



A Quantitative Analysis of Microfinance to Eradicate Poverty

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Abstract *Microfinance is considered an important financial instrument to generate income. The study has focused to ascertain the effect of microfinance on poverty eradication. For this purpose, the random sampling method has been adopted and primary data from 368 respondents has been collected from the two main districts of Sindh, Pakistan. Two different statistical tools have been used to analyze the data. Simple independent t-test has been used for the analysis of the variance in variables (i.e. livelihood, business development, income, and employment) before and after the involvements of microfinance in the business activity of respondents and linear regression test used to find out the relation between the dependent variable (i.e. microfinance) and independent variable (i.e. livelihood, business development, income, and employment). It has been ascertained the $p < 0.005$ and $r = 0.78$ the values show the strong relationship between the dependent and independent variables and as well as microfinance facility has a positive effect on poverty alleviation.*

Key Words: Microfinance, Business Development, Revenue, Employment, Socioeconomic Development

JEL Classification: G00, E44, G21.

Introduction

Half of the total poor population of the world, that is 368 million, lives less than 1.9 US\$ per day in the most populous countries like India, Bangladesh, Ethiopia, Nigeria, and Congo of Sub-Saharan Africa and South Asia. They are deprived of the basic needs like health, education, proper nutrition, even though they utilize inferior articles to satisfy basic needs ([World Bank, 2018](#)). Figure no.1 show global poverty. The international organizations, multilateral and bilateral organization agencies initiated the millennium development goal and focus to adopt microfinance as a tool to . to improve the income and employment opportunities in the developing countries (UNDP, 2015). Though it was not a new financial instrument in many developing countries of Asia and other regions of the World to attain sustainable economic development for low-income people. In Southeast Asia, the activities of the microfinance in Pakistan were started in 1982 with the launch of Orange Pilot Program for the development of Kutchi Abadie's of Karachi and Aga Khan Rural Support Program (AKRSP). In the mid of eighties to empower the women and bring them in economic activity, an

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organization was developed in Gilgit Baltistan of northern (Rauf & Mahmood, 2009) areas of Pakistan. (Rauf and Tahir, 2009). The perspective of microfinance got more strengthened after the issuance of microfinance ordinance 2001. Later on, new micro-financing institutions (MFIs) established and started operations in urban and rural areas of Pakistan (Ayuub, 2013). Presently, the Microfinance industry is comprised of 24 Microfinance Institutions (MFIs), 11 Microfinance Banks (MFBs) and 05 Rural Support Program (RSPs) they are categorized based on scale and appraisal. The same can be witnessed from table and figure no. 2.

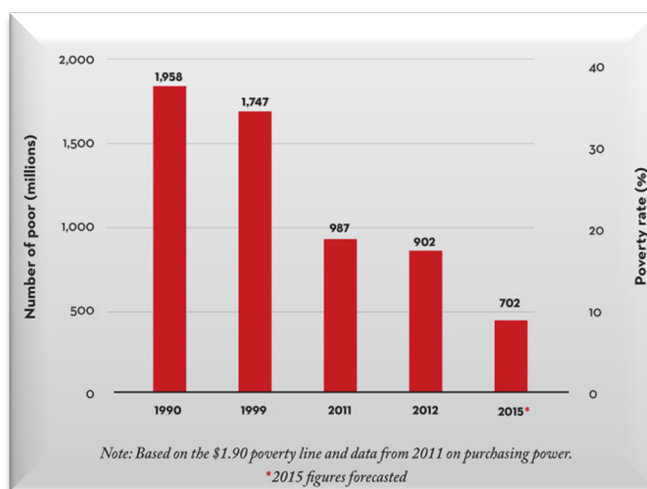


Figure1: Global Poverty

Source: World Bank, 2018

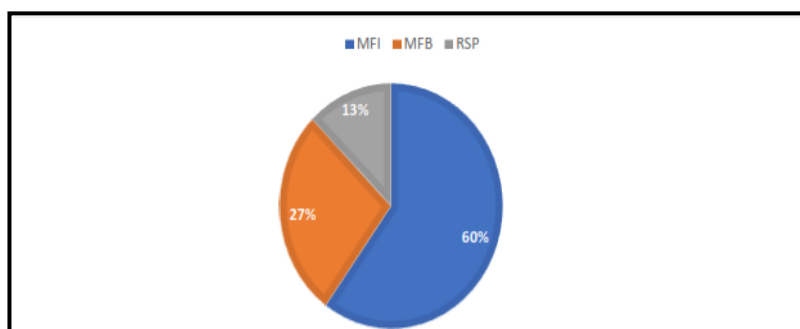


Figure2: Distribution of Microfinance Industry Pakistan as of 2018

Source: Microfinance review, 2018

Table 1. Financial Performance of Microfinance Industry 2014 To 2018

Years	2018	2017	2016	2015	2014
Active borrowers (in millions)	6.70	5.50	4.20	3.60	2.80
Gross Loan Portfolio (PKR in Billions)	256.0	196.0	132.0	90.0	61.0

Active Women Borrowers (in millions)	3.5	2.7	2.3	2.0	1.6
Branches	4,120	3,533	2,367	2,754	1,747
Total Staff	42,827	36,053	29,413	25,560	19,881
Total Assets (PKR Billions)	426.6	330.4	225.3	145.1	100.7
Deposits (PKR Billions)	238.6	185.9	118.1	60.0	42.7
Total Debts (PKR Billions)	90.7	74.1	54.7	44.5	31.1
Total Revenue (PKR Billions)	89.0	65.7	41.8	32.8	24.3

Source: Pakistan Microfinance Review, 2018

Table 2. Microfinance banks in Pakistan as of December, 2018

Advans Microfinance Bank (Advans Pakistan MFB)

APNA Microfinance Bank (AMFB)

FINCA Microfinance Bank

Khushhali Microfinance Bank

Mobilink Microfinance Bank (MMLB)

National Rural Support Programme Microfinance Bank (NRSP Bank)

PAK-OMAN Microfinance Bank (POMFB)

Sindh Microfinance Bank (SMFB)

Telenor Microfinance Bank Ltd. (TMFB)

The First Microfinance Bank Ltd. (FMFB)

U Microfinance Bank Limited

Source: Pakistan Microfinance Network

The aggregate exposure of MFIs during the calendar year 2014 to 2018 highlights that MFIs have played a productive role to uplift the sustainable economic growth of low-income people of the country. The demand and supply for credit exposure can be witnessed from table no.1. Though, the aggregate exposure of demand and supply indicates that MFIs had positively impacted the economic life of financially weak people. Pakistan, being an agriculture country, has a large portion of the population who lives in the rural areas, involved in agriculture and its allied fields. The agriculture sector is a major contributor to gross national income (18.5%) and absorbs more than 40% non-agriculture labor force. (GOP, 2019). Figure no. 3 indicates the breakup of the active borrowers of MFIs.

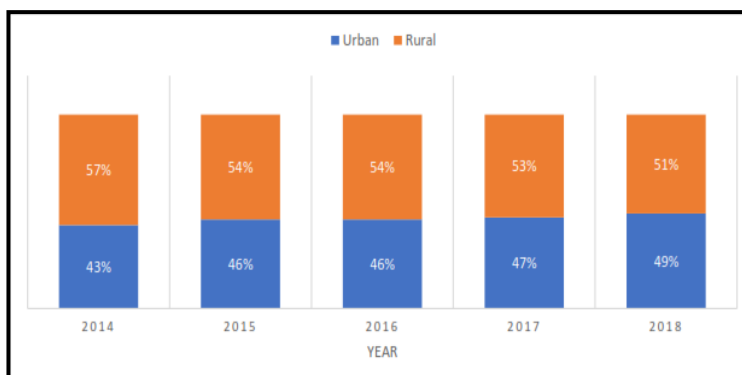


Figure 3. Number of the Active Borrowers from Rural and Urban

Source: Microfinance review, 2018

At the end of the financial year 2018, the MFIs has disbursed small loan 274 billion rupees into the different economic sectors. 6.9 million poor or people with low-income . of the rural and urban areas have been benefited from the micro-credit loan facility of the MFIs (Pakistan Microfinance Review, 2018).

Perspective of Microfinance

Originally the term microfinance is originated from the term microcredit, which pertains to small loans. ((BA de Aghion, & Jonathan , 2007) Microcredit is refer as the small loan facility offered to the low income people by an institutions on the discount rate to induce the people to startup new business, to grow the existing business. While the term Microfinance a system of different monetary items such as advances, protection, investment funds, home credits and cash exchange. The system provides financial facilities to the small entrepreneurs and traders who are unable to avail the opportunity to take shelter of banks for banking and other services for example, skills preparing, innovative training exhortation on the significance of bringing up kids, improving nourishment decisions and wellbeing (Armendariz & Labie, 2011).

Microfinance establishments offer small loans to the financially weak people to setup their own small businesses in order to prevent them from devastated poverty. Microfinance institutions assist and target the financially weak people of rural and urban areas to obtain loan facility from the formal financial services or banking system to .lessen the poverty. The Microfinance institutions provide small loan, insurance and savings. (Servin, et. al; 2012).

Overview of Economy of Pakistan and Microfinance Industry

The growth rate of the economy of Pakistan has been remained positive during the financial year 2017-18. The gross domestic product growth rate accounted at 3.29 percent during the fiscal year 2019. The growth rate 0.85, 1.40, and 4.71 percent accounted during the year 2019 in the agriculture, manufacturing industry and service sector respectively. During The fiscal year 2019 inflation rate has been recorded 8.1 percent. (GOP, 2019). According to the census population of the country is 207,774 thousand, though increasing growth rate is accounted 2.4 percent which is creating problems of demand and supply. The 24.1 percent of the total population lives below

the poverty line. Furthermore 31 percent and 13 percent people live below poverty line in the rural and urban areas of Pakistan respectively. The economic policy makers of the country have initiated some steps to address issues such as unemployment, education, skill labor etc. which have been arisen due to increasing population and inadequate physical and financial resources of the country. (Pakistan Bureau of Statistics, 2017). Moreover, the share of the private sector credit to GDP 17.4 percent. To improve the livelihood of the low income people. Microfinance industry have played significant role in this regard. The portfolio and outreach exposure of MFIs has increased 35.5 percent and 19.6 percent. (Pakistan Microfinance Review, 2018). Microfinance is once in a while alluded to as managing an account for poor people and is definitely not a supernatural marvel weapon that will change the world all alone, however it is an answer for neediness. Microfinances have-a risen as-if a proficient advancement technique and has noteworthy approach suggests for overcoming neediness. . accomplishment of results. (Rubana, 2008).

Microfinance promotes small and micro enterprises in private sector and enhance the private sector participation at the lower end. It plays a role in reducing poverty through generating economic opportunities for poor households. It empowers the people through creating space in the market economy. It creates space for social organization and social awareness for empowerment. Furthermore, Microfinance institution plays a critical role in the financial inclusion of Pakistan as it targets underserved segment of population, which, generally, does not have access to the traditional collateralized and documented mode of finance. One of the major functions of Microfinance is to provide small loans in rural and urban areas to alleviate poverty in Pakistan generally and in Sindh particularly.

The target market of the microfinance sector is low income household or poor families. The small loans are offered with little or no collateral on individual or group guarantee basis.

Table 3. Growth of Microfinance Industry of Pakistan as of 2018

Active Value (PKR Borrowers million)	Active Savers Value (PKR million)	Policy Holders	Sum Insured (PKR million)		
6,936,554	274,707	35,293,602	239,963	8,456,430	248,783
5,800,457	202,699	30,984,717	186,941	7,313,029	198,680
1,136,097	72,008	4,308,885	53,022	1,143,401	50,103
20%	36%	14%	28%	16%	25%

Source: SBP, Financial stability review, 2018

The table number 3 indicates that the growth of microfinance institutions of Pakistan. During the financial year 2017 and 2018 20 percent change has been recorded in the micro credit. The 6.9 billion borrowers availed loan facility of rupees 274 billion, saving of 35 million accounted rupees 239 billion. The sum of insured rupees 248 billion of 8.5 million policy holders accounted during the year 2018. The outreach MFIs indicates there is ample room for further development. The MFIs have immense growth Opportunities owing to their alternative lending mechanism and outreach in far-flung and remote areas.

Research Question

The study explores the increasing rate of poverty in the developing countries and its impacts on the positive growth of Gross National Product, to lift up the impoverished people from the misery of poverty by improving the socio economic factors. In light of the following research question adopted to examine the situation.

What are the effects of Microfinance Institutions to lift up the poor people living under the poverty line and improve their living standards in Pakistan?

Literature Review

Various research studies had been conducted on the role and impact of microfinance in the perspective of the poverty reduction in the different parts of the world. The empirical and descriptive studies have found out the significant and non-significant impact of microfinance to lessen poverty.

Sen (1987), poverty means people who are deprived of the basic needs such as food, shelter, education, and health due to the dearth of income and employment opportunities. Even though these people are living below the criteria of the minimum human standard of living. (Laderchi, et.al; 2003). Though here is a worldwide concurrence happening neediness decrease as-if all-encompassing improvement arrangement objective, there is little concession to the meaning of destitution, and the meaning of destitution assumes a job in neediness destruction methodologies Wilson, et.al, (2012, poverty is considered as group of the people have not access to resources like monetary and non- monetary. to satisfy the basic human wants. The report further state that in the world, about 12 million people and have less than 1.9 US\$ per day income. Kondo & et.al; (2008), 1.4 billion people around the world living under extreme poverty and per day income is less than 01 US\$. World Bank (2018), a total of 736 million which is 10 % of the world, the population lives under the poverty line and have less than 1.9 US\$ per day income. UNDP (2015), due to the efforts of international agencies, local governments, and non-government institutions to establish microfinance and other institutions to improve the livelihood of the poor people the poverty rate has decreased from 1.9 billion to 836 million in developing countries for twenty years from 1990 to 2015. While the substantial development in other areas has been reported such as in primary education enrollment, gender disparities, etc. Sujatha and Malyadri (2015), the analysis of primary data indicates a positive impact between women and microfinance. Microfinance empowers women through small scale business activities. Armendariz & Labie, (2011), Microcredit is referred as the small loan facility offered to the people with low income by an institution on .discounted rate to induce the people to startup new business, to grow the existing business. While the term Microfinance a system of different monetary items such as advances, protection, investment funds, home credits and cash exchange. The system provides financial facilities to the small entrepreneurs and traders who are unable to avail the opportunity to take shelter of banks for banking and other services for example, Skills preparing, innovative training exhortation on the significance of bringing up kids, improving nourishment decisions and wellbeing. Khandker (2005), the primary data was collected from 1,640 households from 29 villages of Bangladesh. The result indicates that the average 3% annual decline in their poverty Rate due to microfinance involvement. Tauqir and Butt (2011), microfinance had a positive effect to improve the financial strength of the women borrowers and development in the

socio-economic status of women in the study area. [Faux and Ntembe \(2013\)](#) the result of the regression model shows that explanatory variables including gender, education level, and job experience show that there is no impact of primary education on poverty reduction in the country. [Waheed \(2009\)](#), Highlighting the impacts of microcredit of rural lenders in Punjab, Pakistan. It has been concluded that due to the availability of credit the poor are provides sustainable employment by participating in various economic activities. ([Chowdhury, 2011](#)), ascertained the relationship between microfinance program and women empowerment through the data panel data survey and fixed effects model to estimate the individual effects such as asset building, decision making, labor supply, family planning, and household effects such as children's education level, household expenditures of availing the facility from the non-credit programs of the women. The results indicate a significant relationship in the perspective of the individual and household effects in comparison to the non-credit program. Microfinance is a financial mechanism to develop the socio economic livelihood of the poor people by involving them in the economic activity. In the early stages the main objective of the microcredit was to reduce poverty level in the country. Currently, the microfinance is used for the improve self-employment, development of mineral and natural industry, agricultural and its allied field's development, women empowerment, etc. [Katsushi S. Imai, et.al, \(2012\)](#) Experience has demonstrated that microfinance can help the poor increment their salary, construct practical organizations, and decrease their defenselessness to outside stuns. It can likewise be an incredible asset for self-strengthening, empowering poor people, particularly ladies, to end up monetary operators of progress. Positively, the job of microfinance in decreasing destitution cannot be denied on the grounds that it builds the pay and utilization of poor family units.

The lack of finance is a major constraint for micro enterprises development, poverty reduction and economics empowerment in under developed areas and the provision of microfinance services tries to fulfill this gap. MFIs largely carry range of financial activities to create an economic activity through which environment of poverty reduction is prevailed.

Objectives of the study

This empirical study focused to ascertain the variance in the socioeconomic factors (i.e. income, employment, and livelihood) of the respondent before and after the involvement of microfinance. Moreover, to examine the relationship between microfinance and poverty alleviation (i.e. livelihood, business development/income, and employment).

Hypotheses of the study

- H1 There is a significant variance in socioeconomic factors (i.e. livelihood, business development/income, and employment) before and after the involvement of microfinance.
- H₀ There is no significant variance in socioeconomic growth (i.e. livelihood, business development/income, and employment) before and after the involvement of microfinance.

H2 There is a significant relationship between microfinance loan size and sustainable economic growth to alleviate poverty.

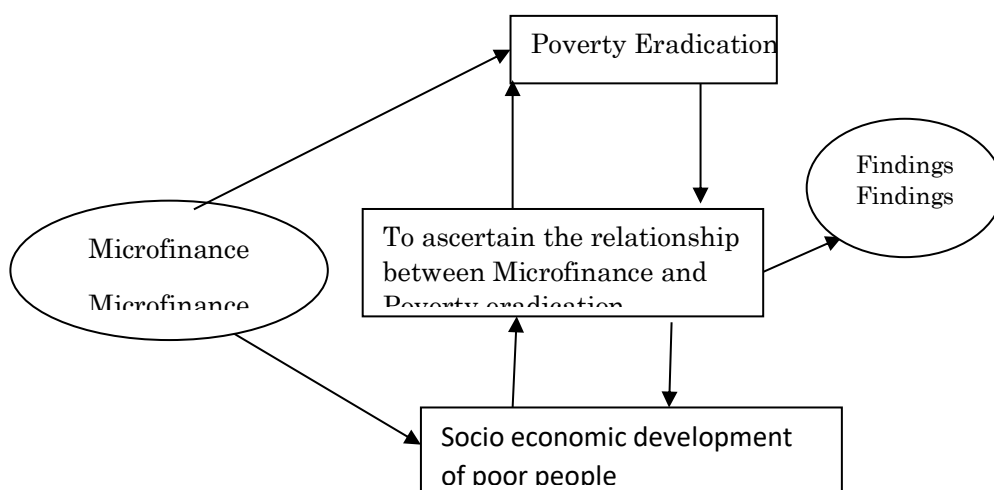
H₀ There is no significant relationship between microfinance loan size and sustainable economic growth to alleviate poverty.

Research Methodology

Through the random sampling method, 368 active borrowers including 65 and 35 percent male and female respectively were selected from the borrowers' list of three microfinance banks operating in district Larkana and Sukkur of upper Sindh. During the field survey five-point Likert Scale (i.e. strongly disagree to agree) a questionnaire designed to primary data from the study area. A simple independent t-test is adopted to estimate the variance of before and after the involvement of microfinance. Additionally, the regression equation is adopted to find the relationship between the dependent variable (i.e. Loan Size), and the independent variable (i.e. Business Development, income, employment, livelihood variable to alleviate poverty).

Research Model

Network theory has been adopted to understand how microfinance organizations play an important role in facilitating economic development.



Result and Discussion

Research Design

A research design is a careful selection of qualitative and quantitative research methods to collect data and to analyze the same data to find the solution of a research problem (Saunders et al. 2012). "Research design is a plan to collect the data through the different means and to analyze the same data in such a way which resolve the research problem. (Kothari, 2010) Research design refers to the logical method to collect accurate evidences or information of the situations for the analysis with low-cost and significant method (Zikmund, 1988). In fact the research design direct a

research study to plan a scheme for collection of information, to estimate and to scrutinize the information. (Manheim, 1977),

Contribution of the Microcredit Faculty

The main objective of microfinance institutions is to facilitate poor households to startup their business and to invest in the existing trade, occupation, business, profession, etc. Therefore the MFIs disburse small loans to low-income people like a tool to support establishing and to maintain business. Table number 4 and 5 highlight the demographic information of the active borrowers and the contribution of the selected three microfinance institutions, their engagement with economic sectors.

Table 4, Demographic Information of the Respondents n=368

Variables	Measuring Groups	Frequency	Percentage
Gender	Male	128	35
	Female	240	65
	Total	368	100
Age (years)	<25 year	85	23
	25-40	127	35
	>40	156	42
	Total	368	100
Education Level	No at all	67	18
	Primary to Middle	135	37
	Matric to Inter	112	30
	Graduation to Master	54	15
	Total	368	100
No. of Family member	<2	101	27
	4 to 5	192	52
	>5	75	20
	Total	368	100
Business Experience before Joining MFI	YES	167	45
	No	201	55
	Total	368	100

Source: Field survey, 2019

Table 5. Microfinance loan activity in various sectors n=368

Sectors	Frequency	(%)
Agriculture	98	27
Livestock Management (Poultry, Fish farms, Dairy Farms)	141	38
Agro-based industry / Service	129	35

(Small Flour Mills, Automobile Workshops, Wholesale & Retail Trade, Handicrafts, Hotel)

Total

368

100

Source: Field Survey, 2019

The MFIs have played a very important role in the increment of the income of the low income and reduction of poverty from the study area. That can be envisaged from the figure no. 04 that 59 percent of respondents shown their satisfaction.

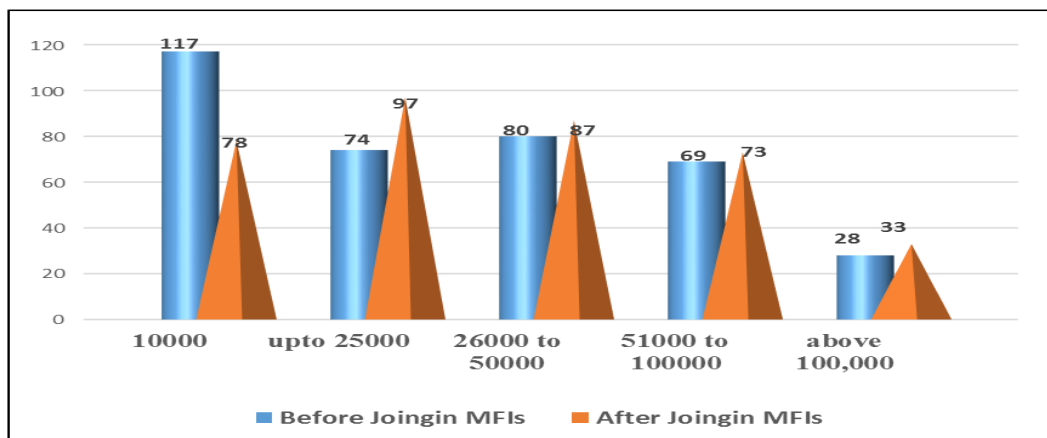


Figure 4. Increment in Revenue / Income

Source: Field Survey, 2019

n=368

Testing of Hypotheses 1

Table 6. Variance in Livelihood, Income and saving of respondents before and after the Microfinance activity

	Levene's Test for Equality of Variances	t-test for Equality of Means							
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference Lower Upper
Livelihood	Equal variances assumed	16.59	.00	-9.16	734	.000	-11.07	1.20	-13.44 -8.69

	Equal									
	variances not									
	assumed									
	Equal	15.93	.00	-1.78	734	.075	-3.42	1.92	-7.20	.346
	variances									
	assumed									
Business	Equal									
Developmen	variances not									
t	assumed									
	Equal									
	variances not									
	assumed									
	Equal	397.4	.00	-4.61	734	.000	-9.95	2.15	-14.18	-5.72
	variances	1								
	assumed									
Employment	Equal									
	variances not									
	assumed									

The t-test result as shown in table no. 06, indicates that significant variance in socioeconomic factors like livelihood (i.e. children education, access to health facilities, investment in social activities, and Women Empowerment), income, and saving. The significant value of the variables is less than ($p < 0.05$). Therefore, we reject our null hypotheses and accept alternative hypotheses.

Testing of Hypotheses 2

Table 7. Result of Regression statistics of microfinance loan size and sustainable economic growth to alleviate poverty

Multiple R	0.785
R Square	0.616
Adjusted R Square	0.613
Standard Error	13.082
Sig.	0.000
Observations	368

a. Dependent Variable: Loan Size

b. Predictors: (Constant), Improvement in the employment, Improvement in the Revenue/income and, Improvement livelihood

Table number 07 highlights the result of the linear regression equation model. The $r = 0.78$ indicates a strong relationship between the dependent and independent variables. The coefficient of determination $r^2 = 62\%$ shows the accuracy predictive accuracy of a statistical model while p-value is $p = 0.000$ which is less than $p < 0.05$, therefore we accept alternative hypothesis “There is a significant relationship between microfinance loan size and sustainable economic growth to alleviate poverty” and reject the null hypothesis.

Conclusion

The study concludes that microfinance has a positive effect to alleviate poverty. These variables have been analyzed through the primary data collected through the questionnaire-based survey of borrowers of four microfinance institutions operating in Larkana and Sukkur districts of upper Sindh. The 65 percent of respondents were female borrowers and 35 percent were male borrowers. More than 60 percent of respondents had started their business with the involvement of microfinance institutions.

The empirical results of primary data indicate the microfinance has a positive effect to alleviate poverty. It has been ascertained that there is a gap between demand and supply as result of the increasing poverty rate and its effect on economic growth. Therefore, to improve the socio-economic development and eradicate poverty. Country economic managers should take measures and initiatives to expand the network of microfinance urban, semi-urban, and rural areas of the country. Furthermore, microfinance institutions should arrange the training and skill development for the borrowers to improve their revenue and extend loan exposure in the field of agriculture and its allied fields.

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