



HOW DOES MICROCREDIT IMPROVE WOMEN'S SOCIOECONOMIC STATUS? EMPIRICAL EVIDENCE FROM BALOCHISTAN

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ABSTRACT

This study aims to examine the impact of microcredit on women's socio-economic status. Loan-usage data was collected through primary sources using a structured questionnaire survey. A sample of 250 women entrepreneurs was taken from the Quetta district. Cross-tabulation and Chi-square analysis were used to see if the participation of women in the microcredit program significantly improves their welfare at the household level. Paired samples t-test was used to examine whether there is a significant difference in women's mean income in pre-and post-microcredit intervention, while a Log-linear multiple regression analysis was employed to estimate the impact of key determinants that contributes to enhancing women's income. The study shows that microcredit improves women's freedom over household matters and assets. We found that most women involved in folk business got empowered because of their access to credit, whereas some have little control over the use of credit, generated



income and are not better off. The findings of this study suggest that overall microcredit borrowing has a positive and statistically significant impact on women's earnings and their households' welfare.

Keywords: Microcredit, Women's Socioeconomic Status, Earnings, Households' Decision

INTRODUCTION

Micro-credit programs have been considered a source of poverty reduction and socio-economic empowerment in the developing world. According to Amartya Sen (1999), development is termed as increasing freedom, especially for women, which is the most vulnerable segment of the less developed societies. Therefore, microcredit provides the best sustainable source of timely funding to low-income households to acquire and control essential household assets and meet various unforeseen financial expenses. This program benefited the growth of its clients in the developing countries from 17 million in 1997 to about 155 million clients in 2008, showing overall 847.4% growth (Daley-Harris, 2009). Microcredit, particularly profitable credits, have been identified to enhance per capita household income (Imai & Azam, 2012), increase households' multifaceted welfare and expand the standard of living of the poorest quintile (Imai, Arun, & Annim, 2010; Adjei, Arun, & Hossain, 2009).

Similarly, micro-credit also has been experienced as the protection of low-income households, especially for women existing and working in the informal sector such as women folks and other intra-home business activities. It is also termed as a risk minimizer instrument that benefits low-income households escape poverty traps (Dercon, 2003) and to cope with the financial outcomes of life-cycle menaces (Binnendijk, Koren, & Dror, 2012). Nevertheless, women over the years have expanded their rich learning and educational experiences through their participation in micro-credit plans, which, in turn, have robust implications for their self-representation and personality.

Much of the existing literature empirically investigated the robust association between microcredit and women's empowerment in the recent past. The concept of socio-economic empowerment of women through microfinance was first adopted by Dr. Muhammad Yonus in Bangladesh in (1970). According to him, poverty and empowerment have remained the foremost problems in Bangladesh over the years. Thus he proposed that microfinance is one of the main instruments to cope with poverty and empower women on a sustainable basis. The same phenomenon was explored by (Vijayalakshmi & Valarmathi, 2008) in India. They established that Microcredit is considered the key strategy in improving poverty, social indicators such as knowledge, income, assets, self-worthiness,



and standard of living. Whereas some schools of thought argue that microfinance has assisted women in increasing their income capabilities, leading to more confidence and capability to cope with traditional irregularities (Hashemi, et al., 1996; Pitt & Khandker, 1998; Rahman, 2001; Kabeer, 2001). However, some of the empirical studies argue that microfinance helps individuals expand households' earnings, stabilize household expenditure, and more significantly strengthens women to encounter economic instabilities (Ledgerwood, 1998; Robinson, 2001; Murdugh, & Hashemi, 2003).

Similarly, the other existing literature suggests that microfinance has been credited with empowering women entrepreneurs to build businesses and adding incremental income to their households. Furthermore, microcredit has been attributed to enhancing other financial consequences, including income and savings and the accumulation of household assets, improving non-financial outcomes such as nutrition and health awareness. In addition, microfinance pacifies women's family empowerment, owning of housing, social cohesion and job creation (Afrane, 2002, Cohen and Barnes, 1996, Barnes and Keogh, 1999, Beck et al., 2004, Hietalahti and Linden, 2006, Kamran & Ghalib, 2012; Hossain & Knight, 2008, Odell, 2010; Wright, 2000 ; Khandker, 2001). Aruna and Jyothirmayi (2011) studied the effect of the microcredit program on women's empowerment. The paper results revealed that microcredit had a significant influence on the socioeconomic status of women. These socioeconomic indicators are considered as economic conditions, decision-making supremacy at the household level, education, and self-worthiness. According to McIntosh, Villaran, and Wydick (2011), access to microcredit is primarily linked to reasonable improvement in indicators related to households' welfare.

The contribution of this study is in line with the existing literature on women's empowerment and micro-credit programs (Anderson & Baland, 2002; Mayoux, 1999; Mayoux, 2001). Women's empowerment has been explicitly studied and measured in multi-dimensional ways in the available existing literature. These measures comprise of physical mobility of women (Hashemi, Schuler, & Riley, 1996), control overutilization of the credit (Goetz & Sen Gupta, 1994), intra-household decision making power (Holvoet, 2005), family planning/contraception (Steele, Amin, & Naved, 2001) and domestic violence (Kim *et al.*, 2007). Therefore, the present study attempts to stimulate and direct the discussion in new dimensions by measuring microcredit as a welfare-promoting tool.

This study, therefore, aims to examine the impact of microcredit on the ability and capacity of beneficiary women to earn income for sustainable livelihood development coupled with assessing welfare effects at the household level.

METHODOLOGY



This research is based on the information collected from 300 respondents from Banks and Microfinance Institutions, including Taraqee Foundation, Khushali Banks, Balochistan Rural Support Program (BRSP), Save the Poor and other likely organizations. Structured questionnaire was used as a research strategy to get answers to the developed research questions from the respondents. Survey research is the most relevant research in the social sciences using primary data. A survey strategy is usually related to the deductive approach in establishing a framework that how a certain percentage of the population reflects or behaves in a particular way to understand the reality (Saunders et al., 2009).

In addition, a pre-test of the questionnaire was conducted by the few women respondents to remove any sort of ambiguity they faced during the questionnaire filling process. Later on, the questionnaire was further modified where deemed necessary to get appropriate data. This research paper applied the random sampling technique as a sampling strategy. Since the sampling frame covers the numbers of micro-finance institutions and Banks. Therefore, the Random Sampling Technique is one of the most suitable procedures in drawing random samples from a population. The probability sampling technique has also been applied for this research paper.

Initially, 300 women borrowers were contacted through a self-administered questionnaire filling them on their own; out of these 300 questionnaires, 50 questionnaires were rejected because of missing data and high response bias and therefore, we were left with a minimum sample size of 250. The entire data was collected through primary sources. The self-structured questionnaire was employed as the main instrument for data collection. A self-structured questionnaire is weighted as the most suitable data collection instrument for a survey study. Content validity index (CVI) was used to measure the validity of items. In this study, S-CVI was computed as .86 which meets the minimum acceptable criteria, i.e., SCVI = 80 or above. Cronbach 's Alpha test was used to ensure that whether questions listed in the questionnaire have internal consistency. The value of Cronbach 's Alpha was computed as .76 which satisfies the minimum acceptable criteria i.e. .70 or above.

The desired sample size was determined using the given formula (Kothari, 2007).

$$n = \frac{Z^2 p q N}{e^2 (N - 1) + Z^2 p q}$$

Where

N = Population totality

n = the sample size of a finite population

z = the standard normal variable at the desired confidence level



p = Population proportion.

e = acceptable margin of error/precision (0.05)

$$n = \frac{(1.96)^2 (0.3) (0.7) (3750)}{0.0025 (3699) + 3.8416 (0.3) (0.7)}$$

n = 299 or approximately 300

DATA ANALYSIS TECHNIQUE

Cross tabulation, percentages and descriptive analysis were used to analyze the data. Log-linear multiple regression analysis was run to investigate the impact of the key determinants on women's earnings. Paired samples t-test was employed to study whether there is a significant difference in mean income in pre-and post-microcredit intervention. Chi-square test of association was used to see the difference in the proportion of opinions of respondents regarding their role at a household level before and after access to micro-credit program.

In this study, the results are reported in three dimensions: The Demographic characteristics coupled with Cross-Tabulation of demographic data, Regression Analysis and Paired *t* - Test were operated to show the differences in income level of the respondents, while Chi-Square Analysis was employed to investigate the association between microcredit program and women's empowerment at household level.

Table 1: Age Structure, Education, Family Structure and Income Level of Respondents

Demographic Variables	Grouping	Frequency	Percentage
Age Structure	15 -30	56	22.4
	31 -45	118	47.2
	46 and above	76	30.4
Level of Education	Below Matriculation	85	34.0
	Intermediate	68	27.2
	Bachelor	63	25.2
	Above Bachelor	34	13.6
Family Structure	Nuclear	137	54.8
	Extended (Joint)	113	45.2
Monthly Income (thousand)	Below 5000	23	9.2
	5001 – 15000	76	30.4
	15001 – 25000	87	34..8
	25001 and above	64	25.6

Source: Field survey 2018



Table 1 represents the demographic structure of the female respondents characterized by age, level of education, family structure and income level, respectively. The first section of Table 1 describes the age of the respondents categorized into three groups, 15-30, 31-45 and 45 and above. According to the table, 56 (23%) of the respondents fall in the group 15-30, while (47%) of the female borrowers belong to the group 31-45 and the remaining 76 (30%) of the respondents were distributed in the group 46 and above. The next section determines the educational level of the respondent where about 85 (34%) of the female respondents have education below matriculation, 68 (27%) having Intermediate, while 63 (25%) of the respondents have Bachelor certificate and the remaining 34 (14%) have above Bachelor's degree. The next part of the table relates to the family structure of the respondents. As 137 (54%) of the respondents fall in joint family structure, the rest 113(45%) fall in the nuclear category. The final part of the table denotes the income level of the respondents as shown by data only (23) 9% of the respondents receive Rs. 5000 income and below. On the other hand, data reflects that (76) 30% of the respondents get monthly earnings that range between Rs.5001 to Rs. 15000, whereas (87) 35% of the participants earn income between Rs.15001 to 25000 and 64 (26%) female respondents were getting monthly income above Rs.25,0000.

I. Multiple Regression

The multiple regression and diagnostic test results are presented below in table 2 where it interprets the log-linear estimates of women's income (ln Y) as explained by the explanatory variables.

Table 2: Log-Linear Earnings Regression

Variables	Coefficients	t-Statistics	Sig.	Tolerance	VIF
Constant	8.753	53.290	.000*		
Credit Received	.312	4.630	.000*	.669	1.496
Years of Schooling	.206	3.668	.000*	.963	1.039
Experience	.168	2.513	.013*	.676	1.480
Household Size	.133	2.011	.045*	.692	1.444
Type of Family	.088	1.334	.184	.693	1.445
R² = .511 F = 26.14* Durbin Watson Test = 2.10* BPG Test = 4.0134*					

Note: *indicates significance at 5% level.



The multiple regression results presented in Table 2 show the economic welfare of the female respondents as measured by the current income level and its variations are linearly explained by credit received years of schooling, years of experience, household size and type of family, respectively.

Almost all the explanatory variables are significant and contribute to improving the individuals' income. For example, an additional year of schooling increases income by 21%, while an extra amount of credit received raises income by 31%, whereas an additional year of experience causes to increase the income level by 17%; this was followed by household size which causes 13% variation in earnings. However, the regression coefficient of type of family is insignificant and found to have no relation to income. The validity and goodness of fit model are measured by the F-statistic and R^2 . R^2 is moderately high, which shows that independent variables explain the dependent variable with impartially high variation. (i.e. .51%). The F- statistic of the multiple regression is significant (i.e p-value <0.05); thus, overall, all explanatory variables predict the dependent variable significantly well. For multicollinearity diagnostics, both tolerance (should be greater .20) and VIF values (should be less than 10) meet the standard criteria. This suggests that our model is free of a multicollinearity problem. While the value of the Durbin-Watson test is close to 2, which shows that there is no sufficient evidence of autocorrection in the model.

II. Implication of aired Samples t-test

H_1 : That there is a significant difference in women's income in pre-and post-microcredit intervention.

Table 3: Descriptive Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Income of female borrowers before access to credit.	15735.00	250	7751.078	447.509
Income of female borrowers after access to credit.	21280.00	250	8350.691	482.127

The results presented in table 3 represent that the average earnings of the sample of 250 female borrowers before joining the Microcredit Program (MCP) was estimated at Rs.15735 while after joining the MCP it was estimated at Rs.21280.,Is it, therefore, revealed that there is a significant increase in women's earnings after joining the MCP.



Table 4: Paired Samples t-Test

Mean	Standard Deviation	Std. Error Mean	T-Statistic	Degree of Freedom	Sig.
-5545.000	5911.171	341.282	-16.248	249	.000

The result of paired samples t-test was significant since the computed t-score is relatively higher. The probability value is very small ($p < 0.05$), suggesting that the null hypothesis of no difference is rejected at the 5% significance level. It is therefore, concluded that the mean income of respondents after linking to MCP is significantly higher than the mean income before accessing MCP. This suggests that the mean income of the female borrowers has increased significantly after accessing to the MCP.

III. Chi-Square Analysis of Association between Micro – Credit Program and Women’s Decision Making at the Household Level.

I. Women’s Freedom of Movement

***H₁*: Participation in the microcredit program significantly improves women’s physical mobility**

Table 5: Association between Access to Credit and Women’s Freedom of Movement

Freedom of Movement or Visit outside Works	Access to Credit		Degree of Freedom	Cramer Value	Chi-Square Value
	Before	After			
Myself (Alone)	70 (28.0%)	98(39.2%)	2	.175	15.34**
Only Husband	108 (43.2%)	67 (26.8%)			
Jointly	72 (28.2%)	85 (34.0%)			

Source: Field survey 2018

Note: 1. The facts placed in parentheses show the proportions of clients before and after access to credit.

2. ** denotes significance level at 1% and 5%.



Women's freedom of movement is considered an important indicator of women's empowerment involved in folkways business. Based on this perception, we asked respondents to indicate their response regarding their freedom of movement in terms of visiting markets before and after receiving a loan from line departments. As presented in table 1, 70(28. %) of the respondents, can move alone to visit the marketplaces; nonetheless, after access to microcredit, women's freedom of movement owned by women by themselves increased up to 98 (39%). This suggests that decision-making power about women's ability to move regarding their business and household activities before and after accessing of credit has significantly improved.

The computed chi-square value is significant at the 5% significance level, leading us to conclude that there is a significant improvement in women's mobility after access to the credit program.

II. Use of Income

***H₁*: Participation in microcredit program significantly improves women's power over the use of Income**

Table 6. Women's Power over Use of Income Before and After Access to Credit

Utilization of Income	Access to Credit		Degree of Freedom	Cramer Value	Chi-Square Value
	Before	After			
Myself	43 (17.2%)	47(18.8%)	2	.114	2.12
Only Husband	112 (44.8%)	96 (38.4%)			
Jointly	95 (38.0%)	107 (42.8%)			

Note: 1. The facts placed in parentheses show the proportions of clients before and after access to credit.

2. ** denotes significance level at 1% and 5%.

Results presented in table 6 provide the basis for testing the hypothesis which depicts that there exists insignificant association between access to credit (before & after) and utilization of income. The data further revealed that before access to micro-credit the utilization of income by loaners was about 17% and thereafter increased to 19% accordingly, before connecting to the micro credit, the use of the credit and generated income by women-owned by husband was about 49% and then significantly decreased to



38%. This suggests that the use of credit does not significantly increase through access to microcredit.

The calculated value of chi-square statistics is highly insignificant 5% level of significance; therefore, it concludes that there exists insignificance difference in using of income earned after access to the micro-credit program.

III. Trading of Folk Goods

***H₁*. Participation in the microcredit program significantly improves women's role in the trading of Folk goods**

Table 7.: Trading of Folk Goods before and After Access to Credit

Trading of Folk Goods	Access to Credit		Degree of Freedom	Crammer Value	Chi-Square Value
	Before	After			
Myself	52 (20.8%)	77(30.8%)	2	.225	25.28**
Only Husband	127 (50.8%)	72 (28.8%)			
Jointly	71 (28.4%)	101 (40.4%)			

Note: 1. The facts placed in parentheses show the proportions of clients before and after access to credit.

2. ** denotes significance level at 1% and 5%.

The results presented in Table 7 describes the perception of respondents regarding trade of goods before and after access to credit. A perusal of the given table provides that there are significant differences in trade of goods after access to the credit as before involvement with microcredit program 21% of the respondents owned trade of goods by themselves whereas it was increased to 31% after involvement in access to the credit.

The value chi-square test was also significant at 5% level of significance and shows very significance differences in trade of goods before and after access to the credit.

IV. Use of Household Assets

Hypothesis *H₁*. Participation in microcredit program significantly improves women's control over household assets.



Table 8: Women's Ownership of Household Assets Before and After Access to Credit

Possession of Household Assets	Access to Credit		Degree of freedom	Cramer Value	Chi-square Value
	Before	After			
Myself	32 (12.8%)	65(26.0%)	2	.191	18.25**
Husband	131 (52.4%)	92 (36.8%)			
Jointly	87 (34.8%)	93 (37.2%)			

Note: 1. The facts placed in parentheses show the proportions of clients before and after access to credit.

2. ** denotes significance level at 1% and 5%.

Access and use of household assets such as the control on the utility of gold, capital, and possession of houses have been considered as significant indicators of women's economic security and empowerment. The results summarized in table 8 show that 13% of the respondents before access to credit had control over household resources, which later increased to 26% after involvement in the microcredit program. Similarly, the husband's role in controlling over household assets decreased from 52% to 37%. This suggests that microcredit significantly improves women's authority and control over household assets.

The Chi-Square statistic is significant at 5% level of significance. Hence, participation in microcredit program significantly improves women's authority over household assets.

V. Education of Children

Hypothesis H_1 : Participation in a microcredit program significantly improves women's role in schooling children.



Table 9: Role of Women in Schooling of Children Before and After Access to Credit

Education of Children	Access to Credit		Degree of freedom	Cramer Value	Chi-square Value
	Before	After			
Myself	42 (16.8%)	78(31.2%)	2	.173	14.98**
Only Husband	105 (42.0%)	79(31.6%)			
Jointly	103 (41.2%)	93 (37.2%)			

Note: 1. The facts placed in parentheses show the proportions of clients before and after access to credit.

2. ** denotes significance level at 1% and 5%.

Schooling of children is also a significant indicator of women’s empowerment in terms of decision making. Based on this perception, the respondents were asked about their freedom and contribution in making decision regarding the schooling of children. As presented in Table 9, 42 (17%) of the respondents owned decision-making power regarding children's schooling before access to microcredit; whereas, after access to microcredit, the decision power regarding the schooling of children has been increased up to 79 (32%). This again suggests that decision-making power about children's schooling before and after access credit has significantly improved. However, in most cases, both wife and husband jointly take the decisions.

The computed chi-square value is significant at the 5 % level of significance, suggesting that there exists a meaningful relationship between the schooling of children and access to the market.

MAJOR FINDINGS AND DISCUSSIONS

The findings of this paper revealed that the microcredit scheme is an effective instrument in promoting and enhancing women’s socioeconomic wellbeing for almost all indicators such as household decision making, family decision making, mobility and income generation. The results of this study are stable with Pi, M. (2015) results, which revealed that microfinance is found to be the important tool in fostering women’s household welfare through familial decision making, economic security, freedom of mobility and legal awareness. Analyzing key variables such as in a log-linear regression suggests that the amount of credit received and years of schooling of borrowers have statistically significant



impact on income level. Since women entrepreneur with higher education tend to utilize loans more effectively and become more innovative to generate more income.

We also found moderately limited assessments of “Classical” self-sustained propositions of micro-credit and income where the households borrow and generate income from the similar “pan”. The findings differ from the microfinance’s outcomes in Africa (Honohan & Beck, 2007; Mosley & Rock, 2004). Due to cultural and financial constraints, our society comparatively more limits women's physical and social mobility and, therefore less participates in business activities, whereas, in African countries, women have more freedom and liberalization in both intra-household and outdoor matters. While considering the effect of microcredit on women’s social status at household level, this study provides evidence that control over earnings from business is inconclusive and inconsistent with across the existing literature. For example, findings from Zimbabwe revealed that participation in the microcredit program were also not significantly increased earnings; however,, in most cases, both wife and husband jointly take the decisions and consult each other in family matters (Barnes, Keogh, *et al.*, 2001).

Whereas the study results also support the findings of (Sivachithappa ,2013). He established that microfinance positively influences income level and household welfare by women borrowers. The study further argues that microcredit programs have been responsible for alleviating poverty and vulnerability by accumulating asset /capital formation at the household level. Similar to the findings of Swain and Wallentin (2009), this study established that women benefiting high from loan cycles of the Khawashil Bank microcredit scheme experienced a substantial increase in the income level compared to their counterparts in the first loan cycle.

CONCLUSION AND POLICY IMPLICATIONS

Out of 300 structured questionnaires, 250 complete questionnaires were received with a minimum sample size, whereas 50 questionnaires were excluded as they were not fulfilling the research requirements one way or the other. Multiple tests were applied using the Statistical Package social sciences (SPSS) based on the available data. Study reveals the socioeconomic welfare-enhancing ability of microcredit programs in Balochistan. The study's findings also answer the research question: Does microcredit matter improving women’s socioeconomic status? In order to get the answer to this question, multiple tests were applied to the data collected through structured questionnaires and thus, the data were analyzed scientifically. The empirical analysis under chi-square and cross-tabulation tests show a positive association with households’ welfare, whereas paired samples t-test and regression analysis show a significant positive impact on the improvement of women’s



income. However, its influences expand women's income very substantially if combined with the level of education. The study further established that women beneficiaries of the microcredit scheme had been more empowered by involving themselves in income generation activities.

The outcomes of this study may be considered to develop women-specific strategies, policies and programs that would reduce their vulnerability and enhance decision-making power at the household level, particularly in Balochistan. The empirical findings of this study may possibly be used as a guideline by the policymakers, line departments and other relevant stakeholders to formulate and design their policies according to the ever-changing dynamics of women's contribution in households' 'decision-making power' and socialization level in the study area which is primarily characterized and controlled by a male-dominated society. Such policies could be socially enduring, culturally acceptable, economically feasible, politically stable, gender subtle and environmentally sustainable and applicable in the study area. The findings and recommendations of this study will likely find applicability in the study area. Hence, it paves the way for a future research endeavor to improve the existing situation further.

It is, therefore, recommended for the policymakers to ensure the implementation of subsidy/ margin-oriented schemes through the MCPs so that repay and recovery process can be guaranteed coupled with reducing the transaction costs. The government and other line institutions may with the sense of responsivity, arrange and launch specific internship programs for the member of MCP who are promoting themselves beyond consumptive credit to the investment/income generation credit. Besides that, NGOs need to support and coordinate with the government to implement this program and focus on their core functions as they are not an alternative to the government machinery.

While microcredit and education explain significant improvement in women's earning and households' welfare, there are other exogenous factors such as access and communication to urban markets where rural women can trade their products and services.

The cottage industry can be encouraged through microcredit if handicraft entrepreneurs receive sufficient market returns and easy access to relevant information and market inputs. Therefore, in collaboration with other supporting institutions, the government may take initiatives to reduce poverty by providing equal and transparent microcredit program to the women (involved in folk art) thus, ultimately guarantee sustainable livelihood and welfare of the poorest quintile of the most disadvantaged areas.



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