, because satisfactory should be more than (0.60) for the scale to be reliable (Malhotra 2002). The overall Cronbah alpha of all scales used in this study was (0.80).

4 - Analysis and Findings

There was none generally accepted mechanism, to assess the impact that the microfinance have made on the borrowers. As a result, it is very difficult to compare the impacts of MFIs against each other (Nanayakkara, 2012).

Many variables can used to assess impacts on different units; economic indicators are the major for microfinance impact assessments particularly when measuring income changes. Other variables also are levels and patterns of expenditure, consumption and assets. Also the social indicators that became popular in the early 1980s (e.g., educational status, access to health services, nutritional levels, anthropometric measures and contraceptive use) have currently been introduced into the socio-political aspect in order to assess whether microfinance can support empowerment (Goetz & Sen Gupta, 1996; Schuler & Hashemi, 1994; Schuler, Hashemi & riley, 1997). Yaron, et al., 1997, stated that generally, two key variables are focused on, institutional outreach and institutional sustainability. If both outreach and sustainability have enhanced then the intervention judged to have a beneficial impact, as it has widened the financial market in sustainable fashion. Microfinance program usually focus on economic development of the clients and the consequent social evolution.

Ghalib 2009 stressed that: "Traditionally, development initiatives have been synonymous with raising people income and employment opportunities, increasing their consumption and helping them build assets and accumulative savings." Some studies have emphasized on the assessment of MFIs performance and sustainability by assessing their financial indicators (such as loan recovery rate and profitability) resulting self-sufficiency, outreach, and delivery mechanism (Chaves& Conzalez-Vega, 1996; Woolock, 1999; Yaron, 1994; Yaron, Benjamin, &Charitonenko, 1998; Yaron, et al., 1997). SSDB provides financial loans mainly for artisan activities and have its means and qualifications for identifying client's production because of the bank direct financing. So this could ease assessing social impacts at least cost.

In this study, some common variables selected to measure the impact of SSDB microfinance operations. The measurements include the indicators of outreach, sustainability, and social impacts.

4.1 Outreach

The study measured the rate of SSDB outreach breadth and depth. Outreach breadth indicates number of active clients or accounts, while depth indicates average outstanding balance per client or account. (SSDB has now 47 branches in all Sudanese states). Table-1 shows clear trend of client's increment, as an active accounts number doubled from (299,505) in 2010 up to (637,274) in 2015, within an annual average increase rate of about (20%). While an outstanding deposit jumped from (379,247) in 2010, up to (1,898,575) in 2015, within an annual incremental rate of (39%). These figures confirm significant outreach for SSDB activities.

4.2 Sustainability

Financial self-sufficiency is essential for institutional sustainability, which in turn is definitely crucial for institution success. Ayayi & Sene, 2011, defined sustainability as the ability to cover all expenses with revenue and produce a surplus of revenue over expenses to finance future growth. In the study, we subject to measure financial sustainability, precisely; profitability, return on assets and operating expense.

4.2.1 Profitability

Profitability considered as quality or state of being profitable or the capacity to make a profit. While profit defined a financial benefits that is realized when the amount of revenue gained from a business activity exceeds the expenses, costs and taxes needed to sustain the activity. Table-2, shows remarkable increase in profit, as it jumped from (8,471) in 2010, up to (60,135) in 2015, within an annual incremental rate of (69%), even it indicated a drop of about 11% in last two years (2014&2015) due to settlement of employee promotion finance & bankruptcy accruals.

4.2.2 Return on Assets (ROA)

The objective of the asset management is to maintain an appropriate level of generated income from these assets (capital) and avoiding falling into a liquidity crisis. To achieve this goal institution seeks to measure the efficiency of investment assets, through the relationship between them and the income achieved because of the use of a so-called return on asset (ROA). The (ROA) figure gives investor an idea of how effectively the institution is converting the money (assets) it has to invest into net income. The higher the (ROA), the better, because the institution is earning more money on less investment. Assets consist of fixed assets and working capital assets.

As shown in table-2, the return on asset (ROA) achieved sustainable increase, within an annual increment rate of (57%), as it increased from 26% in 2010, up to 53% in 2015. The return on working capital, also showed an annual increment of (38%), as it raised up to (43%) in (2015) from only (15%) in (2010).

4.2.3 Operating Expense Ratio (OER)

An operating expense ratio is a measure of what it costs to operate a piece property, compared to the income that property brings in. The operating expense ratio calculated by dividing a property operating expense by its gross operating income. The operating expense ratio is useful tool to identify a particular expense of operating components. The lower the (OER), the better for institution as it spending less money on its operation activities. As mentioned in table-2, an operating expense ratio showed consecutive drop, as it decrease from 86% in 2010, down to 55% in 2014, within an annual average of 62%, even it slightly increased in 2015.

4.3 Social impacts

Microfinance interventions makes a significant impact on livelihoods and various perspectives of poverty reduction. So social performance reflects impacts how does institution achieve effectively its social objectives. However, the impact is indicating via entire process of the social performance, which reveals the dimensions of the social performance.

In this study, some common variables of social impact measured, including contribution to household income, savings levels and business growth and development.

4.3.1 Contribution to Household Income

Subrahmanyam, 2000, mentioned, “Poverty reduction takes place when poor people are able to generate income”. Table-3, shows the variation of average per capita monthly income pre- and post-joining SSDB program.

Data clearly reveals noticeable change in average per capita monthly income. As it was SDG 844 before joining SSBD microfinance programs then jumped to SDG 3179 after joining at rate of 303%. Apparent data declares that the smallest an average increase rate was more than 95% for all respondents. The field survey indicates that, the more year’s subscription the greater income. Data explains significant positive impact on income with cumulative length of association with SSBD microcredit programs.

The World Bank recently as of October 2015 defines extreme poverty as living on less than US $1.90 (PPP) per day, and moderate poverty as less than $2-5 a day. Accordingly, a person is thought of extreme poor who earns less than SDG 912 (SDG. 16 × $1.90 × 30days) and moderate poor whose earning is less than SDG 1680 (SDG. 16 ×$3.5 × 30 days) in a month . Table-3 shows that the average income level before joining SSDB lies underneath of the income level indicating extreme poverty while after joining SSDB, the average income level lies above the income level indicating moderate extreme poverty. These findings confirm most borrowers have been able to exceed even the moderate poverty line after joining SSDB microfinance programs.

4.3.2 Impact on Savings Levels

Savings play several role in life of poor people, it serve as insurance against sudden crisis such as illness and theft, and as reserves for important household expenditures such as school fees and wedding costs. Wright, 1999, cited that, the poor people have the desire to save and the demands for secure and convenient savings services are often even stronger among them than are credit services. Saving enable people to cope with irregular incomes and emergencies when they arise. Poor people above all need to save what they can, to avoid slipping into periods of real deprivation. However, “most poor people have little savings and even less discretionary income” (Bedson, 2009), as the reality is that, their current consumption often exceeds current income. The study mentioned the respondent’s attitude towards savings, as presented in table -4. The study declared that, the average monthly savings of respondents were SDG 401 before joining SSDB microcredit programs. As more than, half of respondents (56%) were not subject to savings. While after joining SSDB microcredit programs, all respondents are under savings position. Meanwhile the monthly average savings has raised to SDG 992, which represents 247% higher than pre-joining microcredit programs. Although the savings volumes rate increment were not significant, but it obviously indicates respondents high awareness attitude towards savings.

4.3.3 Business Growth & Development

Usually in most under developed countries, household income has only one source of income earner. So many Sudanese household depends on only one income. Choudhury, 2001, mentioned, “Microcredit delivery to women assists to generate employment for the able bodied male members who may not have access to the credit facility”. MFIs attribute to increase households income via creating new employments. Table -5, explains the respondent’s statistics of employment generation upon attachment in SSBS microfinance operations. The data reveals that, only (293) income earners were available for sample respondents pre-joined the SSBS programs, where about (72%) of households were depended only on one income earner. While the percentage of households who were depending on two or three income earners were 23% and 5% respectively. The situation of employment creation has improved after joining SSDB programs. As mentioned in table (6) extra total of (170) employments positions created, which represents an increment of 63%. The high increase of

(256%) observed in households earning two members, whilst it was (200%) for those having three income earners. On other hand, the number of household havening only one earner has decreased by (71%). Definitely, these statistics indicate the strong impact of microcredit finance in the creation of employment opportunity.

6. Limitation and future research

The study showed fruitful result, as findings verified the impact of microfinance programs and operations on poverty reduction in Sudan. Even though, this study still have unavoidable limitations. The most obvious ones was the cost and time. Researchers suggest further studies to cover other MFIs work in Sudan to test whether the conclusion s of this study will hold true, and to reach greater generalizability. Future studies should focus on complementary factors such as (infrastructure & entrepreneurial skills) for microfinance to have strong positive on poverty reduction.

Conclusion

Microfinance was widely considered as a universal poverty reduction tool, for its important role in providing safety net and consumption smoothening. Recently some researches doubt on its impact on poverty reduction, so that, this paper came as an attempt to assess the effectiveness of microfinance in poverty reduction. The study focused on both sides of the microfinance process, the supplier, which is the SSDB, and the demanders, which are the borrowers. The paper illustrated the impact of microfinance programs on the livelihood of the borrowers, in terms of contribution to household income, savings levels and business growth &development. Regarding the SSDB, the paper revealed the indicators of institutional outreach and sustainability.

The study used the mixed framework, targeted to measure the two variables of microfinance operation: institutional outreach & sustainability, in addition with measuring social impacts of microfinance interventions with lower cost.

The findings of the paper analysis showed that the overall impact of microfinance operations on the livelihood of the borrowers is positive. Despite in some cases the impact was limited or not significant. Regarding borrower's income have increased significantly after joining SSBD. The monthly average income increased by an amount of SDG. 3179 (303%) post joining SSDB programs. Borrowers having long periods of attachment with SSDB microfinance program showed high volume of income compared to borrowers having short period of attachment. On the other hand, there is a moderate impact observed in the creation of employment opportunity. As many as 170 income earners increased i.e. 63% new employment opportunity has created post-joining SSBD microfinance programs, while a number of 41 households (21%) have failed to create new income earner (still depend on one income earner) despite their involving into SSBD microcredit programs. The case where the impact of SSBD microfinance programs found high significant are saving levels, as volume of savings has increased with significant rate (SDG. 591 per month); however, the attitude of all borrowers towards savings has strongly improved by monthly average percentage of (247%) post-joining SSDB programs. In sum, the study showed that, SSDB microfinance programs relatively succeeded in reducing the poverty rate among the respondents. In order to achieve suitable success in poverty alleviation in Sudan. The researcher recommend, development of comprehensive strategy involving all parties necessary to accomplish the objective of increasing the breadth and depth of MFIs outreach, in order to diversify their products to be more responsive to the needs of all economically active poor.

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References

[1] Adams, S., & Bartholomew, A. T. (2010). The impact of microfinance on maize farmers in Nkoranza (Brong Ahafo Region of Ghana). Journal of Management Research, 2(2), 1-13.

[2]Ahmed, S. (2004). Microcredit and poverty: New realities and strategic issues. In S. Ahmed & M. A. Hakim (Eds.), *Attacking Poverty with Microcredit* (2nd ed.) (pp. 23). Dhala-1000, Bangladesh: The University Press Limited.

[3]Asian Development Bank (ADB). (2007). *Effect of Microfinance Operations on Poor Rural Households and the Status of Women.* Special Evaluation Study. Reference Number: SST: REG 2007-19, available at: http://wwwoecd.org/dataoecd/46/15/39503711.pdf.

[4]Ayayi, A., & Sene, M. (2011). What drives microfinance institution's financial sustainability? , *International Business & Economics Research Journal (IBER), 5*(12).

[5]Banerjee, Abhijit, Esther Duflo, Rachel Glennerster and Cynthia Kinnan (2009) “The Miracle of Microfinance? Evidence from a Randomized Evaluation” Department of Economics, Massachusetts Institute of Technology (MIT) Working Paper, May.

[6]Bedson, J. (2009). *Microfinance in Asia-Trends, Challenges and Opportunities* (first Ed.). Queensland, Australia: The Foundation for Development Corporation.

[7]Chaves, R. A., & Gonzalez-Vega, C. (1996). The design of successful rural financial intermediaries: Evidence from Indonesia. *World Development, 24*(1), 65-78.

[8]Choudhury, M. O. (2001). An impact assessment of micro-credit programs for rural women-experience of Bangladesh. *Journal of the Institute of Bankers Bangladesh, 48*, 1-47.

[9]Fengxia D, Jing Lu, Allen M, Featherstone (2010). Effects of Credit Constraints on Productivity and Rural Household Income in China. Centre for Agricultural and Rural Development, Iowa State University. Working Paper 10-WP 516.

[10]Ghalib, A. K. (2007). Measuring the Impact of Microfinance Intervention: A Conceptual Framework of Social Impact Assessment. *The Singapore Economic Review Conference*. Available at: https://editorialexpress.com/cgibin/conference/download.cgi? Db-name=SERC2007& paper_id=155.

[11]Glazer, S. (2010). Evaluating microfinance: Do small loans for poor entrepreneurs help end poverty? *Global Researcher, 4(4), 81-101.*

[12]Goetz, A. M., & Gupta, R. S. (1996). Who takes the credit? Gender, power, and control over loan use in rural credit programs in Bangladesh. *World Development, 24*(1), 45-63.

[13]Heckman JJ (1976). The Common Structure of Statistical Models of Truncation, Sample Selection and Limited Dependent Variables and
A simple Estimator for such Models, Annals of Economic and Social
Measurement, 5, pp. 475-492.

[14]Hulme, D., & Mosley, P. (1996). *Finance against poverty* (Vol. 2): Psychology Press.

[15]Johnson, S., & Rogaly, B. (1997). *Microfinance and poverty reduction*: Oxfam Pubis.

[16]Ledgerwood, J. (1999). *Microfinance handbook: an institutional and financial perspective*: World Bank Publications.

[17]Malhotra, N.K., (2002). Making research: an applied orientation (3rd ed).New Delhi, India: Pearson Education Measurement, 5, pp. 475-492. Micro Save.

[18]Murdoch, J., & Haley, B. (2002). Analysis of the Effects of Microfinance on Poverty Reduction. *NYU Wagner Working Paper* No. 1014. Available at: www.nyu.edu/wagner/publichtml/cgi-bin/workingPapers/wp1014.pdf.

[19]Nanayakkara, G. (2012). Measuring the Performance of Micro financing Institutions: A New Approach. *South Asia Economic Journal, 13*(1), 85-104.

[20]Okpara, G. C. (2010). Microfinance bank and poverty alleviation in Nigeria. *Journal of Sustainable Development in Africa, 12*(6), 177-191.

[21]Panjaitan-Drioadisuryo, R. D. M., & Cloud, K. (1999). Gender, self-employment and microcredit programs: An Indonesian case study. *The Quarterly Review of Economics and Finance, 39*(5), 769-779.

[22]Rahji MAY, Adeoti AI (2010). Determinants of Agricultural Credit Rationing by Commercial Banks in Southwestern. Nigeria. Inter. Res. J. Fin. and Econ. ISSN 1450-2887 Issue 37.

[23]Schuler, S. R., Hashemi, S. M., & Riley, A. P. (1997). The influence of women's changing roles and status in Bangladesh's fertility transition: evidence from a study of credit programs and contraceptive use. *World Development, 25*(4), 563-575.

[24]Simanowitz, A., & Walter, A. (2002). Ensuring impact: reaching the poorest while building financially self-sufficient institutions, and showing improvement in the lives of the poorest women and their families. *Unpublished background paper for the Microcredit Summit, 5*, 10-13.

[25]Subrahmanyam, P. (2000). Capacity Building and Empowerment of Women Self-Help Groups through Microcredit and Social Mobilization - An Overview. In *Towards Empowering Women- Microcredit and Social Mobilization*.

CIRDAP Action Research Series, Vol. 27, Bangladesh.

[26]Swope, T. (2005). Microfinance and Poverty Alleviation. (Dissertation Paper). Available at:www.rollins.edu/olin/rurj/mpa.pdf

[27]Woolcock, M. J. V. (1999). Learning from failures in microfinance. *American Journal of Economics and Sociology, 58*(1), 17-42.

[28]Wright, G. (1999). A Critical Review of Savings Services in Africa and Elsewhere. *Working Paper.* Nairobi: Micro Save.

[29]Yaron, J. (1994). What makes rural finance institutions successful? *The World Bank Research Observer, 9*(1), 49-70.

[30]Yaron, J., Benjamin, M. D. P., & Piprek, G. L. (1997). *Rural finance: Issues design, and best practices* (Vol. 14): World Bank Washington, DC.

[31]Yaron, J., Benjamin, M. D., & Charitonenko, S. (1998). Promoting efficient rural financial intermediation. *The World Bank Research Observer, 13*(2), 147-170.

[32]Yu, B.B., Egric, C.P. (2005). Human resource Management Practices and affective organizational commitment: Comparative Chinese employee in stale –owned enterprise and join venture, Asia Pacific Journal of Human Resource, vol.43, No.3, 313

[33]Yunus, M. (2004). Expanding Microcredit Outreach to Reach the Millennium Development Goals: Some Issues for Attention. In S. Ahmed &M. A. Hakim (Eds), *Attacking Poverty with Microcredit* (2nd Ed.) (pp. 7-22). Dhaka-1000, Bangladesh: The University Press Limited.

[34]Zeller M, Diagne A, Mataya C (1998). Market Access by Smallholder Farmers in Malawi: Implications for Technology Adoption, Agricultural Productivity and Crop Income. Agric. Econ. 19: 219-229.

[35]WWW.worldbank.org. (2015).

Appendix

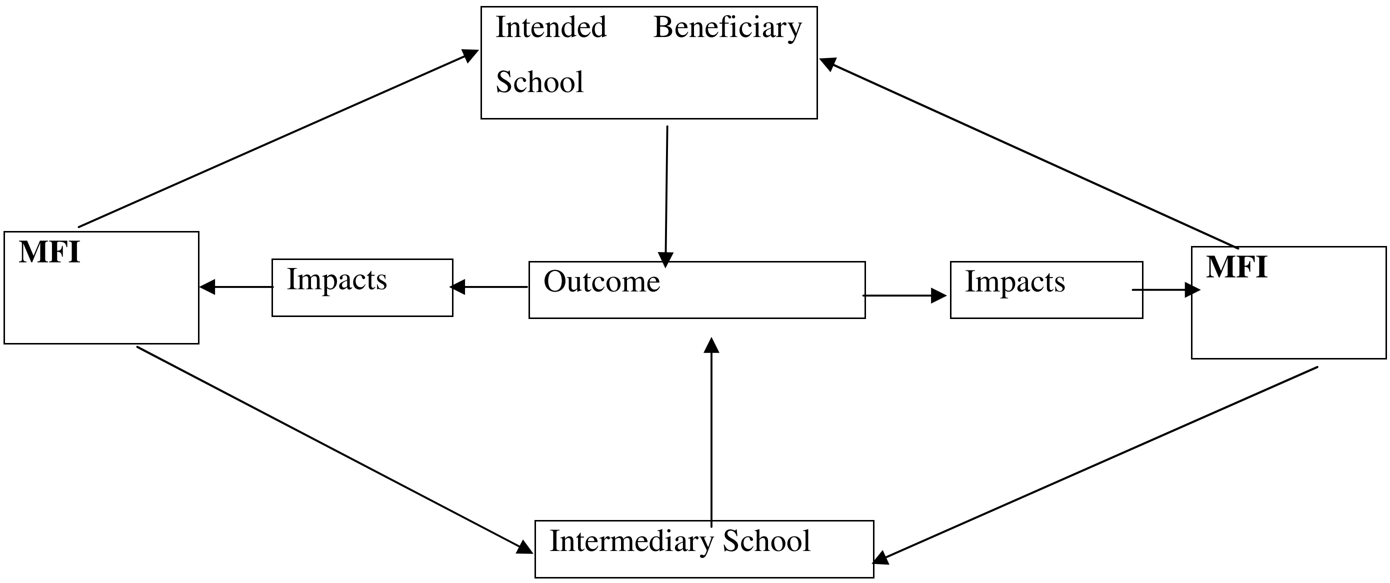

Figure -1: The Study Conceptual Framework

Table-1 SSDB Outreach Indicators (Amount in 1000SDG)

Year	2010	2011	2012	2013	2014	2015	Average
Amount of deposit	379,247	580,211	829,052	993,126	1,515,013	1,898,575	103,254
Growth rate	-	53%	43%	20%	53%	25%	39%
Accounts numbers	299,505	389,629	505,041	570,803	594,199	637,274	499,408
Growth rate	-	30%	30%	13%	18%	7%	20%

Source: - Computed from SSBD annual reports-2016.

Table -2 SSDB Profitability Indicators (Amount in 1000 SDG)

Year	2010	2011	2012	2013	2014	2015	Average
Profit	8,471	14,057	21,778	75,880	67,179	60,135	41,250
Growth rate	-	66%	55%	248%	(11)	(11)	69%
Fixed Assets	42,489	54,508	67,577	74,873	95,013	112,765	74,538
Return on Fixed Assets		26%	32%	101%	71%	53%	57%
Working Capital	58,786	93,728	103,728	130,848	130,848	140,848	109,798
Return on Working Capital		15%	21%	58%	51%	43%	38%
Operating expenses ratio		85%	79%	42%	49%	55%	62%

Source: - Computed from SSBD annual reports-2016.

Table-3 Monthly Income Variation

Years of Attachment	No# of Respondents N=200	Average per capita income(SDG)		Change of per capita income(SDG)	Percentage % of changes
		Pre-Joining SSDB	Post-Joining SSDB		
3	39	1120	2190	1070	96 (+)
4	33	1000	2373	1373	137(+)
5	50	980	2880	1900	194(+)
6	27	850	3120	2270	267(+)
7	21	800	3280	2480	310(+)
8	14	750	3450	2700	360(+)
9	11	690	3650	2960	429(+)
10 and above	5	650	4490	3540	632(+)
Total average income		844	3179	2287	303(+)

Source: Field survey-2016.

Table-4 Monthly Savings Status

Amount per month in(SDG)	Pre-Joining N=200		Post-Joining N=200		Percentage % of changes
	Respondents	%	Respondents	%	
No- Savings	112	43	0	0	High Decrease
Less-500	41	33	83	22	102(+)
500-1000	17	8	35	27	106(+)
1000-1500	12	6	28	24	133(+)
1500-2000	9	5	23	12	156(+)
2000-2500	9	5	18	8	100(+)
2500 and above	0	0	13	7	High Increase
Total	200	100%	200	100%	100%
Average monthly savings pre-joining SSDB = SDG 401 Average monthly savings post-joining SSDB= SDG 992 Average monthly savings change (pre-post) = SDG 591 which represents (247%)					

Source: Field survey-2016

Table-5 Creation of new employment opportunity

Number of income earner	Pre-Joining N=200			Post-Joining N=200			Percentage % of changes
	Respondents	%	No. of employment	Respondents	%	No. of employment	
Only One	143	72	143	41	21	41	71(-)
Only Two	45	23	90	95	58	230	256(+)
Only Three	12	5	60	64	21	192	200(+)
Total	200	100	293	200	100	463	63(+)

Source: Field survey-2016.