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The Moderating Role of Group Lending on the Relationship between Microfinance and Poverty in Pakistan

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Abstract

This paper aims to investigate the moderating effect of group lending on the relationship between poverty and non-governmental (NGO) microfinance in Northern Pakistan, Khyber Pukhtun Khawa. Quantitative primary data is collected from 297 borrowers of NGOs microfinance. The partial least squares-structural equation modelling moderating role of group lending between the microfinance and poverty is estimated through structural equation model and for the purpose of calculation Smart PLS is used. The results show that the group lending has significant impact on relationship between poverty and microfinance and played a major role in mitigating moral hazard among the respondents. The finding suggests that the group lending approach should be adopted in the loan distribution especially in rural areas.

Keywords: Microfinance, Poverty, Moderator, Group Lending, Pakistan

Introduction

Poverty has been a great challenging problem for the whole world, an estimated 766 million people, or 10.7 percent of the world's population, lived in extreme poverty in 2013 (World Bank, 2017). Among the of poverty causes, one cause is the lack of credit or capital due to which poor remain in vicious circle of poverty especially in the developing countries (Coleman, 1999). In 1970s microfinance emerged as an effective tool in developing countries in reducing poverty through granting loans to the poor masses that were ignored by commercial banks and were bound to borrow from local money lenders at high interest rates(Rajbanshi et al., 2015).Since then microfinance has helped thousands of people to cross the poverty line (Youssry et al., 2015) and have people to break the vicious cycle of poverty (Boachie, 2016) specially in developing countries it has been demonstrated great success in poverty relief to the poor masses (Hettihewa & Wright, 2010). Although microfinance has existed since eighteenth century (Armendáriz &

Morduch, 2010) but it became more popular as Mohammad Yunus, a lecturer of economics at Chittagong University initiated the Grameen Bank and later on received Nobel Peace Prize in 2006 for his contribution to human kind in form of loan distribution (Abdul-Hadi & Kamaluddin, 2015; Hossain et al., 2016). According to Yunus (2016), microfinance would transform customer's businesses by providing capital; that would increase borrowers' earnings and ultimately eliminate poverty. Since then, many microfinance institutes (MFIs) were established in the third world, extending loans with moderate interest rates to the poor's who lack collaterals to secure their loans (Pham & Shen, 2017).

As time passed, microfinance was perceived as the answer to the world's poverty problem (Severino, 2009). The world leaders are thrilled around the globe and uptake of microfinance boomed amongst institutions and non-government organizations (NGOs) with billions of development funds coming through to eradicate poverty (Hermes & Lensink, 2011). So much was the enthusiasm and confidence present in the scheme that the United Nations (UN) and the World Bank declared 2005 as the year of microfinance (Abdul-Hadi & Kamaluddin, 2015). Today, Microfinance has become very important in global poverty reduction debates and is an important tool employed by governments, banks, and non-governmental organizations (NGOs) to address the challenges of poverty (Chen & Ravallion, 2013). This has allowed the microfinance industry to grow rapidly over the past three decades. for example, from 2000 to 2010, the portfolio of outstanding microloans increased from US$2.2 billion to US$80 billion, while the number of clients dramatically increased from 11 million to 92 million (Roodman, 2013).

Past studies in the research area conform that microfinance has not only help in expending the business but also helped the poor in establishing new business (Banerjee et al., 2015). Similarly, some studies conform positive impact on consumption (Attanasio et al., 2015), likewise Crepon et al (2015) find positive impacts on self-employment and inventories.

Approaches of Lending Money

Most of the microfinance organizations use two approaches to lend money to the poor's. Individual lending, group lending (Kodongoa & Kendi, 2013). Under individual microfinance loans, lenders usually lend money to single borrowers via standardized contracts, where the borrowers assume the entire liability for repayment individual ending, loan officers bear principle responsibility for loan decisions; they screen, and monitor their clients as well as come up with mechanisms of enforcing repayment (Dellien et al.2005) whereas under group lending models, loans are distributed via groups of individual borrowers. The group members are responsible for screening, monitoring and repayment of loan (Armendáriz & Morduch, 2010). The idea of group lending was introduced by Muhammad Yunus (Grameen Bank) in Bangladesh and now it's replicated by a number of microfinance institutions in different countries of the world (Haldar & Stiglitz, 2016)

In 1999 a survey of 1,500 microfinance organization was carried out by Lapenu and Zeller (2001) and the results reveal that 68 % of the microfinance organizations used group lending approach for lending money to the poor masses. The basic reason behind the group lending approach is

its lower operating costs from more due diligence and monitoring, and therefore a greater likelihood of loan repayment by shifting the bulk of monitoring costs from lenders to groups (Chen et al, 2017) secondly the group members shear a common social circle and are of the same neighborhood (Barboza & Trejos, 2009). Group members help the microfinance institutions in screening and mitigating moral hazards and also the problem of adverse selection (Varian, 1990). The members of the group also advise the borrowers not to make investment in risky projects (Stiglitz, 1990). Due to the social cohesion among the group members and belonging to the same village, the borrowers manage to repay in time so that they are saved from the social sanction of their peer group (Besley & Coate, 1995).In short, group lending is a best way of lending loan as it has no monitoring and service cost as compared commercial lenders and the social cohesion among the groups, alleviates the problem of moral hazard and adverse selection and grants the loan to the deserve person (Wydick, 1999).

Microfinance organizations primary goal is to enhance the poor welfare and alleviate their poverty through micro loan. Most of the microfinance institution relies on high repayment rates as it is the clear indication that the poor masses are utilizing the loan for income generating activities and they have managed to pull themselves out of poverty, and this goal is mostly achieved through group lending (Morduch & Haley, 2002). Though, the hypothesis that Group lending accomplishes this objective of reducing the poverty on the base of loan has not been tested adequately. The main purpose of this paper is to evaluate the moderating roe of group lending on the relationship between microfinance and poverty.

The main reason of selecting group lending as moderator because it targets the very poor in society who are unable to get loan from the formal intuitions either unable to get loan from individual lending organizations due to lack of physical collateral and the only option left is to borrow through group lenders. The main interest of the study is to understand where the group members help the microfinance institutions in reducing the poverty.

Literature Review

The existing literature explains the past views of the research scholars about group lending and microfinance.

Past studies (Stiglitz, 1990; Besley and Coate, 1995; Ghatak, 1999) conforms that group-based lending is best approach for lending loan as alleviates the problem of moral hazard and adverse selection problems. Likewise, Ghatak (2002) analysed the past empirical studies based on microfinance organization performance. The author concluded group lending based microfinance programs have better repayment rates than those using individual liability which is an indication of proper utilization of loan and an increase in warfare of the beneficiaries. Similar results were confirmed by Wenner, 1995 and Wydick, 1997 that microfinance programs that have adopted group lending approach have better outcomes in repayment rates and improvement in the life standard of the respondents. Similarly, Gomez and Santor (2001) conducted a research in Canada relating to group lending by taking 612 group respondents and 52 individual respondents. Wydick (1999) studied the impact of peer pressure, social ties and peer monitoring

on loan borrowers and concluded that peer monitoring has impact on the performance of the borrower. Madajewicz (2011) argue that group lending alleviates the problem of moral hazard as one of them shifts from safe to risky project, the probability that their partner will have to pay the liability rises. This gives group members the incentive to monitor reach other and utilize the loan in safe projects

Hypothesis Developing

Moderating Variable Group Lending

Group lending plays a major role in helping the microfinance intuitions in form of monitoring and screening the respondents. They put less pressure on both lender and the receiver and have strong cohesion among members.

A literature on the microfinance institutions that have adopted group lending helps the institution in preventing moral hazard (Stiglitz, 1990) and adverse selection (Ghatak, 1999). According to Besley and Coates (1995) the effective peer monitoring and peer pressure of group lending also helps in enforce of repayments and better utilization of loan. High repayment rates of the borrowers conform that the loan is used for the intended purpose and the people are breaking the vicious circle of poverty (Armendariz & Morduch, 2000). Thus, this study hypothesis that:

H1: Group lending moderates the relationship between microfinance and poverty

Theory of Social Capital

Theory of social capital focuses on meetings and on social interaction among the groups, or society members that will enhance coordination among them for the achievement of mutual goals (Putnam, 1995).

The group of borrowers of an organization has social capital as each group has its targeted objectives. Therefore, based on the argument, it is anticipated that, the microfinance and social capital will lead to significant and positive effect poverty.

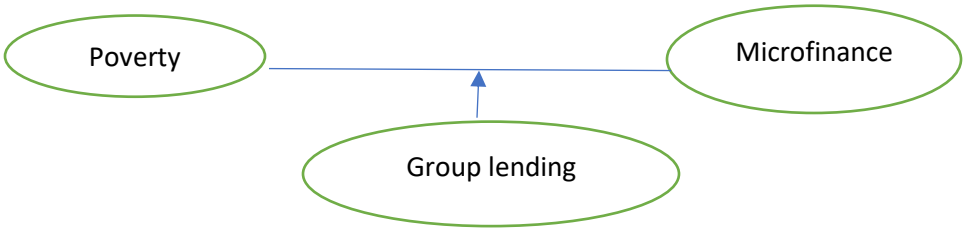

Figure 1: Conceptual Framework

The conceptual framework shows the impact of microfinance on poverty and the moderating role of group lending (social capital) on the relationship between microfinance and poverty. It is

postulated that, microfinance loan improves the financial ability of the poor with low income (Serrano-Cinca et al., 2016) and enhance their welfare (Churchill, 2015).

The proposed framework indicates the social capital clearly supports the combination of variables employed in this research. In a nutshell, this paper assessed the moderating role of group lending on the relationship of microfinance and poverty and in this regard the proposed model recognizes the contribution of social capital factor in the northern area environment towards the poverty reduction via microfinance activities.

Research Methodology

A survey was conducted of 297 household's Northern area, Khyber Pukhtun Khawa. The 297 hundred households list was obtained from two NGOS name Biyar Local Support Organization, and Karimabad Area Development Organization supported by the AKRSP. These NGOs have been financing the underprivileged masses since 2009 and all NGOS follow group lending methodology. Data was collected from the month of May, 2017, August, 2017 respectively. Structural equation modelling was used to evaluate the moderating effect of group lending on microfinance and poverty.

Assessment of Measurement Model (Outer Model)

In PLS-SEM, there are also two stages for assessing a research model; the measurement model and the structural model (Henseler et al., 2009; Hair et al., 2012). Measurement model is structural relationship between latent variables and their items indicators (Tabachnick & Fidell, 2007). Measurement models assessment consists of four steps internal consistency reliability, convergent and discriminant validity and indicators reliability (Henseler, et al. 2009). The indicator reliability is obtained through the loading of the items, calculated by using standard PLS algorism (Figure 1) in Smart PLS software 3.0 (Ringle et al., 2014). The threshold for individual item loading should be greater than 0.70 (Hair et al., 2014) that any indicator with outer loading less than 0.7 should be removed from the measurement model. Based on the criteria mentioned above the poorly loaded items were deleted. Table 1 depicts the entire retained items and their respective loadings. It should be noted that item all items are above the criteria i.e. .7. Similarly, the internal consistency reliability is assessed using composite reliability, Hair et al. (2011) suggests based on Nunnally and Bernstein (1994) that the composite reliability value should be greater than 0.70. The composite reliability for all the latent construct in this study was calculated in Smart PLS standard algorism and the result indicated that all the latent constructs have met and exceeded the minimum threshold value of 0.70 (Hair et al., 2011) as shown in Table 1. Likewise, the convergent validity is a degree of agreement among multiple items in measuring a particular concept (Hair et al., 2014). Average Variance Extracted AVE was used to evaluate the convergent validity based on Hair et al. (2010) criteria. Result of the PLS algorism reveals that AVE values for all the constructs have met and exceeded the minimum threshold value of 0.50 as shown in Table 1. The last criteria of measurement model are the Discriminant validity which shows how indicators actually represent a construct and how they are different from other construct (Hair et al., 2014). The discriminant validity was assessed based on heterotrait-

monotrait ratio of correlations (HTMT) criteria that is the HTMT value should be less than 0.90 (Hair et al., 2017) as shown in Table 2.

Table 1: Loadings, Composite Reliability and Average Variance Extracted

Indicators	indicators	**Standardized Loadings**	**Composite Reliability**	**Average Variance Extracted (AVE)**
Poverty	Poverty			
Assets	Assets2	0.894	0.875	0.585
	Assets3	0.656		
	Assets4	0.713		
	Assets5	0.752		
	Assets6	0.789		
Education	Edu2	0.916	0.960	0.889
	Edu3	0.949		
	Edu4	0.963		
Employment	Employ1	0.867	0.959	0.824
	Employ2	0.933		
	Employ3	0.959		
	Employ4	0.858		
	Employ5	0.918		
Empowerment	Empov5	0.948	0.905	0.660
	Empov6	0.943		
	Empov7	0.734		
	Empov8	0.732		
	Empovs3	0.661		
Expenditure	Expd1	0.627	0.943	0.653
	Expd10	0.871		
	Expd11	0.772		
	Expd12	0.709		
	Expd2	0.632		
	Expd4	0.866		
	Expd5	0.879		
	Expd6	0.923		
	Expd7	0.924		
Health	Health2	0.951	0.976	0.889
	Health3	0.984		

	Health4	0.947		
	Health5	0.974		
	Health7	0.855		
Income	Inc1	0.913	0.960	0.776
	Inc4	0.843		
	Inc5	0.868		
	Inc6	0.851		
	Inc7	0.916		
	Ince2	0.885		
	Ince3	0.888		
Interest	Interest2	0.509	0.877	0.650
	Interest3	0.805		
	Interest7	0.905		
	Interest8	0.935		
loan size	loan sz1	0.962	0.978	0.879
	loan sz2	0.843		
	loan sz3	0.949		
	loan sz4	0.94		
	loan sz8	0.968		
	loan sz9	0.957		
Supervision	Supv2	0.806	0.898	0.561
	Supv3	0.877		
	Supv4	0.791		
	Supv5	0.793		
	Supv6	0.658		
	Supv7	0.719		
	Supv8	0.551		
Peer pressure	Perpressure4	0.91	0.963	0.897
	Perpressure5	0.969		
	Perpressure6	0.962		
Saving	Sav1	0.941	0.957	0.787
	Sav2	0.849		
	Sav3	0.938		
	Sav4	0.959		
	Sav5	0.892		
Social ties	Social ties1	0.817	0.954	0.84
	Social ties2	0.954		
	Social ties3	0.93		
	Social ties4	0.958		
Effectiveness	Effect2	0.618	0.933	0.782

	Effect4	0.951		
	Effect5	0.961		
	Effect6	0.959		
Trust	Trust3	0.933	0.954	0.839
	Trust4	0.953		
	Trust5	0.953		
	Trust6	0.819		

	Assets	Education	Effectiveness	Employment	Empowerment	Expenditure	Health	Income	Loan size	Pressure	Saving	Social Ties	Supervision	Trust	interest
Assets															
Education	0.799														
Effectiveness	0.428	0.549													
Employment	0.87	0.74	0.433												
Empowerment	0.862	0.733	0.469	0.718											
Expenditure	0.86	0.674	0.364	0.73	0.814										
Health	0.864	0.717	0.384	0.877	0.792	0.706									
Income	0.494	0.332	0.097	0.348	0.717	0.58	0.388								
Loan size	0.283	0.407	0.271	0.214	0.225	0.159	0.169	0.111							
Pressure	0.56	0.392	0.443	0.47	0.58	0.629	0.479	0.434	0.095						
Saving	0.543	0.581	0.541	0.517	0.542	0.526	0.47	0.299	0.384	0.307					
Social Ties	0.33	0.175	0.63	0.253	0.279	0.257	0.205	0.095	0.131	0.549	0.218				
Supervision	0.557	0.389	0.242	0.352	0.462	0.495	0.308	0.458	0.387	0.541	0.313	0.161			
Trust	0.184	0.143	0.172	0.33	0.195	0.142	0.378	0.148	0.143	0.079	0.098	0.274	0.231		
interest	0.43	0.471	0.525	0.366	0.541	0.476	0.327	0.488	0.719	0.336	0.611	0.24	0.413	0.269	

Table 2: HTMT criteria for Discriminant Validity

Assessment of Structural model

Table 3 presents the results of the hypothesis testing. The statistical results showed that the entire three direct hypotheses proposed and tested were supported. Results show that moderating impact of group lending on poverty and microfinance is significant and positive. Interestingly, the direct relationship of group lending and microfinance with poverty is also significant and positive. Thus the results in the Table 3 indicate that the group lending moderates the relationship microfinance and poverty. The Figure 2 shows the structural model.

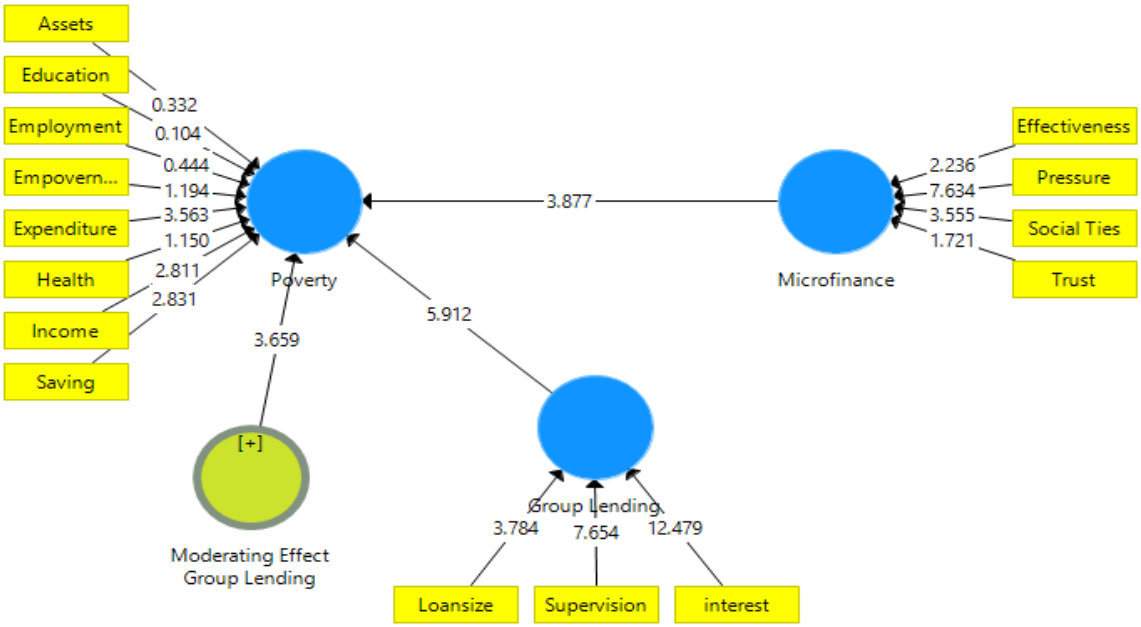

Figure 2: Structural Model

Table 3: Path Coefficients

Hypothesis	Relationships	Beta	Stand Error	t-value	Decision
H1	Moderating Effect Group Lending -> Poverty	0.108	0.03	3.659	Supported
H2	Group Lending -> Poverty	0.462	0.078	5.912	Supported
H3	Microfinance -> Poverty	0.245	0.063	3.877	Supported

Note: significant at 0.05 (2-tailed)

Discussions

Microfinance is a loan designed for the marginalized before that are unable to get loan from the formal institutions such as banks. The NGO Microfinance organizations lend the loan through the group lending approach which help the poor's in getting easy access to the loans without any collateral and also helps the microfinance organization in screening and motoring borrowers.

Although there is a debate over the impact of group lending approach on the relationship between microfinance and poverty, this study confirmed that the group lending moderates the relationship between microfinance and poverty. The study also conforms a positive impact of microfinance and group lending on poverty. The empirical results reveal that the moderation effect of group lending on microfinance and poverty is 10.8 % while the direct impact of group lending on poverty is 46.2 % and the direct impact of microfinance on poverty 24.5 % respectively. The NGOs provide credit to those individuals that lack collateral or access to formal institutions. The NGOs through the group lending ensures that only those people are granted loans that really deserves and are marginalized by society. Most of the respondents in the study area used the loans for business purposes such as selling of handicraft, honey bee forming, vegetables growing and selling dry fruits and as a result many respondents are being self-employed and especially the females have gained empowerment in the community due to such loans that have given opportunity to generate income for them self and for the family and have transformed them from housewife to working lady. The NGOS encourage the respondents to develop saving habit so that can deal with the emergencies smoothly.

Conclusion

The current studied the moderating role of group lending on microfinance and poverty and also the impact of direct impact of microfinance and group lending on poverty. It is evident from our study the group lending approach has a positive impact on the relation between microfinance and poverty and has motivated the borrowers to use the loan for the intended purpose and avoid the risky projects. In short, microfinance organizations may achieve competitive advantage if they also provide other various services like skill-based programs and training sessions that will enhance the ability of the poor to alleviate poverty.

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