Artículo de investigación

Microfinance and Women Empowerment: An Endogenous Switching Regression Analysis

Microfinanzas y empoderamiento de las mujeres: un análisis de regresión de cambio endógeno

Microfinanças e empoderamento de mulheres: uma análise de regressão de comutação endógena

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Abstract

Women in Pakistan are suffering from a great social and economic deprivation due to gender discrimination and inequitable distribution of resources. This paper examines the determinants and extent of women empowerment by their participation in microfinance programs. Data for this study were collected from different areas of Faisalabad, Pakistan, where most of the households were poor and had borrowed money from different microfinance institutes. Keeping in view the disguised endogeneity, Endogenous Switching Regression Model was employed which accounts for selection bias because of observable and unobservable factors. The analysis revealed that education level, household size, family system, educational expenditures, income level and the ownership of different assets like sewing machines have the statistically significant impact on the women decision to work and hence promote women empowerment. It is concluded that the government in developing countries should introduce income-generating activities, especially for women by providing them access to financial resources.

Keywords: Microfinance; Women Empowerment; house hold; resource; Pakistan

Resumen

Las mujeres en Pakistán están sufriendo una gran carencia social y económica debido a la discriminación de género y la distribución desigual de los recursos. Este documento examina los determinantes y el alcance del empoderamiento de las mujeres por su participación en los programas de microfinanzas. Los datos para este estudio fueron recolectados de diferentes áreas de Faisalabad, Pakistán, donde la mayoría de los hogares eran pobres y habían tomado dinero prestado de diferentes institutos de microfinanzas. Teniendo en cuenta la endogeneidad disfrazada, se empleó el Modelo de Regresión de Conmutación Endógena que explica el sesgo debido a factores observables y no observables. El análisis reveló que el nivel educativo, el tamaño del hogar, el sistema familiar, los gastos educativos, el nivel de ingresos y la propiedad de diferentes activos, como las máquinas de coser, tienen un impacto estadísticamente significativo en la decisión de las mujeres de trabajar y, por lo tanto, promover el empoderamiento de las mujeres. Se concluye que el gobierno de los países en desarrollo debe introducir actividades generadoras de ingresos, especialmente para las mujeres, proporcionándoles acceso a recursos financieros

Palabras claves: microfinanzas; Empoderamiento de las mujeres; asimiento de casa recurso: Pakistan

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Resumo

As mulheres no Paquistão sofrem de uma grande privação social e econômica devido à discriminação de gênero e à distribuição desigual de recursos. Este artigo examina os determinantes e a extensão do empoderamento das mulheres pela sua participação em programas de microfinanças. Os dados para este estudo foram coletados em diferentes áreas de Faisalabad, Paquistão, onde a maioria dos domicílios era pobre e tinha tomado dinheiro emprestado de diferentes institutos de microfinanças. Tendo em vista a endogeneidade disfarçada, empregou-se o Modelo de Regressão por Comutação Endógena, que considera o viés de seleção por causa de fatores observáveis e inobserváveis. A análise revelou que o nível de escolaridade, tamanho da família, sistema familiar, gastos com educação, nível de renda e posse de diferentes ativos, como máquinas de costura, têm impacto estatisticamente significativo na decisão das mulheres de trabalhar e, portanto, promovem o empoderamento das mulheres. Conclui-se que o governo dos países em desenvolvimento deve introduzir atividades geradoras de renda, especialmente para as mulheres, proporcionando-lhes acesso a recursos financeiros

Palavras-chave: Microfinanças; Empoderamento das mulheres; casa segura; Recurso; Paquistão

Introduction

Women in Pakistan are a deprived sector of society. They are involved in household domestic activities whereas in rural areas they perform additional duties like raring of animals, contribution in on-farm activities, and storage and value addition of the agricultural produce (Jamal & Kaukab, 2007). Their role in the economy is generally not appreciated and they are not paid for their work. As a result, women remain socially and economically vulnerable (Panichkul, 2018). They have no voice in the household decision-making and lack ownership of valued assets like land.

Gender equality is a necessary foundation for the prosperous, sustainable and peaceful world (Kabeer, 2005). Providing equal access to health, education and decent work to women in the society can benefit the countries and humanity at large. In the economic and political decision-making process, the representation of women can fuel sustainable economies (Kayani, 2014). Each day, 19 percent of their time is spent on unpaid household domestic activities as compared to 8 percent for men during the year 2000 to 2014 in 59 countries. For the Empowerment of women and girls, there is need that they should have identical freedom and rights equal to those of men (Cull et al., 2009).

One way of empowering women is to give them financial freedom (Shrawat, 2017). They can earn the incomes of their own and can spend this money without any interference from their male counterparts. This way, they can create and own assets, which will enable them to enjoy a respectable status in the society. Microfinance can be a suitable tool to meet the desired goal by providing financial assistance to poor people (Strasser, 2014). Females, who usually are ignored due to the lack of collateral by the conventional banks, find microfinance as an effective tool to fight against poverty (Felder-Kuzu, 2008). Participants mostly invest in household affairs like health, education, and clothes of their children. The women who are participants of microfinance have long-lasting impacts, as they also improve their economic conditions and consequently there is a reduction in poverty [(Pitt et al. (2003); Hermes & Lensink (2011)] resulting in their empowerment (Mayoux, 2001).

The general objective of the study is to estimate the impact of participation in microfinance program on the Gender in terms of Empowerment through improving their income patterns, decision making power, expenditure on education and health of their children and poverty alleviation of the poor rural households of women participants of Faisalabad from Punjab, Pakistan.

Our study differs from previous studies in terms of loan source. Most of the literature concentrated only on the participants of single microfinance programs. In this study, we collected personal, locational and household information from the participants of different microfinance institutions. Moreover, we have treated participation in microfinance as a selection process in which the decision to get a loan depends on the expected benefits.

Materials and Methods

Data were categorized according to the objectives of the study and comparisons were

also made between the participants and non-participants. The following technique was employed for the analysis of data.

We assumed that households are risk-averse. They decide to participate and not to participate on the basis of net utility. If net expected utility from participation is greater than that of non-participation, households decide to participate. In case, if the net utility is equal or less than the utility of non-participation, households decide not to participate. It can be expressed as follows:

$$U_\Delta = U_P - U_N$$

Here U_Δ represents the net utility, which represents the difference of utility from participation U_P and utility from non-participation U_N of household ι (ι= 1, 2...N).

Hence we can say that households participate when U_Δ is greater than 1 and they decide not to participate when U_Δ is equal to or less than 1.

$$U_\Delta > 1$$

Participation then occurs if,

$$U_P > U_N$$

The expected utility of participants can be related to a set of explanatory variables (Z) as follows:

$$U_P = \alpha Z_i + \varepsilon_i$$

With Z_i being a vector of parameters, the error term ε_i with mean zero and variance ∂_u^2capture measurement errors and factors unobserved to the researcher but known to the respondent. Variables in Z include determinants of the participation decision such as personal, locational and household characteristics of the participants and their families such as education, age or household size, etc. The participant's utility from choosing participation is not observable but the choice of participation or non-participation:

$U_P = 1$ if, $U_P > U_N$

and

$U_P = 0$ if, $U_P \leq U_N$

The probability of participation may then be expressed as:

$\Pr(U = 1 | Z_i) = \Pr(U_P > U_N) = \Pr(U_{PI} > 0) = F(\alpha Z_i)$

Where "F" is the cumulative distribution function of ε_i. The assumptions made on the functional form of F result in different models.

The intuition behind this research is not only to observe the determinants of participation but also to empirically estimate the impact of participation on the outcomes of our interest. The relationship between the participation and outcome variable "Y" is expressed as:

$$Y_i = f(X_i, U_i)$$

Where "X" is a vector of exogenous variables and "U" is the dummy for participation. If Y_i is the outcome variable of individual "i" as a function of the participation status "U" then "Y" can take two forms, Y_{1i} being the outcome of participants and Y_{0i} that of non-participants.

Impact Evaluation Problem

The welfare of women households can be spurred by their active participation in microfinance program. The difference in the outcomes of participants and non-participants can be useful in expressing the impact of microfinance participation. But the participants and non-participants will not be the same in this case. There may be the chances of biases in the causal impact estimation due to the difference in their observed and unobserved characteristics. The results largely rely on the difference in outcomes, if both are true counterfactuals: having similar characteristics whether they participate or not, which is not possible practically in case of Quasi-Experimental technique.

The binary decision of household mainly depends upon the net utility of participation and it applies in the case when households may select themselves (self-selection) into microfinance program even if they are not entitled for and it will give rise to selection bias. Thus, the issue of self-selection is crucial in Quasi-experimental studies. The error term of participation equation and the error term of outcome equation results in a correlation affected by the un-observable factors and hence there will be an issue of selection bias. If this correlation between error terms is greater than zero, OLS regression techniques tend to give biased estimates (Blundell & Costa Dias, (2000).

In order to make a valid and true comparison group having similar characteristics as the

treatment group, the main and foremost challenge is to select the true counterfactuals. In the absence of the microfinance program, on the average these both groups need to have the same characteristics. Both groups if participated should respond to the program in a similar pattern. When this criterion is fulfilled, we have true counterfactuals (Zyromski et al., 2011).

Endogenous Switching Regression Model

To account for selection bias from both observable and unobservable factors, we employ the Endogenous Switching Regression Model (ESR)**.** The Endogenous Switching Regression Model [Duso (2005); Hermes & Lensink (2007)] is a parametric approach that uses two different estimation equations for the participant and non-participant women by adding the inverse mills ratio, controlling for selection bias. Inverse mills ratio is calculated through a selection equation in the first step where the selective sample is treated as a missing value problem. Then for each regime conditioned on the adoption decision, the outcome equations are disposed of differently, which are estimated by a probit model.

By given the equation of participation and equation of outcome, the two regimes for participation and non-participation are:

$$Y_{0i}=X_i'\beta_0+\varepsilon_{0i} \quad \text{if} \quad U_P=0$$

$$Y_{1i}=X_i'\beta_1+\varepsilon_{1i} \quad \text{if} \quad U_P=1$$

Where Y_{0i} and Y_{1i} represent the outcomes of interest, separately for the regimes of non-participation and participation in microfinance, X_i represents the vector of exogenous variables, which is thought to influence outcome functions, whereas ε_{0i} and ε_{1i} are the error terms. On the basis of observable factors, self-selection can take into account but there could be a correlation between ε_I, and $\varepsilon_{0i,}$ ε_{1i}, due to unobservable factors. Therefore, mills ratios λ_0 and $\lambda_1$would be derived to solve this problem and the equations would be transformed into the following specifications:

$$Y_{0i}=X_i'\beta_0+\sigma_{0D}\lambda_{0i}+\mu_{0i} \quad \text{if} \quad U_P=0$$

$$Y_{1i}=X_i'\beta_1+\sigma_{1D}\lambda_{1i}+\mu_{1i} \quad \text{if} \quad U_P=1$$

Where λ_0 and λ_1 are parameters to be estimated, and Y_i are the outcome variables, X_i are the vector of explanatory variables and μ_{0i} and μ_{1i} are error terms. Finally, the error terms are assumed to have a Trivariate Normal Distribution with zero mean and non-singular covariance matrix as follows:

$$\text{Cov}(\mu i, \varepsilon_0, \varepsilon_1)=\begin{bmatrix}\sigma_1^2 & \sigma_{12} & \sigma_{1\varepsilon}\\ \sigma_{12} & \sigma_2^2 & \sigma_{2\varepsilon}\\ \sigma_{1\varepsilon} & \sigma_{2\varepsilon} & \sigma^2\end{bmatrix}$$

Where σ_1^2=var (μ_0);σ_2^2=var(μ_1); σ^2= var(ε); σ_{12} =cov(μ_0,μ_1); $\sigma_{1\varepsilon}$=cov(μ_0,ε); $\sigma_{2\varepsilon}$=cov(μ_1,ε) and σ^2 represents the variance of the error term in the selection equation and σ_1^2, σ_2^2 represent the variance of the error term in outcome equation. There were used the two-stage method of estimation the endogenous switching regression model e.g. Lee, (1978). Where a probit model is estimated for criterion equation and then Inverse Mills Ratios are derived, then in the second stage, these variables are added to suitable equations. Maddala (1983) argue that this process requires a complicated and difficult procedure, therefore it has failed to implement. Thus, a single stage approach is estimated in the present study where Full-Information Maximum Likelihood (FIML) method proposed by [16] using the movestay command.

The FIML's log likelihood Function for switching regression model by Lokshin & Sajaia (2004) is described as follows:

$$\ln L_i$$

$$\sum_{i=1}^{N}\left\{L_iW_i\left[\ln F\left(\frac{\left(X_i'\propto+\rho_{1\mu}\left(Y_{1i}-\frac{Z_{1i}'\beta}{\alpha_1}\right)+\right)}{\sqrt{1-\rho_{1\mu}^2}}\right)+\ln\left(f\left(Y_{1i}-Z_{1i}'\beta/\alpha_1\right)+(1-L_i)W_i\left[\frac{ln\left(1-F\left(X_i'\propto+\rho_{2\mu}\ (Y_{2i}-Z_{2i}\beta)/\gamma_2\right)\right)}{\sqrt{1-\rho_{2\mu}^2}}+ln(f(Y_{2i}-Z_{2i}\beta)/\gamma_2)\right]\right)\right]\right\}$$

Table 1: Descriptive Statistics of the Variables that are used in the Model

Variable	Description	Mean	Sed. Dev.
Age	Age of respondent (year)	35.77	6.62
Age^2	Square of age	1636	824
Edu	Education of respondent (year)	1.98	3.51
Incmy	Income Yearly (PKR)	173263	76221
Depend	Number of dependents	7.32	1.73
Hhh	Household head	0.39	0.48
Civil	Civil status of respondent	2.24	0.65
Famsys	Family system of respondent	1.47	0.50
Hhsize	Household size	6.75	2.72
Eduexp	Educational expenditures(rupees)	10394	9932
Owntv	1 if ownership of T.V by female, 0 otherwise	0.37	0.48
Ownsw	1 own of sewing machine by female, 0 otherwise	0.82	0.37
Mbl	Number of Mobiles	1.37	0.91
Loc2	1 if women is located in MadanPura, 0 otherwise	0.16	0.37
Loc3	1 if women is located in RizwanTawn, 0 otherwise	0.07	0.26
Loc4	1 if women is located in BaaghWaliBasti, 0 otherwise	0.06	0.25
Loc5	1 if women is located in MarziPura, 0 otherwise	0.21	0.41
Loc6	1 if women is located in BarkatPura, 0 otherwise	0.35	0.47
Avlngo	1 if women has availability of NGO, 0 otherwise	0.77	0.41

Results and Discussion

This section is subdivided into further subsections about the information of the empirical results of the present study. Table 2 represents the empirical results of microfinance participation on the women empowerment of the participants, for this purpose we have estimated have estimated that either woman who are participants of any microfinance institute are working any kind of job at home as well as in any factory or anywhere else, and used it as the proxy of the women empowerment, which was the basic purpose of the study. Table: 1; show cases the descriptive ststistics of whereas, the results of ESR are portraid in Table: 2;

Microfinance Participation and Impacts of Participation on Welfare and Women Empowerment

In this present study there are two types of respondents, almost half of the respondents are those households, who never participate in any of

microfinance institutions and half are those households, who participated in any of the institutions of microfinance like microfinance bank, NGO or any other institution but both the participants and non-participants have similar characteristics.

In the first stage, ESR gives the determinants of program participation. Our results reveal that co-efficient representing the age of female participants.

The coefficient of education of the female in selection equation is significant and positive, which shows the relationship between education and participation of females in microfinance. The females who have more years of schooling have higher probablity, to participate in microfinance programs. So, mostly the educated women participate in microfinance as they can better manage the funds in the productive activities and have more awareness as compared to those with low education.

The coefficient of civil status of the participants is positive and statistically non-significant, represents that most of the respondents in this study are married, so they have the power to make decision regarding participation in microfinance program as compare to the single women. It is the general aspect that married women need more money to fulfill their household needs and to make a smooth consumption in case of poverty. So the married women are more likely to participate in microfinance program.

Family system also increases or decreases the probability to participate in microfinance. In our study most of the respondents belong to the nuclear family, so they are independent to participate in microfinance program. The coefficient representing family system has positive sign and statistically significant, implying that as compare to the joint family system, nuclear family system is positively related to the microfinance participation. Unlike joint family system, the women who are living in nuclear family system have more freedom to participate in microfinance programs.

The coefficient of household size also shows positive sign but not significantly different from zero, which indicates the relationship between the participation decision and the number of family members of the respondents. As the numbers of family members increase the possibility of participation in microfinance also increases because the families having higher number of family members would prefer to work by themselves as well as by their females although at small level and prefer to participate in any microfinance program.

The most important determinant of microfinance participation is the presence and ownership of physical assets like sewing machines, mobile phones, refrigerator etc. So the coefficient representing the presence of any kind of physical assets is positive and highly significant, which indicates that as the availability of these assets increases in the ownership of the households the probability to participate in microfinance program, also increases.

In our case all the respondents are female, so the facility of the presence of sewing machines has the great impact on the decision of these females either to participate or not to participate in microfinance. The coefficient of ownership of T.V and numbers of mobile phones are also statistically significant and has positive sign indicating that females having the ownership mobile phones and T.V are more likely to participate in microfinance program. These assets are the proxy for information and number of awareness, households, who are well informed and aware of such programs, have higher probabilities to participate.

In the lower panel of the table 2 in case of working decision of women, the covariance terms σ_{0D} and σ_{1D} are significant and show the presence of endogenous switch. The participation in microfinance is based on hierarchical sorting as shown by the covariance terms σ_{0D} and σ_{1D} having same signs. This means that those participants who have above average returns, it is beneficial for them to participate in microfinance program. Moreover, it is not suitable for those participants, who already have below average returns.

Table 2: Full Information Maximum Likelihood Estimates of Endogenous Switching Regression in case of Women Empowerment

Dependent variable: 1/0women participates in eco. Activity		FILM Endogenous Switching Reg.		
Variable	Description	Participation (1/0)	Participation=1 (Participants)	Participation=0 (nonparticipants)
Age	Age of respondent (year)	-0.023(0.027)	0.001(0.006)	0.002(0.006)
Age^2	Square of age	0.0005(0.0002)**	0.00001(0.000)	-0.000(0.000)
Edu	Years of education	0.0705(0.029)***	0.004(0.009)	0.001(0.006)
Incmy	Income Yearly (PKR)	1.490(1.61)	1.110(0.37)***	2.17(0.45)***
Depend	No. of dependents	-0.005(0.060)	0.017(0.016)	-0.007(0.012)
Hhh	Household head	0.577(0.26)**	0.408(0.071)***	0.283(0.054)***
Civil	Civil status	0.032(0.169)	-0.106(0.044)	-0.040(0.034)
Famsys	Family system	0.641(0.23)***	0.269(0.068)***	0.113(0.049)***
Hhsize	Household size	0.0027(0.040)	-0.020(0.011)**	0.002(0.008)
Eduexp	Educational expenditures (rupees)	-0.0001(0.00)	0.438(0.26)*	0.086(0.27)
Owntv	1 if ownership of T.V, 0 otherwise	1.051(0.21)***	0.207(0.75)***	0.045(0.073)
Ownsw	1 own of sewing mac,0 otherwise	0.455(0.31)	0.190(0.115)*	0.001(0.051)
Mbl	No. ofCellphones	-0.001(0.133)	0.103(0.03)***	0.166(0.037)***
Loc2	1 if Madanpura, 0 otherwise	0.222(0.34)	-0.045(0.103)	0.002(0.073)
Loc3	1 if Rizwantawn, 0 otherwise	-0.040(0.46)	-0.188(0.136)	0.012(0.089)
Loc4	1 if Baaghwalibasti, 0 otherwise	-0.285(0.48)	-0.167(0.147)	-0.122(0.091)
Loc5	1 if Marzipura, 0 otherwise	-0.277(0.344)	-0.013(0.110)	-0.072(0.067)
Loc6	1 if Barkatpura, 0 otherwise	-0.669(0.24)	-0.081(0.094)	-0.002(0.063)
Avlngo	1/0 availability of NGO	0.669(0.24)***		
Constant		-1.835(1.04)**	-0.810(0.32)***	-0.517(0.22)***
σ_{1D}			14.75***	
σ_{0D}				15.15***
ρ_{1D}			2.24***	
ρ_{0D}				-0.160

(Significance levels: *: at 10%, **: at 5% and ***: at 1%)

Impact Evaluation in case of Women Empowerment

Table 2 also shows the results of the second part of the FIML estimates of the endogenous switching regression model. For the identification of the model, there should be at least one variable in the equation of participation that does not appear in the dependent variable that women are working at any kind of job or not. In this study we have used the availability of NGO as an instrument variable.

The results also represent that education has the positive but non-significant impact on the women working experience as indicating by the

positive sign suggesting that only those women usually join any kind of work who do not have any experience of education [Aubrey (2002); Stelmach et al. (2004); Adebowale et al. (2011)]. Women having more years of schooling would not prefer to work in any small industry or any kind of work at home (Kabeer, 2005). So the women having less educational experience lend more and start work at small level. This is the main source to empower them by themselves.

Age is an important element of women empowerment [Hunt & Kasynathan (2001); Sambhaji (2013)]. The results show that there is a positive relationship between women working activities and their age as the coefficient of age has the positive sign but statistically non-significant which suggest that as the age of the women increases they become more respectful and more experienced being a wife, mother and a mother-in-law so, the results support this argument as it is found that the freedom of working any kind of job or small business by women increases with the increases in their age and it has a positive impact on the working activities of the women.

The participation in microfinance program improves the income level of the participants [Weiss, & Montgomery (2005); Chowdhury & Chowdhury (2011); Khan & Noreen (2012)]. As microfinance enables the participants to start up their own business and help them to come out of state of unemployed to the employed one. The coefficient of annual income has the positive sign and statistically significant, suggesting that women who are participants of any microfinance institute and are accessing the credit facilities are more likely to start income generating activities like sewing the clothes, working in small industries and also start their own small scale business. Through this, microfinance also enables to get higher income. The results of present study represents that the households who were suffering from poverty, microfinance has improved their existence and recognized their socio-economic presence and empower them becoming entrepreneurs. So microfinance improves the level of income of the participants and income has significant and positive impact on women empowerment. The study reveals that after earning income the women spend it solely on their home maintenance as they are the builders of their homes and they are the real assets of their families

The dependency rate is also an important factor that influences the decision of women to work or not as the increase in the number of dependence in any household size the chances of participation in any economic activity also increases. The results of the study show that there is a positive relationship between the number of dependent and the decision of women to work or not as the coefficient of number of dependence has the positive sign and but not statistically significant. In our data most of the women have more children and less income so they have to work for the better future of their children, smooth consumption and also for the marriages of their daughters and sons. So, women having their own income sources would be more able to make decisions about the household affairs as compare to those women who are not working. The coefficient of household size having negative sign but statistically significant, indicates that as the family size increases, women chances to work outside home decreases.

The variable household head is an important factor that influences the women empowerment. Household head tends to have positive impact on the women empowerment as in our study most of the household are headed by male members of the families as well as most of the women are married so they have permission and freedom to work outside or inside their home to smooth their consumption patterns. The results indicates that the coefficient of household head has positive sign and statistically highly significant impact on women decision to work as women empowerment increases by the freedom of working outside the house and earning income. This is the universal fact that most of the societies of Faisalabad are poor so they are conservative and do not allowed the women to move freely and do any job outside their houses but if they are associated with their husbands then their freedom to work outside the house also increases.

Civil status is also very important factor that influence the female decision either to work or not (Chowdhury & Chowdhury, 2011). In our data 88 percent women were married so the married women need more income as compared to the widow and single women to fulfill their needs. The coefficient of civil status has the positive sign which shows that married women are more independent to work outside and participate in microfinance activity as compare to unmarried or single women. This is because our social setup does not allow unmarried women to work outside their homes and move freely. So having the married status the probability to participate in economic activities also increase and this leads to rise in the decision making power regarding social and economic activities.

The value of coefficient representing the family system of the respondents is statistically significant and has the positive sign, which shows the positive relationship between the family system and the women decision to participate in any economic activity. Women with the joint family system have the greater chances to join any economic activity as in joint family system women have the facility to look after their children by their other family members. So, family system has greater impact on the women empowerment [24]. The coefficient of household size is statistically significant and has the negative sign, which represents the negative relationship between the women decision to working or not and the household size, as the family size increase the chances to work by women decrease. With large number of family member and whome need to manage their household affairs by themselves and their probability to participation in any job especially outside their homes is very limited.

In our data, most of the respondent women start work because of the presence of factory or mills like glove factory, dressmaking factory etc. as it make easy to bring dresses and gloves from these factories and make it at home. The coefficient of presence of factory or mill in the vriety has a positive sign and plays statistically significant impact on the working decision of women. This availability creates easy for women who are willing to. The ownership of valuables things like mobile phones and T.V by females also increase the chances of women to join economic activity at home or outside. In our results the coefficient of all these assets have the positive sign and the ownership of mobile phones by females is statistically significant, showing that in the present era of technology the mobile use has been increase so the mobile phone also have great impact on the female decision making power regarding their work.

Women only participate in any economic activity or decide to go outside the homes only because of their children. For their children have better education. The value of coefficient representing educational expenditures is positive and statistically significant, which indicates that there is positive relationship between working women and the educational expenditures of their children. As the working women have their own income resources and they mostly spend this income on their childrens education, clothes and entertainment as well. These results not only to empower the women themselves but also their households.

CONCLUSIONS

The results of this present study have significant policy implications. Governments and policy makers should include it in their development plans to easy the accessibility of microfinance institutes to all the under developed areas of the country at the cheap rates. There is also a need in the rural areas to improve their infrastructure and make them enable to have enough amount of loan as they needed at the low rate of collateral and for this purpose the intervention of government in the credit market is utmost important. Financial institutions and commercial banks should be bound to entertain the small loaners at least some of the proportion of their richer and regular customers.

The results of this study suggest that the policy makers should overcome the economic and social constraints to make easy access to microcredit of the poor people. Government should encourage the poor people to take participation in productive activities after getting loan and used it to produce more income, as it is most important for their own household welfare as well as for the betterment of the economy. This would also be decreasing the liquidity constraints and would make it possible for the surety of the repayment of loan. The microfinance institutions should also decrease the mark up rate as most of the poor people do not apply for credit because of their high markup rate as they are enable to this high mark up.

Governments should themselves provide funding to the institutes of formal credit and take initiative steps to start new microfinance programs having the objective of poverty alleviation and welfare of the households. While the existing NGOs and institutions of microfinance should be encouraged to get the poor households out of vulnerability and poverty.

RFERENCES

Adebowale, S. A., Adepoju, O. T., & Fagbamigbe, F. A. (2011). Child spacing and parity progression: Implication for maternal nutritional status among women in Ekiti communities, Southwestern Nigeria. Pakistan Journal of Nutrition, 10(5), 485-491.

Aubrey, L.A. (2002). African Americans in the United States and African studies. African issues, 30(2): p. 19-23.

Blundell, R., & Costa Dias, M. (2000). Evaluation methods for non-experimental data. Fiscal studies, 21(4), 427-468.

Chowdhury, S.S. & Chowdhury S.A. (2011) Microfinance and women empowerment: A panel data analysis using evidence from rural Bangladesh. International journal of economics and finance, 3(5): p. 86-96.

Cull, R., Asli Demirgüç-Kunt, A., & Morduch, J. (2009). Microfinance meets the market. Journal of Economic perspectives, 23(1), 167-92.

Duso, T. (2005). Lobbying and regulation in a political economy: evidence from the US cellular industry. Public Choice, 122(3-4), 251-276.

Felder-Kuzu, N. (2008). Kleiner Einsatz, grosse Wirkung: Mikrofinanzierung und Mikrofranchising-Modelle gegen die Armut. Rüffer & Rub. Available at https://www.die-gdi.de/uploads/media/DP_23.2017.pdf

Hermes, N., & Lensink, R. (2007). The empirics of microfinance: what do we know?. The Economic Journal, 117(517), F1-F10.

Hermes, N., & Lensink, R. (2011). Microfinance: its impact, outreach, and sustainability. World development, 39(6), 875-881.

Hunt, J., & Kasynathan, N. (2001). Pathways to empowerment? Reflections on microfinance and transformation in gender relations in South Asia. Gender & Development, 9(1), 42-52.

Jamal, T. & Kaukab, I. (2007). Women's Role in Agriculture in Pakistan. Science International-Lahore, 19(1): 75.

Kabeer, N. (2005). Gender equality and women's empowerment: A critical analysis of the third millennium development goal 1. Gender & Development, 13(1), 13-24.

Kabeer, N. (2005). Is microfinance a'magic bullet'for women's empowerment? Analysis of findings from South Asia. Economic and Political weekly, 4709-4718.

Kayani, S. A. (2014). Women and Politics in Pakistan: Issues and Constrains. PUTAJ-Humanities and Social Sciences, 21(1), 169-178.

Khan, R. E. A., & Noreen, S. (2012). Microfinance and women empowerment: A case study of District Bahawalpur (Pakistan). African Journal of Business Management, 6(12), 4514-4521.

Lokshin, M., & Sajaia, Z. (2004). Maximum likelihood estimation of endogenous switching regression models. The Stata Journal, 4(3), 282-289.

Mayoux, L. (2001). Impact assessment of microfinance: Towards a sustainable learning process. EDIAIS Application guidance note. Available at: arabic.microfinancegateway.org

Panichkul, S. (2018). Research Ethics in Obstetrics and Gynecology. Thai Journal of Obstetrics and Gynaecology, 142-148.

Pitt, M., Khandker, S., & Cartwright, J. (2003). Does micro-credit empower women? Evidence from Bangladesh. The World Bank.

Sambhaji, K. D. (2013). Empowerment Of Women Through Self Help Groups (Doctoral dissertation, Mahatma Phule Krishi Vidyapeeth, Rahuri.). Available at: http://krishikosh.egranth.ac.in/handle/1/5810006800

Shrawat, A. (2017). Personal Laws and Maintenance Claims. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2927942

Stelmach, W., Kaczmarczyk-Chałas, K., Mianowany, M., & Drygas, W. (2004). The impact of income and education on medicine consumption in a representative sample of Lodz inhabitants between the ages of 18-64 years. Przeglad lekarski, 61(5), 498-502.

Strasser, G. (2014). The Grameen Bank and Beyond the Millennium Development Goals: Microfinance and Poverty Alleviation. Available at http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A726173&dswid=-5076

Weiss, J., & Montgomery, H. (2005). Great expectations: microfinance and poverty reduction in Asia and Latin America. Oxford Development Studies, 33(3-4), 391-416.

Zyromski, B., Bryant Jr, A., & Gerler Jr, E. R. (2011). Succeeding in school: The online reflections of Native American and other minority students. The Journal of Humanistic Counseling, 50(1), 99-118.