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The Mediating Role of Group Lending between Poverty and Microfinance

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ABSTRACT

Microfinance has become the main tool of poverty alleviation in the 21st century. The microfinance program in different countries has different lending approaches. The most common in the world is group lending and individual lending. Each lending procedure has its own merits and demerits. The present research is about the evaluation of the mediating role of group lending between microfinance and poverty. In this regard, the study was carried out in district Chitral. The data was collected from two local support organizations using a structured questionnaire. For the purpose of analysis structural equation modeling was used and Smart PLS was used as an analysis tool. The finding of the results shows that the group leaders have a positive role in the in mediating the relationship between microfinance and poverty and in reducing the moral hazards and proper utilization of funds.

Keywords: Microfinance, Group Lending, Individual Lending, Structural Equation Modelling

1. INTRODUCTION

Microfinance has become a powerful tool in the 21st century especially in developing countries to alleviate poverty (Lumianski, 2019). From the last three decades, the microfinance industry has not only expended but also has become the main tool of providing credit to the poor masses (Ledgerwood & Gibson, 2013). The UN declaring of 2005 as a year of microfinance and awarding Noble prize to Muhammed Youns in 2006 for the Graeem Bank, the popularity of microfinance increased around the globe (Miled

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& Rejeb, 2015). The popularity can also be seen from the figures that in 1997, 13 million customers counted worldwide and by 2013, the total had hit 211 million (Morduch & Cull, 2017; State of the Summit Report, 2015). Poverty has become a core issue in the socio-economic development of every nation (Jaffery & Mamoon, 2015) and with the passage of time various initiatives have been undertaken worldwide to combat poverty. In this regard, United Nations also initiated the Sustainable Development Goals in order to reduce the poverty level all around the globe till 2030 (United Nations, 2017) and to achieve the goal, the United Nation considers microfinance as a unique tool and an easy access to the financial needs of the poor (Sfhea et al., 2017). According to the founder of Grameem bank, Yunus (2016), in most developing countries the basic cause of poverty is the lack finical access to the poor community and through microfinance, the financial access of the poor can be improved.

2. LITERATURE REVIEW

Microfinance organization have different procedures of lending loan to the poor people (Nordin et al., 2019), ranging from village bank, individual lending and group lending but the common approaches of lending money to the poor people are group and individual lending (Xu et al., 2019) and in most of the developing nations the microfinance organization prefer the group lending approach as it creates a substitute for asset collateral (Mosley, 1986; Udry, 1990). In addition, group lending approach mitigates moral hazard, adverse selection and debt enforcement problems (Besley & Coate, 1995; Morduch, 1999; Ghatak, 1999; Ahlin & Waters, 2011; Postelnicu et al., 2014; Yiwen & Guangwen, 2016; Simmons & Tantisantiwong, 2018). Moreover, in comparison to the individual lending approach, the loans are granted at lower interest rates in group lending design (Stiglitz, 1990; Besley & Coate, 1995; Ghatak & Guinnane, 1999; Armendariz de Aghion, 1999; Ghatak, 2000; Karlan, 2005).

Previous studies mostly have focused more on the effectiveness of the microfinance on poverty alleviations (Khavul et al., 2013; Vaessen et al., 2014; Roodman & Morduch, 2014; Banerjee et al., 2015; Chliova et al., 2015; Attanasio et al., 2015; Crépon et al., 2015; Bandiera et al., 2016; McKenzie, 2016; Cai et al., 2016; Zhang,

2017). Limited researches have been done on the delivery mechanisms of microfinance organizations such as individual lending or group lending (Besley & Coate, 1995, Stiglitz, 1990; Ahlin & Townsend, 2007; Giné et al., 2010; Ahlin, 2018; Modisagae, & Ackermann, 2018). Moreover, their exit contradiction among the existing studies about the significance impact of the lending approaches as some are in favor and consider the lending approaches as positive effects on the loan default and increase in the loan repayment rate (Stiglitz & Weiss, 1981; Ghatak & Guinnane, 1999; Al-Azzam & Mimouni, 2012; Carpena et al., 2013; Giné & Karlan, 2014; Mahmud, 2015; Xing & Xue, 2019). While in contrary there are some scholars that have reported negative impact of the microfinance organizations lending approaches on poverty alleviation (Waelde, 2011; Al-Azzam et al., 2012; Nghiem et al., 2012; Fischer, 2013; Gine and Karlan, 2014; Attanasio et al., 2015; Banerjee et al., 2015; De Quidt et al., 2017; Omolo, 2018; Nkwocha, et al., 2019). In light of the above inconclusive and limited research, the current research seeks to find the mediation effect of group lending on poverty in the Northern Areas of Pakistan.

2.1. Hypothesis Development

Group lending plays an important role in the effectiveness of microfinance on poverty alleviation (Khan & Rahaman, 2007). The group-lending approach helps to select such individuals that lack financial resources and have the ability to use the loan productively (Schurmann & Johnston 2009). In addition, previous studies confirm group lending approach as a strong tool of delivering loans to the deserving masses in developing countries (Khandker and Pitt, 1998; Khandker, 2005; Kaboski and Townsend 2005; Karlan and Zinman 2011; Annim and Alnaa, 2013; Attanasio et al., 2015). Dadson et al. (2012) study in Ghana reveals a positive impact on the group lending on respondent's income as compared to the control group. The same results were also observed by Annim and Alnaa (2013). In Indonesia, Takahashi et al. (2010) investigated the impact of group lending which evidenced significant impacts on respondents' expenditures. In addition, Al-Mamun et al. (2012) conducted research in Malaysia on group lending and found a significant impact on poverty reduction. In the same line, Crepon et al. (2011) studied the group lending approach in rural Morocco and observed

that the group-based microfinance organizations had more impact on poverty as compared to other lending methodologies. Thus, the following hypothesis is developed.

H₁: Group lending mediates the relationship between microfinance and poverty.

3. RESEARCH METHODOLOGY

Data were collected from two local NGOs in Northern Areas of Pakistan. The Sample mostly consisted of females 60 % and 30% male. The responses from the beneficiaries were collected through a 5 scale Likert questionnaire. This study employed Partial Least Squares (PLS) path modeling to test the hypothesis. Partial least squares structural equation modeling (PLS-SEM) is a variance-based structural equation modeling. This technique is used to model latent variables, specifically for composites, and the relationships between them (Henseler, 2017)

3.1. Results of the Measurement Models

Table 1 depicts the measurement models. Indicator loadings are in the range of 0.4 to .7 which satisfy the criteria (Hair et al., 2018; Ringle, et al., 2018). Likewise, the composite reliability is also met as all the latent values have a value greater than .70 (Fornell & Larcker, 1981) which shows that latent variables are internally consistent. In addition, the table also shows the average variance extracted from the variables has a value greater than the threshold value of .50 (Hair et al., 2019)

Table 1: Loadings, composite Reliability, and Average Variance Extracted				
Construct	Loading	CR	AVE	Convergent Validity
Assets	0.612-0.919	0.905	0.659	YES
Education	0.582-0.894	0.853	0.598	YES
Effective	0.579-0.888	0.827	0.554	YES
Employment	0.573-0.946	0.911	0.681	YES
Expenditure	0.585-0.934	0.939	0.614	YES
Empowerment	0.691-0.879	0.903	0.610	YES
Health	0.618-0.970	0.943	0.773	YES
Income	0.794-0.845	0.933	0.665	YES
Interest	0.609-0.908	0.906	0.662	YES
Peer pressure	0.69-0.887	0.906	0.659	YES
Saving	0.878-0.956	0.964	0.841	YES
Social Ties	0.528-0.924	0.891	0.681	YES
Supervision	0.653-0.922	0.888	0.618	YES
Trust	0.866-0.938	0.945	0.811	YES
Loan Size	0.849-0.961	0.965	0.82	YES

3.2. Discriminant Validity

Technically defined, Discriminant Validity is the extent to which a latent variable is different from other latent variables (Hair et al., 2014). The discriminant validity is examined through the Heterotrait-Monotrait ratio of correlations which recommends that values of the latent should not exceed .090 (Henseler et al., 2015). Table 2 depicts the discriminant validity test.

Table 2: Discriminant Validity															
Variables	Asset	Edu	Effect	EmPLY	Empov	Exp	Health	incm	Interest	Loan Sz	Pressure	Sav	Superv	Trust	Social
Asset															
Edu	0.839														
Effect	0.607	0.472													
Employ	0.637	0.877	0.334												
Empov	0.618	0.744	0.253	0.693											
Exp	0.888	0.792	0.471	0.734	0.658										
Health	0.845	0.821	0.371	0.809	0.688	0.795									
IncM	0.456	0.293	0.157	0.191	0.441	0.416	0.39								
Interest	0.531	0.322	0.886	0.267	0.15	0.396	0.337	0.306							
Loan Size	0.461	0.306	0.734	0.231	0.132	0.259	0.229	0.188	0.897						
Pressure	0.812	0.543	0.514	0.513	0.404	0.737	0.683	0.358	0.509	0.336					
Sav	0.792	0.655	0.351	0.541	0.516	0.721	0.716	0.417	0.491	0.401	0.668				
Superv	0.567	0.445	0.746	0.26	0.191	0.429	0.331	0.344	0.821	0.866	0.481	0.438			
Trust	0.677	0.526	0.37	0.536	0.469	0.612	0.705	0.231	0.275	0.19	0.877	0.602	0.219		
social	0.653	0.614	0.423	0.504	0.414	0.575	0.58	0.213	0.319	0.176	0.852	0.58	0.234	0.749	

3.3. Results of Structural Model

The results of the structural model are presented in Table 3. The table shows the structural relationships of the variables examined on the basis of the hypotheses.

Table 3: Path Coefficients				
	Beta	SD	T-Statistics	P-Value
Microfinance -> Group Lending	0.769	0.023	33.836	0
Group Lending -> Poverty	0.683	0.074	9.181	0
Microfinance -> Poverty	0.095	0.079	1.194	0.233

Figure 1. Structural model: Group lending as a mediating role between microfinance and poverty

The results of the structural model show full mediation as per the criteria of Baron and Kenny (1986). In order to have a full mediation, there should be no significant relationship between the independent variable and the dependent variable in the presence of the mediator variable. Thus, the current results are in the same line with the Baron and Kenny theory where a significant and positive relationship is observed between microfinance and group lending, $b = 0.769$, t value = 3.973. Furthermore, a significant positive link between group lending and poverty ($b = 0.683$, t value = 9.181, p -value = .000). In addition, the Sobel test was carried out to further ascertain the strength of the mediating effect and the results of the Sobel test also confirm the significant mediating effect ($t=8.96$, $P<0.00$)

4. CONCLUSION

The study investigated the mediating role of group lending on microfinance and poverty. The results of the structural equation model revealed that group lending has a significant positive impact on poverty and microfinance. Moreover, the lending approach plays an important role in the distribution of funds to the poor and preventing from the

moral hazard, adverse selection problems strong. In addition, the social ties among the beneficiaries help in terms of screening, monitoring, and enforcement of payment of the loan on time. The study findings are consistent with the past literature (Kaboski & Townsend 2005; Karlan & Zinman 2011; Annim & Alnaa, 2013; Postelnicu et al., 2014; Yiwen & Guangwen, 2016). The poverty is measured on the base of socio and economic indicators while the microfinance indicators were loan size, interest and supervision. The overall result shows a positive impact on group lending on poverty.

4.1. Future Direction

Comprehensive research is a need in terms of the approaches so that one can adopt the best lending approach in the future for their microfinance projects. Furthermore, one should investigate the factors of defaulting by collateral lending groups in microfinance.

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