Instrument Development of Microfinance on Poverty Reduction: Pilot Study in Sri Lankan Microfinance Sector

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Abstract: The objective of the study is to investigate measures of microfinance elements drawing from concept of financial integrated approach. The constructs and measures were developed from related previous literature. A pilot study was conducted on 30 borrowers of Samurdhi microfinance program in Sri Lanka. Reliability and validity of the measures were tested to confirm the suitability of the items to represent the constructs and test the conceptualized relationship between each constructs. The study was 61 items were adopted form previous study and 4 items newly introduced in this research. The findings revealed that the suitability of all 65 items to represent the each constructs. The instrument will be useful to future researchers to identify the suitable instrument for their studies. The findings and implications of this study could substantially contribute to the government by offering it a deeper insight into its programs, thereby enabling it to make any necessary adjustments, since the study was based on the government microfinance program. Therefore, policymakers and regulators will be able to introduce better tools for eradicating poverty. Future studies can be introduced various items based on new developed microfinance services.

Keywords: Micro Credit, Micro Savings, Nonfinancial Service, Insurance Service, Social Intermediation Service

INTRODUCTION

Microfinance refers to ‘the provision of a broad range of financial services (elements) to the poor’ (ADB, 2007; Kumari et al., 2019; Jayasuriya, 2007; Dixit et al., 2019). Otero (1999) stated that microfinance is the provision of financial services to low-income people and very poor self-employed people. Cull & Murdoch (2017) defined it as, Microfinance is generally seen as a way to fix credit markets and unleash the productive capacities of poor people who are dependent on self-employment. Microfinance is not a new concept, as all the countries have a history of usage of this concept. Micro credit has been identified as key element of microfinance. Microfinance is providing various products to their client recently. Microfinance is not including microcredit service of credit; it includes savings, intermediation services, money transfer services, pensions and insurance as well (Littlefield et al., 2003). Definition given by IFC of the World Bank Group explains the nature as well as the role of microfinance as access to a range of microfinance services, such as savings, loans, micro insurance, and money transfers that enable poor families to invest in enterprises and in better nutrition, improved living conditions, and the health and education of their families (IFC, 2019). According to Seibel (2005), microfinance refers to “Financial intermediation between micro savings and microcredit that is powered by intermediation, legal recognition, regulation and mandatory supervision.”

The revolution of microfinance has led to provide of different micro financial products to clients and this is helping to increase their savings, investment, consumption, asset building needs and social needs. These financial services are being provided for short, medium and long terms in a convenient, appropriate, safe and affordable manner to assist the clients to deal with vulnerability and reduce their poverty. The products of microfinance gradually developed after understanding the poor people’s financial needs, which were then addressed by enhancement of different financial products by Microfinance Institutes. The initial stage of microfinance was identified as the state mediated and subsidized credit provision service for reducing poverty. Microcredit was the main product of government institutes, which provided this facility to eradicate poverty at this stage. The second stage of the microfinance evolution laid concern on accessing the basic wants of the poor and it was known as the ‘microfinance movement’ (Hulme & Mosley, 1996; Johnson & Rogaly, 1997). The scope of microfinance institutions has increased through providing various microfinance services to the poor after the 1990s. Ledgerwood, (1998) identified the two approaches adopted by MFIs in providing various financial elements to clients as minimalist approach and integrated approach. The MFIs that follow the minimalist approach offer basic financial services to their clients and this is practiced during the initial stages of financial development. The elements of microfinance mainly included several key services at the initial stage, such as microcredit, micro savings, and insurance services. MFIs that follow the integrated approach offer additional microfinance services, such as social intermediation service, insurance service and non-financial services. Most holistic view of the clients has shown by the financial integrated approach. It offers a combination or wider range of social intermediation, financial services business and social services (Ledgerwood, 1998). The following figure presents the elements of microfinance provided by MFIs under the two approaches.
Theoretical Framework of the Study

With the recent development of microfinance, the wider range of products of microfinance have been identified as the key instruments needed to improve the poor people’s living standard by helping them to form their small-scale businesses. During the initial stages, the financial sector defined microfinance as microcredit provided by the government to the poor for eradicating poverty. However, recently MFIs have been providing their services in two ways, as through minimalist approach or integrated approach as provided in the framework by Ledgerwood (1998). Some lenders provide social intermediation service to some extent while other lenders provide integrated services to their clients. Microcredit, savings, and insurance service were identified as key elements of microfinance that contributed toward reducing vulnerabilities.

Source: created from Ledgerwood, (1999).

Microfinance institutions that follow the minimalist approach generally provide only financial services. However, few of microfinance institutions may provide some services of social intermediation as well. The MFIs that follow the integrated approach offer a wide range of financial, social intermediation, enterprise development, and social services. MFIs decide the suitable approach based on their objectives and circumstance.

Financial Intermediation

The main function of MFIs is to offer financial products such as working capital, credit, savings, and insurance. Savings and credit play significant roles when starting to transfer credits from firms to clients. Majority of MFIs offer credit service to clients while some institutions offer other elements of microfinance, like savings, insurance, and payment service, depending on the objectives of the financial institutions. According to Ledgerwood (1999), the range of services mainly includes credit, savings, insurance, credit card, payment service as discussed below.

Credit

Credit is the lending of funds for repayment within the specified time period. Majority of MFIs provide loans to people to generate income from business. Some lenders offer credit for housing, consumption and special family occasions as well. Most MFIs achieve sustainability by confirming that the service provided meets the demands of their borrowers. The operation may prove efficient enough to cover the interest rate and fees and repayment of the loans provided the borrowers are sufficiently motivated. There are two main types of loan delivery methods, which are the group and individual delivery methods. Individual credits are provided to individual clients based on their capacity for repayment. Group based lending is provided to small groups and all members of the group act as guarantors to one another.

Savings

Savings is a key product provided by MFIs. There are two types of savings offered to clients as voluntary savings and compulsory savings. Compulsory savings must be maintained by clients as a basic requirement for obtaining a loan. Most MFIs include compulsory savings as a condition for granting credit.
This is useful to make the client realize the amount of savings and to serve as a guarantee for the loan. It also demonstrates the ability of the management to maintain cash flow and enables the creation of an asset base for the borrower. Compulsory savings must be maintained until the full amount of the loan is repaid with interest. Voluntary savings differ from compulsory savings and not treated as an obligatory part of the loan requirements. It is provided to both clients and non-clients of the financial institution. Interest rate for voluntary savings is determined by the financial authority. The provision of voluntary savings services provides a mechanism to facilitate consumption smoothing for the borrowers and provide a regular fund mechanism for institutions.

Insurance

Insurance service is an experimental product provided by many MFIs. Group lending method includes the insurance service in many microfinance programs and every member of the group must contribute a specified percentage to the insurance fund. Group credit program is a successful example of insurance service. Grameen Bank required their clients to contribute one percent from their loan, which they used to resettle part of the loan. There is an increasing demand on insurance after expanding the microfinance industry, particularly for death or loss of assets of clients. Currently, majority of MFIs include various insurance schemes in accordance with client demand.

Credit Card and Smart Cards

MFIs offer various financial products with the recent developments in the microfinance industry. Credit and smart cards are being offered as some of the financial products of MFIs. MFIs allow clients to use credit when they need it. However, credit card is still a new product among microfinance clients and still there are not enough facilities for them to use it, besides which clients do not have the knowledge to use same for their financial needs. There are several advantages for both card holders and financial institutions in using credit cards; low operating costs, streamlined operations, and ongoing loan to clients to fulfill their needs. Smart card is similar to credit card but it cannot be used in general retail outlets. It has a memory chip that includes details about the credit balance available to borrowers.

Payment Service

Payment service in the traditional banks consists of check writing and check cashing based on their deposits (Caskey, 1994). Microfinance institutions offer payment service bundles with client savings. MFIs charge a low interest rate to cover the cost for the payment service. The payment service includes a remittance transfer service as well. To provide remittance transfer to different areas, MFIs have expanded their branch network. Payment service of MFIs is very rare in the current microfinance industry since they are very new and complicated. However, it is predicted that the demand for payment service will increase in the near future.

Social Intermediation Service

Successful micro financial institutions often provide combined social intermediation services. It allows marginalized clients to build stable business relationships with lenders. Social intermediation encourages social networking and cooperative efforts via local clubs, societies, temples, social associations, etc. It helps to realize the social and capital needs of people through sustainable financial intermediation services. There are two types of social intermediation services as group based social intermediation and individual social intermediation. Group based social intermediation is defined as the effort to build the institutional capacity of groups and invest in the human resources of their members (Le, p. 77). Group based intermediation can be seen in the Grameen lending models and credit unions.

Enterprise Development Services

Enterprise Development Services (non-financial services) of MFIs, which follow the integrated approach, offer several of these services. Some financial institutions call them non-financial services while others call them business development services. It is includes a wide range of non-financial services such as technology and marketing services, business development training, training on productions, sector analysis and intervention. Informal networks provide production training through apprenticeships, etc. (p. 79).

Social Services

Some of the microfinance institutions provide several social services apart from microfinance services, such as health, nutrition, education and literacy training programs. However, majority of MFIs do not provide these types of public services as they are often provided by government. Clients are able to get these benefits during the credit disbursement and resettlement period.

Ledgerwood (1999) has identified the two approaches followed by MFIs when they provide microfinance services as the minimalist approach and financial integrated approach. Majority of MFIs have been providing their financial services based on integrated approach during the last two decades. Ledgerwood (1999) listed the several microfinance services (elements) offered by MFIs as providing working capital, credit, savings, insurance, social intermediation service, business development service (non-financial services), and social service.
**STUDY FRAMEWORK AND MEASURES**

Majority of researchers were considering the minimalist approaches that included only credit, savings and insurance service. However, several other researchers have presented the theoretical framework based on the financially integrated approach in the recent past. Based on most cited key elements’ (Yeboah, 2017; Ali et al., 2014) the study used Micro credit, Micro Savings, Non-financial Service, Social intermediation Service and Insurance service as main key products of microfinance and Poverty Alleviation used as dependent variable.

The study used a questionnaire containing 65 items (Kumari 2020; Yeboah, 2017; Ali, 2014; Okibo & Makanga, 2014; Ochieng, 2012; Khan & Rahaman, 2007) used ten different items for measuring the impact of micro credit on the poor. This research also adopted the above ten items for measurements development. Micro Credit (MC) services included explanations on procedure for obtaining loans, bank requirements, loan information, group lending methods, interest rate, amount of loan, terms of loan, repayment conditions, flexible repayment schedules and usage of the loan. The second construct is Micro Savings (MS), which also consisted of ten items, namely, savings opportunities, information, procedure for opening savings accounts, compulsory monthly savings, interest rates, minimum deposit, for opening account, interest rate on compulsory savings, friendly and efficient service, group savings method, and usage of savings. Ali (2014), Yeboah (2017), Okibo and Makanga (2014), and Ochieng (2012) used eight items for measuring the impact of micro savings on poverty alleviation. Two items were introduced to Micro Savings measure and these ten items have been adapted to measurements development in this research. The third construct is Non-financial Services (NF), which include ten items including skill acquisition training, evaluation of training, geared beneficiaries training needs, training on available products and services, reliable and friendly non-financial services, client relationship services, business advisory services, education service, financial management service, and one item introduced in this research. The fourth construct is Social Intermediation Service (SI), which consists of ten items, such as participating in regular group meetings, group pressure for repayment, group monitoring system, leadership skills, accessing financing, social networking, group liability, financial literacy, training in book-keeping, and training in business management (Okibo & Makanga, 2014; Zahid, 2008). One item introduced is social intermediation service construct. The fifth construct is Micro Insurance Service (IN), which includes ten items; namely, various micro-insurance schemes, installments, investment in profitable but risky ventures, procedure for opening insurance, preventing health risks and property risks, adequacy of insurance, basic amount for opening accounts, number of benefit items, awareness of insurance, and time period of benefits. The final construct is poverty alleviation, which consists of 15 items, such as monthly income, economic empowerment, acquisition of properties, living standard, employment opportunity, business capital and profit margin, business management, financial security, household expenses, savings, financial literacy, environmental shocks, decision-making, educational benefits, and health benefits. Table 1 presents the instruments of the study.

<table>
<thead>
<tr>
<th>No</th>
<th>Measures and Constructs</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Micro Credit (MC)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01</td>
<td>MC1 The procedure for obtaining loans from Samurdhi bank is easier than from other banks</td>
<td>(Ali, 2013; Yeboah, 2017; Okibo &amp; Makanga, 2014)</td>
</tr>
<tr>
<td>02</td>
<td>MC2 The requirements used by bank are easy to meet</td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>MC3 The Samurdhi bank provides the necessary information about loan services</td>
<td>Ochieng, 2012; Ledgerwood (1999)</td>
</tr>
<tr>
<td>04</td>
<td>MC4 The group lending method is successful</td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>MC5 The rate of interest of micro credit is reasonable</td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>MC6 The loan amount is adequate</td>
<td></td>
</tr>
<tr>
<td>07</td>
<td>MC7 The number of loan turns is adequate</td>
<td></td>
</tr>
<tr>
<td>08</td>
<td>MC8 The loan repayment period is convenient</td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>MC9 The bank has a flexible repayment schedule</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>MC1 I think that usage of loan is successful</td>
<td>(Ali, 2013; Yeboah, 2017; Okibo &amp; Makanga, 2014; Ochieng, 2012)</td>
</tr>
<tr>
<td><strong>Micro Savings (MS)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>MS1 Samurdhi bank introduces various savings schemes for beneficiaries</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>MS2 I think banks provide the information about savings products</td>
<td>(Ali, 2013; Yeboah, 2017; Okibo &amp; Makanga, 2014)</td>
</tr>
</tbody>
</table>
I think that the procedure for opening a savings account is easier.

The amount of compulsory monthly savings is manageable.

The interest rate on savings is attractive.

The basic deposit for opening an account is convenient.

Samurdhi banks provide friendly and efficient service to customers.

Group savings method is successful.

The usage of voluntary savings products is successful.

**Non-Financial Services (NF)**

Samurdhi microfinance provides skill acquisition trainings.

The trainings are provided to beneficiaries geared towards increasing their knowledge on available products and services.

The bank has a structured method for evaluating training.

The training programs are geared towards identifying the beneficiaries’ training needs.

Samurdhi microfinance program provides a reliable and friendly service for non-financial services.

I think microfinance provides client relationship services.

Samurdhi microfinance provides business advisory services.

Samurdhi microfinance program provides education programs to clients.

I think Samurdhi Microfinance provides a good financial management service.

Samurdhi microfinance provides operational assistance to maintain a business.

**Social Intermediation Service (SI)**

Samurdhi Microfinance ensures participation in regular group meetings.

The group pressure encourages me to make repayments of the loan regularly.

The group monitoring system encourages me to use the loan efficiently.

Samurdhi microfinance facilitates the development of leadership skills.

Samurdhi group guarantee system has made it possible for me to access financing.

Samurdhi microfinance encourages linking and social networking.

Samurdhi microfinance ensures the development of group liability.

The group system develops one's knowledge on financial literacy.

The group system develops the training on book keeping.

The group system enhances the training on business management.

**Micro Insurance Service (IN)**

Samurdhi banks have various micro insurance schemes.

Installment on insurance is reasonable.

Micro insurance has enabled me to invest in profitable risky ventures.

The procedure for obtaining insurance services is easier.

Micro insurance service has enabled me to deal with health risks and property risks.
Poverty Alleviation (PA)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA1</td>
<td>Microfinance has increased the average monthly income</td>
</tr>
<tr>
<td>PA2</td>
<td>Microfinance has enhanced the economic empowerment</td>
</tr>
<tr>
<td>PA3</td>
<td>Microfinance has facilitated the acquisition of properties</td>
</tr>
<tr>
<td>PA4</td>
<td>Microfinance has improved the living standard of the family</td>
</tr>
<tr>
<td>PA5</td>
<td>Employment opportunities have increased</td>
</tr>
<tr>
<td>PA6</td>
<td>Microfinance has increased business capital and profit margin</td>
</tr>
<tr>
<td>PA7</td>
<td>Samurdhi microfinance has boosted confidence in business management</td>
</tr>
<tr>
<td>PA8</td>
<td>Microfinance has enhanced financial security</td>
</tr>
<tr>
<td>PA9</td>
<td>Microfinance has helped to meet household expenses</td>
</tr>
<tr>
<td>PA10</td>
<td>Microfinance has increased savings</td>
</tr>
<tr>
<td>PA11</td>
<td>Microfinance has increased financial literacy</td>
</tr>
<tr>
<td>PA12</td>
<td>Microfinance has decreased vulnerability to poverty and environmental shocks</td>
</tr>
<tr>
<td>PA13</td>
<td>Role in the decision-making process has increased</td>
</tr>
<tr>
<td>PA14</td>
<td>Microfinance has enhanced children’s education</td>
</tr>
<tr>
<td>PA15</td>
<td>Microfinance has helped meet the health needs of family</td>
</tr>
</tbody>
</table>

Source: Author Developed, 2019

PILOT STUDY AND DATA ANALYSIS

A pre-test was used for statistically testing a small sample of respondents before the main study. It is used to identify any issues in the questionnaire, such as unclear wording and inclusion of questions with similar meanings. From 600 borrowers 30 were picked randomly to represent 5 percent of the total as sample. The selection of 30 borrowers for the pilot study was made from the three districts. The collected data were used to test the reliability and validity of the items. If Cronbach’s alpha was higher than 0.7, the item was considered reliable and if it did not meet the requirement, the item needed to be modified suitably. The highest correlation of each item with at least one other item in the construct is between 0.3 and 0.9 and this is so for all items Wickramaratne (2019), Uma & Sekaran (2014). The requirement for the reliability of the study was met during the pilot test, and therefore all the items were retained for further analysis.

RELIABILITY AND VALIDITY OF THE INSTRUMENT

Validity of the items’ measurements must be established before analyzing the data. There are several types of validity tests for testing the goodness of the measurement. Content validity needs to be ensured before testing the model and the theory, in order to understand the items’ content or meaning (Hair et al., 2013). It is a subjective as well as systematic evaluation of the content of the instrument that checks to see whether it includes a sufficient and representative set of items to measure the concept. To achieve the content validity of the measure, four steps were followed to develop the questionnaire with the advice of several experts. The questionnaire development process was followed by valid translation using a rigorous translation method (Parham, LaCroix, Johnson, Mailloux, & Roley, 1997). The study asked the Samurdhi borrowers to explain their perception of microfinance by responding to 65 questions listed in the Likert scale type questionnaire. Questions were categorized into six parts representing the elements of microfinance and poverty alleviation. Initial draft of the questionnaire was prepared in English, but the Sinhala version was distributed to the borrowers of Samurdhi microfinance program in Sri Lanka.

Cultural translation method was followed as the initial step for generating a valid translation (Su & Parham, 2002; Werner & Campbell, 1970). To accomplish this effectively, two bilingual Sri Lankans with microfinance expertise revised the initial translation to ensure that the items originally written in English were culturally compatible to Sri Lanka. After this cultural translation step, two bilingual translators and two Sinhalese experts back translated it to English. As the next step, this was back translated to Sinhala to correct errors in the translation process. This Sinhala version was distributed to five borrowers of microfinance in Sri Lanka and corrections were made based on the borrowers’ responses about the clarity and relevance of the items. This helped to refine the
questionnaire further. This final version was used to conduct the pilot study of the research (Su & Parham, 2002; Werner & Campbell, 1970).

“The reliability of a measure indicates the extent to which it is without error” (Uma & Sekaran, 2014, p. 161). This study conducted a pilot survey before the main survey and it utilized content reliability for testing the applicability of the questionnaire in the Sri Lankan context. To measure the reliability of each item consisting of different microfinance elements such as Micro credit, Micro savings, Non-financial services, Social intermediation service, Insurance service and Poverty alleviation, Cronbach’s Alpha was used. There were 65 items in the six constructs, each rated on a five-point Likert scale marked from 1 to 5. All of the items used a scale ranging from strongly disagree (1) to strongly agree (5) and all had Cronbach’s Alpha of more than 0.7. However, there is no strict rule that Cronbach’s Alpha should be higher than 0.7 to provide a good instrument (Comer & Kelly, 1982). Although it is generally agreed among researchers that Cronbach’s Alpha should be higher than 0.7, the items can be said to measure what they were intended to measure. Table 3.5 presents the Cronbach’s alpha values of the pilot test of the study.

The contracts of the micro credit consists 10 measures, each measured on a Likert scale 1 to 5. Cronbach’s Alpha is 0.945, which is more than 0.7. Thus, the measures can be said measure what they were intended to. The mean values for all the items, are more than 3. All the standard deviations are nonzero, indicating variability in the responses. The inter item correlation with in the range of 0.513 to 0.883, which is between 0.3 and 0.9. The requirement for the reliability of the study of MC construct was met during the pilot test. Therefore, all 10 items can be accepted as reliable measures of micro credit. Furthermore, exploratory factor analysis conducted to confirm the factor in primarily level. KMO value for Factor Matrix confirm the correlation values resulted in KMO value 0.873 for the construct of MC; factor matrix values were within range of .748 to .906 and 67.7% total variance explained.

10 measures were represented the constructs of micro savings. The mean value of this construct was more than 3 and Cronbach’s Alpha is 0.925, which is more than 0.7. Reliability test revealed that inter item correlation values were within .338 to .696. Therefore, all the measures suitable for represent the MS construct. Exploratory factor analysis confirmed the correlation values with KMO measure of 0.819. Factor matrix for all the factors of MS were within the range of .631 to .851 and total variance explained 61.7%. Thus, all the factors suitable to represent the micro saving construct.

Nonfinancial Service (NF) consists 10 factors; Cronbach’s Alpha is 0.958, which is more than 0.7. Thus, the measures can be said measure what they were intended to. The mean value for all the items, is .3.7 more than 3. All the standard deviations are nonzero, indicating variability in the responses. The inter item correlation with in the range of 0.575 to 0.830. Since met the reliability requirement for constructs of NF all 10 items can be accepted as reliable items to represent dimension of micro cred. Furthermore, exploratory factor analysis conducted to confirm the factor in primarily level. Factor Matrix confirm the correlation values resulted in KMO value .913 for the construct of NF; factor matrix values were within range of 0.629 to 0.848 and 74.8% total variance explained. 10 measures were represented the constructs of nonfinancial service.10 measures were represent in construct of Social Intermediation Service (SI). Reliability analysis was conducted for this construct; Cronbach’s Alpha is 0.956 and highest inter item correlation was .848 and lowest correlation was .336 which is within the required range. KMO value was 0.889 factor matrix values were within range of 0.645 to 0.918 with 70.9% total variance explained. Reliability test and factor analysis confirm suitability of the factors in the construct. Hence 10 items in the construct of Social intermediation retain for further analysis.10 measures were represented the constructs of Insurance service (IN). The mean value of this construct was more than 3 and Cronbach’s Alpha is 0.933, which is more than 0.7. Reliability test revealed that inter item correlation values were within .400 to .801. Therefore, all the measures suitable for represent the IN construct. Exploratory factor analysis confirmed the correlation values with KMO measure of 0.887, Factor matrix for all the factors of MS were within the range of .760 to .900 and total variance explained 66.7%. Thus, all the factors suitable to represent the micro saving construct. As dependent variable, Poverty Alleviation (PA) consists 15 items. Reliability and factor analysis were conducted for identifying suitable measures in this construct as well. Reliability test confirm that inter-item correlation value within the acceptable range, which is range of .344 to .862 with Cronbach’s Alpha value is 0.947. Exploratory factor analysis conducted to confirm the factor in dependent variable. Factor Matrix confirm factor loading for all the items were acceptable range, which is range of .557 to .823 exploratory factor analysis conducted to confirm the factor in primarily level. Factor Matrix confirm the correlation values resulted in KMO value 0.892 for the construct of NF; factor matrix values were within range of 0.629 to 0.848 and 60% total variance explained. Therefor 15 measures were represented well in the constructs of poverty alleviation. Table 2 presents the summary reliability and exploratory factor analysis of pilot test of the study.
The table 2 presents the values of reliability and exploratory factor analysis of the pilot test. Comprehensive values of Cronbach’s Alpha and KMO values were obtained for all six constructs in the study. All the constructs were obtained more than 60% total variance. Reliability test confirm that the suitability of the items to representing the instrument.

### Table 2 Summary of the Reliability and Exploratory factor analysis of the pilot test

<table>
<thead>
<tr>
<th>Construct</th>
<th>No of Measures</th>
<th>Cronbach’s Alpha value</th>
<th>KMO value</th>
<th>Bartlett’s sphericity (p-value)</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro Credit (MC)</td>
<td>10</td>
<td>.945</td>
<td>.873</td>
<td>0.000</td>
<td>67</td>
</tr>
<tr>
<td>Micro Savings (MS)</td>
<td>10</td>
<td>.925</td>
<td>.819</td>
<td>0.000</td>
<td>61</td>
</tr>
<tr>
<td>Nonfinancial Service (NF)</td>
<td>10</td>
<td>.958</td>
<td>.913</td>
<td>0.000</td>
<td>74</td>
</tr>
<tr>
<td>Social Intermediation Service (SI)</td>
<td>10</td>
<td>.956</td>
<td>.889</td>
<td>0.000</td>
<td>70</td>
</tr>
<tr>
<td>Insurance Service (IN)</td>
<td>10</td>
<td>.933</td>
<td>.887</td>
<td>0.000</td>
<td>66</td>
</tr>
<tr>
<td>Poverty Alleviation (PA)</td>
<td>15</td>
<td>.947</td>
<td>.892</td>
<td>0.000</td>
<td>60</td>
</tr>
</tbody>
</table>

### Conclusion and Future Research Direction

This paper intend to presents key determinants of microfinance. This study achieved the objective of investigating the determinants of microfinance on poverty alleviation. The study consists 65 measures in all the six constructs. Many researchers have introduced different items for microfinance services and poverty alleviation and 61 items were adopted for this the study and 4 items newly introduced in this research. Reliability analysis and exploratory factor analysis were conducted to identify the validity and reliability of the measures in primary stage. These test results revealed that the suitability of all the items to represent the each constructs. This study based on a pilot study data with 30 responses to test the reliability of the measures in the instrument. Future research focus detailed analysis with the large sample and consist the moderation effect of demographic factor to the microfinance on poverty.

### References


