



MICRO-CREDIT INITIATIVES FOR WOMEN'S EQUITABLE AND SUSTAINABLE DEVELOPMENT IN SOUTHWESTERN NIGERIA

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ABSTRACT: Women empowerment is a pivotal issue of developing countries, particularly in Asia and Africa. Zero poverty and gender equality are the distinctive goals among SDGs of the UN. Micro credit has been widely recognized in recent development to have positive consequences of societal economic development. However, most studies examine the impact of micro credit on some narrow indicators of well-being such as income, poverty, education and health. While these indicators do measure and represent the standard of living of the society, and are important development objectives, they focus only on the material aspect of well-being. Therefore, it does not really shed light on whether micro credit is associated with quality of life which is the subjective aspect of economic development. This raises the question of whether micro credit also leads to better quality of life. This research attempts to answer this question by encompassing the investigation not only on the impact of micro credit and its domains loan duration, training and loan size on income, but also on quality of life. The Multinomial logit model analysis technique was used to make empirical evidence to show the association between microcredit and quality of life. The cross sectional primary data that were obtained from a survey questionnaire of 400 women borrowers of the three microcredit provided banks, namely Microfinance bank, Agriculture credit and Loan Bank, Cooperatives and state poverty alleviation program in southwest was used for the analysis. The results show that micro credit and its three domains loan duration, training and loan size have an important impact on household income and on quality of life. These findings indicate that microcredit is an essential investment to achieve good quality of life in particularly economically undeveloped states and Local Government.

KEYWORDS: Women Empowerment, Microfinance Bank, Poverty Alleviation Program and Multinomial Logit Model.



INTRODUCTION

Microcredit, which is generally recognized as a method to improve poor people's condition. It supports poor to come out of poverty by taking small loans for small scale income generating activities [1]. Indeed, microcredit has been proposed as one of the potential causes that might elucidate why progress accelerates across states or communities through it. Microcredit encompasses both these formal and informal arrangements [3]. The stream in financial services indicates momentous growth in the sector. It changes all the previous concepts of the use of financial services by poor people. It broke all the perceptions about the poor not being trustworthy of repayment. It has generated a variety of microcredit that exhibits the trustworthiness and capability of the poor to generate and return the loans and mobilize the money through the economy [4]. There are many microfinance providers reported in 2023 that have more than 100 million clients, among whom 74% were women users [5]. Microfinance services predominantly target women borrowers. The reason is not just because women are the poorer of the two genders, but, as the evidence suggests, they are more creditworthy in loan repayment as compared to men. However, another reason is that as mothers, women mostly use their improved income toward household and child welfare [6]. Microfinance services help women out of poverty more than their male counterparts [7].

Furthermore, it is an approach to facilitate women and ensuring a stable population level who are the poorest citizens in a country. Similarly, women comprise 2/3 of the poorest citizens in each country of the world, according to the 1997 United Nations Development Report [8]. Population growth will be lower by supporting women's efforts to achieve economic self-sufficiency. Unfortunately, it's a very crucial reality that Pakistan ranks third on the list of the most dangerous countries for the women in their survival in the whole world, while Afghanistan has first and Congo has second rank, respectively [9]. Especially in Nigeria, women are struggling daily for their basic rights, self-recognition, & respect. Women's participation in economic activities is a status-reducing rather than a status-enhancing activity in Nigeria. There are social constraints on economic activity and mobility of women in a patriarchal society like ours [12]. Thus, these researchers demonstrate that microcredit contributes in the highest standard of living, which is definitely a significant development objective, especially for women. However, it would be realized that development is not solely referred to the material or physical aspects of life, but it also emphasizes quality of life. On the other hand the query is what establishes a good quality of life? However, the main challenge of the underdeveloped countries has to face poorer quality of life regarding women; as a result, the need to address the concerns of women in international development has been well publicized since the United Nations Women's Year (1975) and the following Decade for Women (1976-85). It was shown that women and children are the most vulnerable to the adverse consequence of the diversion of resources from health and education and withdrawal of subsidies for food, medical care and education [13]. Another study by Goulet [14] might be a helpful perspective in the development of the inner meaning of quality life which comprises the three fundamental standards, which are sustenance, self-esteem and freedom. Although the first basic value is related to having the basic human needs such as food, shelter, education and health, the other two are subjective in nature: having a sense of worth and self-respect and having full control over oneself.



Each nation is focusing for its economic development by using the indicating ladder of quality of life. Human experiences have been commonly expressed in terms of quality of life. Quality of life is meant to be the extent to which individuals of a group's perceived satisfaction or dissatisfaction in various life domains represents how well human needs are met. In this concern, several programs have been developed to deal with this situation, such as the United Nations Development Program (UNDP) and International Financial Institutions (IFIs), particularly the World Bank and United Nations, focused on the millennium development goal that has elevated poverty alleviation to the policy forefront [15]. In this regard, microcredit and its three domains—loan duration, training and loan size—play a significant role in the development of poor women's quality of life.

THE CONCEPTUAL FRAMEWORK

The concept of quality of life was conceived as a distinct option for the more problematic idea of material welfare in the wealthiest society and was viewed the new, multidimensional and a great deal more mind-stunning goals of societal development. Consequently, the quality of life is influenced by the degree of independence, the social relationship with the environment, an individual's physical and mental health and other factors [16]. Traditionally, females are financially dependent on males. Often women are more vulnerable members of society and therefore have been marginalized. Most underdeveloped and developing countries have male-dominant societies that impose various boundaries on females. They neither travel outdoors nor are allowed to have social contact with male individuals of the community. When females have their own income, psychologically, they feel powerful because of Independence and this leads them towards a good quality of life [17,18]. Nigeria has the majority of its residents living in rural areas.

The condition of women is different in context to different areas of the world. Among developed countries, the status of women has changed compared to underdeveloped countries. In numerous underdeveloped countries such as Nigeria, India, Bangladesh and Sri Lanka largely women don't have the way to contribute and they require cheap advances to gain respectable employment. To meet these necessities various approaches have been made at distinctive means, e.g., individual projects were set up and credit surety plans were presented, but they contributed nothing to the persevering monetary improvement of women and increasing their quality of life [22]. International Labor Organization [23], widely focused that microcredit have an impact on women's livelihood. It leads to higher income that helps women to better perform their reproductive role as brokers of the health, nutritional, and educational status of other household members. It increases women's employment in microenterprises and in improving the productivity of women's income-generating activities and enhancing their quality of life. It also enhances status within the family as independent producers and providers of valuable cash resources to the household economy. This evidence comes from empirical findings of Asia [24-37] that have shown the significant, positive effect and dynamic role of microcredit on quality of life has not been denied, especially in the developing countries regarding women.



DATA AND METHOD

The Data

The data used in this study are primary data gathered through a survey questionnaire carried out 1st May-August 31st 2024 in Osogbo, Ibadan and Akure, Southwestern part of Nigeria. The sample of the study consists of 400 women borrowers of four microcredit-provided institutes, namely: Microfinance bank, Agriculture credit and Loan Bank, Cooperatives and state poverty alleviation Program, respectively. A simple random sampling method was used for the sample selection from the study.

Measures of Microcredit

There is a lack of correspondence in the literature on what establishes microcredit. Actually, There is also a discrepancy in how microcredit should be measured. On the other hand, in the current study microcredit is viewed to constitute three dimensions or components, which further contains three items (Table 1) to measure the microcredit of women borrowers. These three The dimensions of microcredit are i) loan size ([38-40]), ii) loan duration ([41,42]), and iii) loan training ([43]), used from the previous research, respectively.

Table 1: Microcredit Dimensions and Related Indicators

Dimension of Microcredit	<i>ITEMS</i>	
	i.	Loan size
	ii.	Loan Duration
	iii.	Training

The general microcredit profile of the women borrowers is obtained through a single item measure. Every women respondents are asked to assess her overall state to use of microcredit by using a Likert scale, ranging from 1 to 5. In the measurement scale of the Loan size (LS) or amount is

1 = (5000-10,000), 2 = (10,000-15,000), 3 = (15,000-20,000), 4 = (20,000-25,000), 5 = (25,000-more). While the measurement scale of the Loan duration (LD) is 1 = 1-12 months, 2 = 12-24 months, 3 = 24-36 months, 4 = 36-48 months, and 5 = 48 or more. Lastly, to measure the scale of Training (T), 1 = 1 day, 2 = 2 days, 3 = 3 days, 4 = 4 days and 5 = not at all, respectively.



Measures of Quality of Life

Whereas the quality of life investigated by [44-50]; ILO [51] they have discovered that quality of Life is influenced by many factors and conditions like accommodation, employment, income, material welfare, moral attitudes, personal and familial life, social support, stress and crisis, health-related quality of life, health services, working conditions, nourishment, education opportunities, ecological factors and others. In this study After reviewing the earlier studies, this study is able to select the four domains of quality of life, which contain 20 items (Table 2), to measure the women borrowers' quality of life. These four dimensions are

- i) **Healthy Life Improvement.** It covers four further aspects of human health, such as the purchase of food items (groceries, fruits and clothing), the intake of food items (milk, meat and fruits), the purchase of medicine recommended by a doctor, and the ability to cope with work-related stress.
- ii) **Economic life Improvement.** Under this heading it covers the following components, such as the ability to pay utility bills, house rent and transport costs; dealing with business-related matters, participation in income-generating activities and personal savings.
- iii) **Familial Life Improvement.** It consists of the following elements. These are the ability to manage spousal relations, command respect in the family, give quality time to your family and visit friends and relatives.
- iv) **Household Life Improvement.** It contains the following items: number of rooms, toilet facility, availability of drinking water, electricity connection, own consumer durables and HH assets, home appliances, media resources, communication resources and vehicles.

Table 2 : Dimensions of Quality of Life and the Related Indicators

Dimensions of Quality of Life	Items
Health Life Improvement	i. food items (grocery, fruits and clothing) ii. intake of food items (milk, meat and fruits) iii. purchase medicine by recommended doctor iv. ability to cope with work-related stress
Economic life Improvement	i. ability to pay utility bills (house rent and transport cost) ii. dealing with business related matters iii. participation income generating activities iv. personal savings
Familial Life Improvement	i. ability to manage spousal relations ii. command respect in family iii. ability to give quality time to your family iv. ability to visit friends and relatives
Household Life Improvement	i. number of rooms ii. toilet facility iii. availability of drinking water iv. home Appliances v. electricity connection vi. Vehicle vii. own consumer durables and HH assets viii. Media & Communication resources



In addition to deriving quality of life of women borrowers through the calculation of QOL as above, information with regards to the overall state of quality of life of the women borrowers is obtained through a single-item measure. Each of the women respondents is asked to assess her overall state of quality of life using a Likert scale, ranging "1" for worse, "2" for same, "3" for improved. Hence, Table 3 below shows the mean score for each dimension of quality of life. Of the four dimensions, the last domain, Household Life Improvement has been accounted as a subjective

A measure of the quality of life to evaluate the state of household quality of life of women borrowers in subjective manners such as number of rooms is 1=1 room, 2=2-3 rooms and 3=4-5 rooms. Toilet facilities are 1 = No Toilet, 2 = Toilet without Flush and 3 = Toilet with Flush. Availability of drinking water is 1 = Tap water, 2 = Hand Pump and 3 = Machine Pump. Electrical connection is measured as 1 = No connection, 2 = Temporarily connection and 3 = Full connection.

Own consumer durables and HH assets are measured by 1 = Fan, 2 = Air cooler and 3 = Air conditioner. Whereas home Appliances is measured as 1 = Refrigerator, 2 = Sewing Machine and 3 = Washing Machine. Use of media resources is measured as 1 = Radio, 2 = TV and 3 = Personal Computer. While communication resources are measured as 1 = LandLine, 2 = Mobile and 3 = Use Public call office. Use of vehicles is measured as 1= Bicycle, 2 = Motorcycle, and 3 = Car respectively. The mean score of quality of life is under below in Table 3

Table 3: Mean Score of Quality of Life

Dimensions of Quality of Life	Mean Score
Health Life Improvement	2.1275
Economic life Improvement	2.4450
Familial Life Improvement	2.1125
Household Life Improvement	1.7225
Individual assessment of their overall quality of life	1.8700

Source: "Survey, 2024 computed using STATA Version 13"

Multinomial logit model analysis

In this research, after studying the previous researches and theoretical framework, this study has selected the dependent and independent variables to design the empirical model of this research. Besides the variables microcredit and its three domains as one of the independent variables, we include other factors as control variables. Details are given below: Model QOL_i includes microcredit and its three domains or dimensions: Loan Duration, Training and Loan size respectively in Eq. 1.

$$QOL_i = \beta_0 + \beta_1 LD_i + \beta_2 T_i + \beta_3 LS_i + \beta_4 Age_i + \beta_5 Edu_i + \beta_6 FSize_i + \beta_7 MS_i + \beta_8 PAI_i + e_i \dots \quad (1)$$

As the women's borrower quality of life is a qualitative variable, the study used the Multinomial Logit and Probit Model to measure the impact of microcredit on women's borrowers' quality of life. STATA has been used for analysis. In light of the model, to analyze the impact of microcredit on women's borrowers' quality of life, women borrower's Health Life



Improvement, Economic life Improvement, Familial Life Improvement and Household Life Improvement as dependent variable while age, education, family size, personal annual income, marital status, use of microcredit, its loan duration, training and loan size are taken as independent variables. QOLi is measured in three categories: “1,” “2,” and “3.” Whereas age, education, family size, personal annual income and marital status are measured in numeric values (numbers) and these values have transformed into a scale of 1 to 5. As shown above, the women's borrower quality of life, which is the dependent variable in Eq. 1, is tabulated from overall discrete evaluations on several domains of quality of life. Whereas the household characteristics include demographic variables of the head of the household, such as age, education, family size, personal annual income and marital status in Table 4. So as to validate the findings in Eq. 1, a single-item measure of quality of life as the dependent variable is used to re-estimate the equation. The assessment in this research is the Multinomial Logit Model (MNL). The estimation results are discussed in the following section.

Table 4: Summary Statistics of the Variables

Variables	Min	Max	Mean	Std. Dev
Overall quality of life	1	3	1.970	0.6083
Loan Duration	1	4	2.385	0.6227
Training	1	5	2.645	0.9039
Loan size	3	5	4.332	0.7169
Age	1	5	2.670	1.1382
Education	1	5	2.451	1.0494
Family Size	2	4	3.110	0.6395
Marital Status	1	5	2.758	1.0661
Personal Annual Income	1	5	3.405	1.0973

Source: “Survey, 2024 computed using STATA Version 13”

THE RESULTS

Empirical Results of Multinomial Logit Model Estimation

Table 5: Results of Multinomial Logit Estimation (Full Sample)

Model 1	Dependent Variables					
Independent Variables	Worsen Relative to Improved QOL			Same QOL Relative to Improved QOL		
	1			2		
	Coefficient	Std. Error	Z	Coefficient	Std. Error	Z
Loan Duration	-1.575***	0.363	-4.33	-0.0986	0.235	-0.42
Training	-0.296	0.218	-1.36	-0.043	0.179	-0.25
Loan size	-2.005***	0.324	-6.18	-1.233***	0.278	-4.43
Age	-0.0447	0.2580	-0.17	0.9149	0.2194	0.42



Education	0.5236** *	0.2577	2.03	0.27944	0.1790	1.56
Family Size	-0.1258	0.3455	-0.36	-0.2306	0.2755	-0.84
Marital Status	-0.3398	0.2551	-1.33	-0.3224	0.1980	-1.63
Personal Annual Income	-- .2745***	0.2572	-4.96	-0.7058***	0.1815	-3.89

LR χ^2 (6) 67.45 Log likelihood -331.958 Number of obs 400

Prob > χ^2 0.0000 Pseudo R^2 0.0922

Source: "Survey, 2024 computed using STATA Version 13"

*Note: Coefficient *** is significant at the 1% ($p < 0.01$), ** is significant at the 5% ($p < 0.05$) and * is significant at the 10% ($p < 0.10$) level, respectively. Improved is the base outcome (3).*

The microcredit loan profile has been listed in Table 5. The p-value for Pearson's Chi-square tests indicates an association between women borrowers' respondents with the loan duration and training and loan size (p -value = $0.000 < 0.005$). The interpretation of results in both cases, worsen relative to improve and same relative to improve quality of life, and the predictor variables, the logit of outcome relative to the referent group are as follows. The empirical results of the multinomial logistic regression are presented in Table 5 of Eq. 1. It is found that the variation in loan duration, training and loan size are significant at 1% ($p < 0.01$) in explaining the variation in quality of life of women borrowers. These variables have accurate, predictable signs.

While other variables in which education and personal annual income are significant, age, family size, and marital status are insignificant. The results therefore confirm in loan duration (LD) the outcomes of earlier research, i.e., microcredit guides to improve the quality of life of the poor women borrowers. This finding is consistent with prior studies that also reported a positive influence of the loan duration (LD) on borrowers, such as [52-54]. On the other hand, it is in contrast to the study of [55], which reported that loan duration has a negative but significant influence on the borrower's worsening quality of life, while having a positive but insignificant effect on the borrower's same quality of life.

Similarly, in the case of Training (T), the findings support other researcher such as [56-68], that training and monthly meetings with loan officers and skill and development provision by the microcredit providers yield improved and significantly positive effects on the quality of life of women users. Whereas [69] have found negative and significant relationships (in relation to their business/project activity), those who have a higher probability to default are those borrowers who had some training. Which means that the provision of training and advice together with the loan by the same organization positively affects loan repayment and also to improvements in the borrower's skill, which leads to a better quality of life.

Likewise, with respect to loan size (LS), the larger the loan size (LS), the less likely the same quality of life is to improve, based on negative parameters established, found to be significant at 1% ($p < 0.01$). Hence, the higher the loan size, the better the quality of life of women borrowers. Hence, when a woman is a manipulator of microcredit, she is supposed to be more



experienced and wiser than the women who do not avail themselves of microcredit. Therefore, microcredit is a kind of financial service that can be a source of financing since microcredit targets women. The current study results are similar [70-73]. As a result, this research established enough evidence to reject the null hypothesis, which hypothesizes that there is no relationship between loan duration (LD), training (T), loan size (LS) and women's quality of life.

Impact of Marginal Effect

Table 6 shows the estimation results in impact of change in the explanatory variable on women's borrowers' quality of life. Marginal effect also complementary to the multinomial logit regression estimates as it relates to the impact of each explanatory variable on the predicted outcome probabilities of choice and rate of increase and decrease. For categorical variables with more than two discrete choices, the marginal effect reveals the difference in predicted probabilities for each comparison category relative to the base category as [74].

Loan Duration (LD)- In Table 6, the results indicate that the higher the marginal effect of the loan duration, if it increases by one unit, then the probability of worsening quality of life relative to improving quality of life will decrease by 21.2 percent, *ceteris paribus*. However, if a loan duration is increased by one unit, the probability of the same quality of life relative to improved quality of life will rise by 16.4%, though holding all other variables in the model constant. Whereas, the marginal effect of the loan duration of the probability of improving quality of will rises 47.8%.

Training (T) - Training (T), which was only significant that if it increases by one unit, then the the probability of worsening quality of life relative to improved quality of life will decrease by 37 percent, however, holding all other variables in the model constant. On the other hand, if training (T) increases by one unit, then the probability of the same quality of life relative to improved quality of life will increase by 25.52 percent, *ceteris paribus*. Similarly, the marginal effect of the training on the probability of improving quality of will rises 11.4% percent *ceteris paribus*.

Table 6: Marginal Effect of the MNLM (Full Sample)

Model 1	Dependent Variables					
Independent Variables	Worsen QOL 1		Same QOL 2		Improved QOL 3	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Loan Duration	-0.212***	0.383	0.0418	0.164***	0.478*	0.0284
Training	-0.037*	0.021	0.025	0.027	0.0114	0.0213
Loan size	-0.139***	0.026	-0.292	0.0336	0.168***	0.027
Age	-0.01693	0.2425	0.0251	0.0321	-0.0081	0.0276
Education	0.0417	0.0289	0.0001	0.0319	-0.0418*	0.0226
Family Size	0.0089	0.0359	-0.0356	0.0440	0.0267	0.0340



Marital Status	-0.0107	0.0267	-0.0308	0.0322	0.0415	0.0253
Personal Annual Income	-0.0985***	0.0260	-0.0059	0.02855	0.1045***	0.0217

Source: "Survey2016,16 computed using STATA Version 13".

Note: Coefficient *** is significant at the 1% ($p < 0.01$), ** is significant at the 5% ($p < 0.05$) and * is significant at the 10% ($p < 0.10$) level, respectively. Improved QOL is the base outcome (3).

Loan Size (LS)- The results show that the higher the marginal effect of the loan size, that if it increases by one unit, then the probability of worsening quality of life relative to improving quality of life will decrease by 13.9 percent, still holding all other variables in the model constant. Likewise, if loan size is increased by one unit, the probability of the same quality of life relative to improved quality of life will fall 29 percent, *ceteris paribus*. Conversely, the marginal effect of the loan size on the probability of improving quality of olifell rises 16.8 percent, even though holding all other variables in the model constant.

Age (AGE)—In Table 6, the results indicate that the higher the marginal effect of the Age (AGE), if it increases by one unit, then the probability of the quality of life of the worse group relative to the improved quality of life will decrease by 0.01 percent, *ceteris paribus*. However, if Age (AGE) is increased by one unit, the probability of the same quality of life relative to improved quality of life will rise by 0.02%, though holding all other variables in the model constant. Whereas, the marginal effect of the Age (AGE) of the probability of quality of life of the group to improve will decrease 0.008% even though holding all other variables in the model constant.

Education (EDU)—The results indicate that the higher the marginal effect of the Education (EDU), if it increases by one unit, then the probability of the quality of life of the worst group relative to the improved quality of life will increase by 0.04 percent, *ceteris paribus*. However, if Education (EDU) is increased by one unit, the probability of the same quality of life relative to improving quality of life will rise by 0.0001%, though holding all other variables in the model constant. Whereas, the marginal effect of the Education (EDU) of the probability of quality of life of the group to improve will decrease 0.04% and significantly at 10% *ceteris paribus*.

Family Size (FS)—The results indicate that the higher the marginal effect of the Family Size (FS), if it increases by one unit, then the probability of the quality of life of the worst group of relatives improving will increase by 0.008 percent, *ceteris paribus*. However, if Family Size (FS) is increased by one unit, the probability of the same quality of life relative to improved quality of life will fall by 0.03%, though holding all other variables in the model constant. Whereas, the marginal effect of the Family Size (FS) on the probability of the quality of life of the group improving will increase by 0.02% percent *ceteris paribus*.

Marital Status (MS)—The results indicate that the higher the marginal effect of the Marital Status (MS), if it increases by one unit, then the probability of quality of life of the worst group relative to improving quality of life will decrease by 0.01 percent, *ceteris paribus*. However, if Family Size (FS) is increased by one unit, the probability of the same quality of life relative to



improved quality of life will fall by 0.03%, though holding all other variables in the model constant. Whereas, the marginal effect of the Family Size (FS) on the probability of the quality of life of the group to improve will increase by 0.04%, even though holding all other variables in the model constant.

Personal Annual Income (PAI) - The results indicate that the higher the marginal effect of the Personal Annual Income (PAI), if it increases by one unit, then the probability of the quality of life of the worst group of relatives improving will decrease by 0.09 percent, ceteris paribus. However, if Personal Annual Income (PAI) is increased by one unit, the probability of the same quality of life relative to improved quality of life will fall by 0.005%, though holding all other variables in the model constant. Whereas, the marginal effect of the Family Size (FS) on the probability of the quality of life of the group improving will increase by 0.1% and is found to be significant at the 1% level ($p < 0.01$) ceteris paribus.

Multinomial Probit Model

It is necessary to assess the model for the robustness of its key findings. Thus, it is expected that The main conclusions as derived from the signs and significance level of key variable(s) should hold even when the variables are subjected to different model specifications. Therefore, an alternative measure of quality of life is employed for robustness checks. In the results estimation of the multinomial logit model, women borrowers who obtained microcredit have improved their quality of life. To verify the results are robust, they are also estimated by using the multinomial probit model. Table 7 shows that overall the model is statistically significant, as the $\text{Prob} > \chi^2 = 0.0000$.

Table 7: Results of Multinomial Probit Estimation or Robustness Check

Model 1	Dependent Variables					
Independent Variables	Worsen Relative to Improved QOL 1			Same QOL Relative to Improved QOL 2		
	Coefficient	Std. Error	Z	Coefficient	Std. Error	Z
Loan Duration	-0.965***	0.248	-3.87	0.0645	0.184	0.35
Training	-0.212	0.157	-1.35	-0.039	0.139	-0.28
Loan size	-1.388	0.219	-6.32	-0.844***	0.195	-4.38
Age	-0.0228	0.1857	0.12	0.1115	0.1639	0.68
Education	0.4348**	0.1832	2.37	0.2583**	0.1342	1.92
Family Size	-0.0498	0.2419	-0.21	-0.1404	0.2032	-0.69
Marital Status	-0.2268	0.1890	-1.20	-0.2517*	0.1527	-1.65
Personal Annual Income	-.9666***	0.1958	-4.94	-0.5484***	0.1396	-3.93

Source: "Survey, 2024 computed using STATA Version 13".

Note: Coefficient *** is significant at the 1% ($p < 0.01$), ** is significant at the 5% ($p < 0.05$) and * is significant at the 10% ($p < 0.10$) level, respectively. Improved QOL is the base outcome (3).



Loan Duration (LD)—Results shown in Table 7, in the case of worsened quality of life relative to improved quality of life, the coefficient Loan Duration (LD) is negative and significant at 1 percent, indicating that the longer the loan duration, the greater the decrease in the worsened quality of life of the women borrowers. However, there is a slight difference in the same quality of life relative to improving quality of life. The coefficient of the Loan Duration (LD) variable is positive but not significant. Estimated results of both cases worsen quality of life relative to improving quality of life and the same quality of life relative to improving quality of life. The coefficient of Training (T) is negative but not significant, indicating that the longer the Training days the less the worse or the same quality of life.

Loan Size (LS)—Assessment of the variable loan size (LS) finds the coefficient to be negative and significant, indicating that as the loan size increases, the decrease in the worsened quality of life relative to improved quality of life and the same quality of life relative to improved quality of life increases. Hence the results indicate that all the results are consistent with the results of the multinomial logit model.

Age (AGE)—The estimated result of the variable Age (AGE): the coefficient is found to be negative and insignificant in the case of worsening quality of life relative to improving quality of life. Whereas the coefficient of Age (AGE) is found to be positive, but insignificant in the case of same quality of life relative to improved quality of life, indicating that as the age (AGE) increases, the more the same quality of life relative to improvement. Hence the results indicate that all the results are consistent with the results of the multinomial logit model

Education (EDU)—In the estimated results of the variable Education (EDU), the quality of life of women borrowers in Education (EDU) is lesser for a worsened quality of life and for the same quality of life as compared to the base category, the quality of life improves. It means that the more the Education (EDU), the more likely the quality of life is to improve, based on positive parameters established. Hence, the more the Education (EDU), the better the quality of life of women borrowers. This is simply because the comparative analysis exists on categories to improve quality of life as a base and is found to be positive and significant. Henceforth the results point out that all the results are reliable with the results of the multinomial logit model.

Family Size (FS)—In the estimated results of both cases, worse quality of life relative to improved quality of life and the same quality of life relative to improved quality of life, the coefficient of Family Size (FS) is negative and insignificant, indicating that the larger the Family Size (FS), the less the worse or same quality of life relative to improve. Henceforth the results point out that all the results are reliable with the results of the multinomial logit model.

Marital Status (MS)—In the estimated results of both cases, worse quality of life relative to improved quality of life and the same quality of life relative to improved quality of life, the coefficient of Marital Status (MS) is negative and significant, indicating that the higher the Marital Status (MS), the less the worse or same quality of life relative to improvement. Accordingly, the results point out that all the results are consistent with the results of the multinomial logit model.

Personal Annual Income (PAI) - In the estimated results of both cases, quality of life relative to improving quality of life and the same quality of life relative to improving quality of life, the coefficient of Personal Annual Income (PAI) is negative and significant, indicating that the



higher the Personal Annual Income (PAI), the less the worse or same quality of life relative to improving. In view of that, the results highlighted that all the results are consistent with the results of the multinomial logit model.

CONCLUSION

The results showed that access to microfinance has a significant impact on the poverty reduction and empowerment and social status of women. It is quite logical that if a woman receives a loan and is able to reduce her poverty, she will certainly become economically empowered with a better social position; our empirical investigation supports this. Previously, economists and strategy makers have been highlighting the accretion of physical and human resources as a tool for accomplishing development goals for instance to raise income and improve the health and education level of poor women. Though these two forms of resources are essential, ignoring microcredit could lead to a letdown in attaining the full prospects of development and quality of life. From the empirical analysis and the information gathered, we may infer that the increased women's participation will increase the economic empowerment and ultimately bring in the prosperity in the family as discussed by De Brauw et al. (2014) and Duflo (2012). Therefore, microfinancing and MFIs are the most effective tools for achieving SDGs. Eight goals under SDGs of the UN, including no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, decent work and economic growth, and reducing inequality, are directly related to the lower segment of society. If we elevate the poor well above the poverty line, all these goals could easily be met in the shortest possible time. The poor have no need to compromise over food, water, quality of living, education, medication, and, above all, self-esteem. This study endorses the results of past studies. Microcredit does matter to increase material well-being (income), i.e., the quality of life of poor women. Based on the results, this research concluded that microcredit and its three domains—loan duration, training and loan size—have played a significant role in the borrower's quality of life. In the future, government and non-government agencies can increase women's quality of life through promoting microfinance institutions.

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