



Gender accessibility to credit among entrepreneurs: empirical evidence from women entrepreneurs in Kano Metropolis

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Abstract. This study was carried out to empirically assess women entrepreneurs' access to credit in Kano metropolis. The study was aimed at analyzing the maximum willingness to accept loans by women entrepreneurs and exploring the major problems hindering women entrepreneurs from fundraising for businesses in Kano Metropolis. The study employed a multi-stage random sampling to select a total of three hundred and seventy-six (376) women entrepreneurs as the sample of the study. The analysis of the data was carried out using frequency count and simple percentages to analyze the demographic characteristics of the respondents. Furthermore, the inferential statistics were done using logit models to capture the specific objectives of the study. The findings of the study revealed that high interest and collateral requirement prevent women entrepreneurs from accessing a loan from financial institutions, while religious affiliation is a major factor affecting women entrepreneurs' access to credit facilities. Based on the findings of the study, the study recommends that financial institutions should introduce and operate an Islamic finance system to encourage women entrepreneurs to go for a loan as the interest rate is one of the most important constraints to women entrepreneurs seeking financial credits. Additionally, collateral demand attached to a loan for women should be removed to encourage women entrepreneurs to raise capital.

Keywords. women, gender, entrepreneurs, finance, credit accessibility.

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1. Introduction

Entrepreneurial activity is crucial for private sector development and imperative for a country's economic prosperity. Micro, small and medium enterprises (MSMEs) create jobs and provide nurturing ground for private sector development. MSMEs play a prominent role in developing countries that are characterized by high levels of unemployment and poverty (Abubakar et al., 2013). Entrepreneurship has been regarded as a major contributing factor to economic growth and poverty alleviation both in urban and rural areas. The role of entrepreneurship and entrepreneurial culture in economic and social development has often been underestimated. Over the years, however, it has become increasingly apparent that entrepreneurship indeed contributes to economic development. Nevertheless, significant numbers of enterprises are owned by men (International Labour Organization (ILO), 2006).

In the past, it was not common to see women entrepreneurs worldwide, especially in developing countries. The idea and practice of women's entrepreneurship is a recent

phenomenon. Until the 1980's, little was known about women's entrepreneurship both in practice and research, which made its focus entirely on men. Scientific discourse about women's entrepreneurship and women-owned and run organizations is just the development of 1980s (ILO, 2006). Women entrepreneurship plays an important role in the economic development of a country. Ochola and Okelo (2013) found that women entrepreneurs enhance livelihoods within the family and lead to wealth creation at the national level. Women's involvement in entrepreneurship is applauded as a necessary precursor to the economic growth of nations (Richardson et al., 2004).

Women in Nigeria have been known to operate SMEs businesses effectively in areas such as food production and preservation, craft and cottage industries, trading, farming, and services provision. The deterioration of the economic situation since the 1980s adversely affected the women economic condition globally. Hence, it exposed them to a high poverty level situation that has resulted in regarding them as the poorest of the poor (Cheton, 2002 & Burkett, 2003). Women have been recognized as the most neglected and marginalized sector as per as access to credit is concerned due to their inability to provide collateral security and other conditions required by financial institutions. This is a typical case of gender inequality, which might hinder economic growth (World Bank, 2001).

Furthermore, programmes by governments and public agencies provide skills, start-up capital and other inputs, which are meant to support women interactions within the formal sector. Despite the empowerment supports, many of these programmes have been mostly ad-hoc and poorly sustained. With the expansion of global capital and growing transnational trade, the informal sector in Nigeria, when women's creativity is largely ignored and left to rot through non-gender sensitive economic programmes. Women in this sector are left unaided, and if so, what alternative businesses and economic arenas are available to them if they are to take advantage of the new investment environment driven by globalization. These and many other concerns have raised new questions on how women are benefiting from global trade and which environment is needed to support women's involvement. In the case of many countries undergoing various economic reforms, other questions have been raised about how endangered these reforms were when the contributions of the main sector in which women in developing countries operate (informal sector) is yet to be fully integrated into strategies of economic reform. This has resulted in the invisibility of women's economic contribution and their inability to access many of the benefits available within these economic packages and programmes.

Access to credit by women entrepreneurs is hampered by numerous factors, including a low level of education, higher interest rate by the lending institutions, socio-cultural factors that place women in a lower status in the society as compared to men in as far as running businesses is concerned.

In Kano State, it was well observed that women have less involvement in entrepreneurial activities. Most of the women in Kano engaged in-home businesses. Kano is a majority Muslim populated state, and the majority is Hausa or Hausa/Fulani. There is the notion among the

women in Kano, especially the Muslims, that obtaining a bank loan is against the teaching of their religion. Others have the notion that when loans are collected from banks, the interest on them is forbidden. Thus, even if the women have met all the necessary requirements to collect loans from any financial institutions, some of the women are not willing to collect loans from banks. This may be a result of religious beliefs and, more importantly, lack of trust. In the Northern part of Nigeria especially Kano, women do not trust financial institutions. They believe that these financial institutions have exploitative agenda and have tendencies to lead them to financial hardship if they can't pay back the loan in due time. Cultural belief is one major barrier to women's entrepreneurship in Africa. The majority of cultural practices in Africa is that women's main purpose is to either work in the farmlands or just stay at home. This trend serves as a major barrier for women to get involved in entrepreneurial activities, thereby reducing their access to loans from financial institutions. Hence this study assesses the determinants of women entrepreneurs' access to credit in Kano Metropolis, Kano State. The study specifically addressed how collateral requirements, socio-cultural values, and interest rates affect women entrepreneurs' access to credit facilities in Kano Metropolis, Nigeria.

2. Literature review and theoretical framework

2.1 Empirical literature review

Several studies were conducted to assess the relationship between gender and credit accessibility in different areas. For instance, Olateji et al. (2017), examined the factors that determine women's access to microcredit programs in Lagos, the study revealed that all the variables that were used in measuring the determinants of women's access to microcredit are significant except the variable age which is not significant. In the same vein, Kweyu (2017), concluded that providing financial support for women can increase the number of new businesses, which in turn, would boost economic activity, and enable the expansion of old businesses, leading to increased productivity and growth.

Furthermore, Eze et al. (2016), found that household size and marital status were more likely to increase access to credit. Education attainment has a positive relationship with access to credit. Distance is less likely to decrease access to credit. This study was supported by the findings of Balogun et al. (2016), as was pointed out by Esther (2016), who examined the factors affecting access of women enterprise funds by women groups in Kenya. Akhabonje and Namusonge (2016) established that lending procedures, collateral requirements, credit bureau referencing policies and training offered by finance Institutions significantly influence access to credit facilities by SME from financial institutions.

Moreover, studies by Mutai (2015), Waari and Mwangi (2015) and Chinonye et al. (2015), showed that women entrepreneurs are gaining recognition in entrepreneurial activities, they are however, confronted with several challenges which include inadequacy of funds for start-up and

expansion, lack of electricity/infrastructural facilities, un-conducive business environment, customers dissatisfaction and complaints, high level of competition and lack of trustworthy personnel. In addition, they pointed out that information asymmetry, business risks and transactional cost influence access to finance.

Karanja et al. (2014) examined how lending procedures hinder access to credit services by women entrepreneurs, using both qualitative and quantitative methods, and they found out that all the variables have a causal relationship with access to credit by women entrepreneurs.

Likewise, Machiraetal. (2014), attempted to determine the accessibility of women's enterprise funds by women enterprise owners in Tharaka South District, the study revealed that access to women enterprise fund and studied variables were closely related. This study was similar to that of Gichuki et al. (2014), who investigated selected factors perceived to influence the performance of women-owned small micro-enterprises. The study showed that the selected factors income, credit and education level of the respondents influenced positive changes in the net profits and capital of Small Micro Enterprises (SMEs), while Age did not influence the change in the enterprise.

From the literature reviewed, it was shown that not all factors have equal importance in determining the gender accessibility of credit for different areas due to differences in socio-economic settings, environmental factors, and cultural factors as well as the average level of development in the area. This (i.e., differences in the study area) has led to the arrival of different and inconsistent conclusions in the literature on gender and credit accessibility among women entrepreneurs.

2.2 Theoretical framework

This study will adopt the theoretical framework used by Muntai (2015). Muntai (2015) used Schumpeter's (1939) theory of innovation which is in line with some of the specific objectives of this study.

According to Schumpeter's theory of innovation, Development implies carrying one new combination of entrepreneurship. 'Entrepreneur' is an innovator who carries a new combination of New goods / services, new method of production, New market, New source of supply of raw materials, New organization. In political economics, entrepreneurship is the process of identifying and starting a new business venture, sourcing and organizing the required resources, while taking both the risks and rewards associated with the venture.

According to Schumpeter, a woman entrepreneur is willing and able to convert a new idea or invention into a successful innovation despite limitations accessibility to business finances. Entrepreneurship employs what Schumpeter called "the gale of creative destruction" to replace in whole or in part inferior offerings across markets and industries, simultaneously creating new products and new business models. Thus, creative destruction is largely responsible for the dynamism of industry and long-term economic growth. In spite of the consensus that size has

little effect on innovation; size does have important consequences on innovation. Some advantages of large firms are:

- a) The spread of fixed costs of innovation
- b) Economies of scale, scope in research and development
- c) Capital market imperfection confers advantages to large firms in securing finance for risky research and development projects

As firms grow larger, efficiency in R & D is undermined either through the loss of managerial control or, alternatively, excessive bureaucratic control, which diverts the attention of the firm's bench scientists and technologists. Moreover, as a firm grows large, the incentives of individual scientists and entrepreneurs may be blunted as either their ability to capture benefits from their individual efforts diminishes or their creative impulses are frustrated by the conservatism characteristics of hierarchy of large corporations.

The model presented by Muntai (2015) was adapted in this study; the model is presented as in the diagram below.

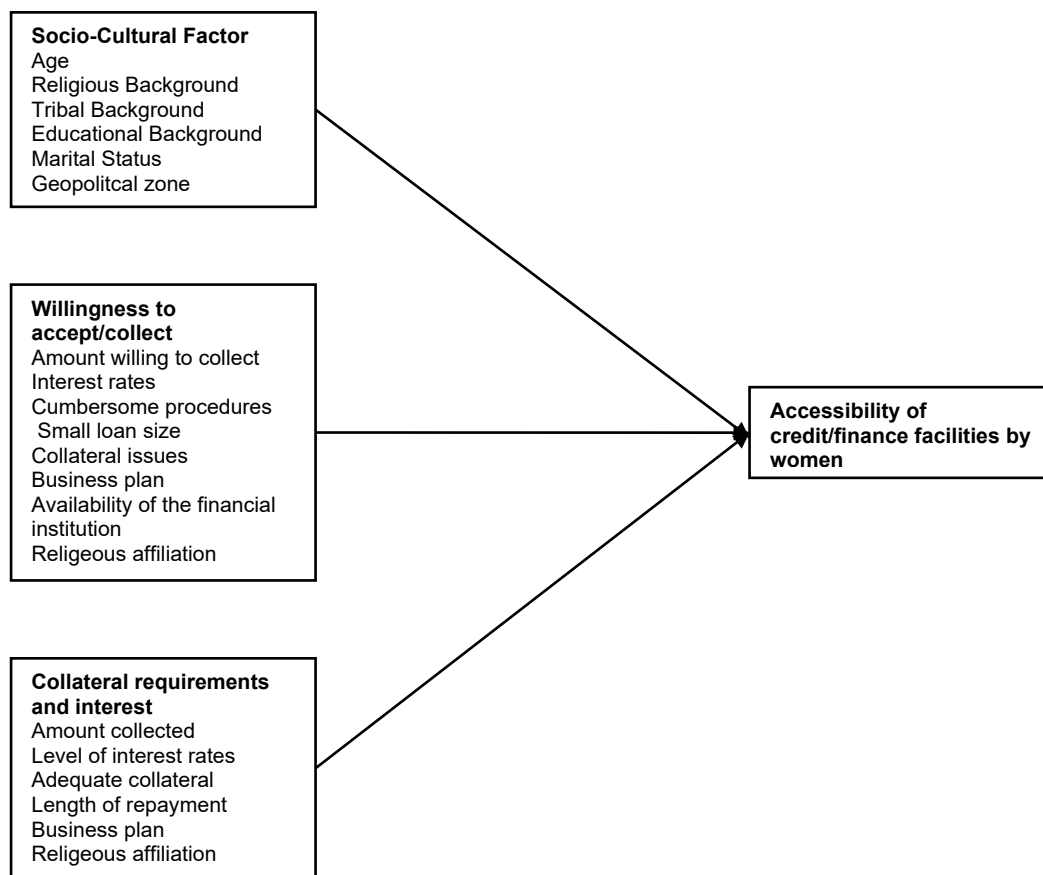


Figure 1. Conceptual framework. Source: adapted from Muntai (2015)

In order to estimate the willingness to accept/collect loans by women entrepreneurs, this study will adopt the Logit regression framework, which was specified by Epo (2012).

According to Epo (2012), assume that the probability of being a local female entrepreneur is determined by an underlying response variable that captures the economic activity undertaken by an individual.

3. Methodology

3.1 Population of the study

There is no specific data to determine the number of female entrepreneurs in Kano State at large and how many are within the Kano Municipal. This study focuses on women entrepreneurs in Kano Metropolitan Areas, namely Fagge, Dala, Gwale, Tarauni, Nassarawa, Kumbotso, Ungogo and Kano Municipal.

3.2 Sample size

Since the exact number of women entrepreneurs is not known, the study does not have a sample frame. Since there is an absence of a sample frame, the study used the standard deviation technique to estimate the sample size of the study.

The sample size determination formula is given as:

$$S = (Z_{score})^2 + \delta(1 - \delta)/(Margin\ of\ error)^2$$

Given; 90% confidence interval, 0.5 standard deviation and margin error of 0.05.

$$S = (1.645)^2 \times 0.5(1.05)/(0.05)^2$$

$$\frac{2.706 \times 0.25}{0.0025}$$

$$\frac{0.6765}{0.0025} = 270.6$$

However, because of the problem of non-response bias (Danlami, 2017; Danlami et al., 2018) a total of 400 questionnaires were distributed

3.3 Sampling technique

The study used multi-stage sampling technique as used by some previous studies (Danlami, 2019; Kofarmata & Danlami, 2019; Danlami & Islam, 2020; Tsauri & Danlami, 2016). The

proportion of each segment is calculated, and the questionnaires will be divided on the bases of such proportion estimated in each segment, and a cluster sample using multi-stage random sampling will be used to select the respondents from each segment comprising the number of women entrepreneurs in Kano Metropolitan, Kano State. This sampling technique is employed because it has two advantages viz:

(a) It is easier to administer than most single-stage designs mainly because of the fact that sampling frame under multi-stage sampling is developed in partial units.

(b) A large number of units can be sampled for a given cost under multistage sampling because of sequential clustering, whereas this is not possible in most of the simple designs (Kothari 2004).

3.4 Method of data analysis

To examine how collateral requirements and interest rate affects women entrepreneurs' access to credit facilities in Kano Metropolis. The study will also employ the binary logit model for this. Following Danlami et al. (2017)

The empirical model can be derived as;

$$P = E \left(Y = \frac{1}{X_i} \right) = \frac{1}{1+e^{-(\beta_1+\beta_2X_i)}} \quad [1]$$

if $z = \beta_1 + \beta_2X_i$ then;

$$Pi = \frac{1}{1+e^{-z_i}} = \frac{e^z}{1+e^z} \quad [2]$$

If P represents the probability of occurrence (say if the respondent had collected a loan or not), the probability of not occurrence can be expressed as:

$$1 - Pi = \frac{1}{1+e^{z_i}} \quad [3]$$

Hence the odds ratio between the probabilities of occurrence and non-occurrence can be expressed as:

$$\frac{P_i}{1-P_i} = \frac{1+e^{z_i}}{1+e^{-z_i}} = e^{z_i} \quad [4]$$

Where: $\frac{P_i}{1-P_i}$ represents the odds ratio of if the respondent had collected loan. That is the ratio of the probability that a female entrepreneur had once collected a loan to the probability of otherwise. Taking the natural log of equation (4) we obtained the following expression as:

$$L_i = \ln \left(\frac{P_i}{1-P_i} \right) = Z = \beta_1 + \beta_2X_i \quad [5]$$

Where L means the log of odds ratios, equation (5) represents what is known as the logit model, which is used when the defendant variable takes a binary value; 0 or 1.

The empirical logit model estimated in this study can be expressed as:

$$\ln\left[\frac{P_i}{1-P_i}\right] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \delta_i \quad [6]$$

$\left[\frac{P_i}{1-P_i}\right]$ = collected loan before (0 have not and 1 otherwise)

β_i = Coefficients

X_1 = Huge collateral

X_2 = High interest rates

X_3 = Accessibility to financial institutions

X_4 = Age

X_5 = Education

X_6 = Marital Status

X_7 = Local Government Area

δ_i = error term

4. Results

The demographic and socio-economic characteristics of the respondents captured from the study area including gender distribution, age, level of income, educational qualification, marital status, type of residence, household size, occupational distribution and level of income of the respondents, were analyzed in this section using the simple descriptive statistics analysis.

Table 1. Demographic and socio-economic analysis

Responses	Frequency	Percentage
Marital-Status		
Not Married	192	51.06
Married	184	48.94
Education		
No Formal Education	125	33.24
Primary level	40	10.64
Secondary level	158	42.02
Tertiary level	53	14.10
Religion		
Muslim	281	74.73
Christian	95	25.27
Tribe		
Hausa/Fulani	237	63.03
Yoruba	70	18.62
Igbo	46	12.23
Igala	23	6.12

Table 1 shows the demographic distribution of the respondents. From the table, the result shows that majority of the respondents consisting of 192 (51.06%) are not married, while 184(48.94%) of the respondents are married. Also, the educational qualification of the respondents shows that 125(33.24%), while 40(10.64%) of the respondents have primary level education and 158(42.02%) of the respondents have Secondary level education as 53(14.10%) of the respondents have only Tertiary level education. Likewise, 281(74.73%) of the respondents are Muslims as 95(25.27%) of the respondents are Christians.

Based on the tribal distribution, 237(63.03%) of the respondents are Hausa/Fulani while, 70(18.62%) of the respondents are Yorubas, and 46(12.23%) of the respondents are Igbo's as 23(6.12%) are Igala's.

Going by the results, it is evident that the Hausa/Fulani women are less involved in entrepreneurial activities compared to women from other tribes. Likewise, the Christian ladies are more involved in entrepreneurial activities compared to the Muslim ladies. This by implication shows the cultural dimension of the involvement of women entrepreneurs in Kano metropolis. This further implies most indigenes from the North-Western part of Nigeria hardly encourage their women in entrepreneurial activities.

4.1. Collateral requirements, interest rate and women entrepreneurs' access to credit

The model made used the binary dependent variable model of logit model to determine how collateral requirements and interest rate affects women entrepreneurs' access to credit facilities in Kano Metropolis. Table 2 presents the logit estimate of the first model. Table 2 shows the logit estimation examining how collateral requirements and interest rate affects women entrepreneurs' access to credit facilities in Kano Metropolis. The result shows that the collateral requirement by financial institutions has a significant effect on women entrepreneurs' access to credit facilities. The results of higher demand for collateral, women entrepreneurs are less likely to collect loans from financial institutions.

The result further shows that the coefficient of interest is negative and statistically significant. The result implies that with a higher interest rate, women entrepreneurs are less likely to collect loans from financial institutions. The result also shows that the availability of financial intuitions' is a significant factor affecting women entrepreneurs access to credit facilities. The sign of the coefficient is negative, which implies that lack of availability of financial institutions, women entrepreneurs are less likely to collect loans from financial institutions.

In addition, the coefficient of age is positive and statistically significant. This implies as age of women entrepreneurs increase, they are more likely to collect loan from financial institutions.

Table 2. Collateral and interest constraints to women entrepreneurs' access to credit facilities.

VARIABLES	Coefficient	Odds Ratios
Huge Collateral	-1.176* (0.632)	0.309* (0.195)
Huge Collateral	5.078*** (1.248)	160.4*** (200.3)
High Interest Rate	-2.774*** (0.599)	0.0624*** (0.0374)
Availability Financial Institute	-0.399* (0.241)	0.671* (0.162)
Age	0.140*** (0.0196)	1.150*** (0.0225)
Primary Education	3.212*** (0.843)	24.83*** (20.93)
Secondary Education	-1.166** (0.554)	0.312** (0.173)
Tertiary Education	0.843 (0.835)	2.323 (1.941)
Married	-1.440*** (0.510)	0.237*** (0.121)
Fagge	-2.915*** (0.799)	0.0542*** (0.0433)
Ungogo	1.255* (0.730)	3.506* (2.561)
Constant	-3.814*** (1.002)	0.0221*** (0.0221)
Observations	368	368

Note: The asterisks ***, ** and * indicate significance at 1%, 5% and 10% respectively. The figures in parenthesis () are standard errors

On the education level of the respondents, the sign of the coefficient of those with primary education are more likely to collect loans from financial institutions, and it is statistically significant. While the sign for secondary education level is negative and statistically significant, which implies that women entrepreneurs with secondary educational level are less likely to collect loans from financial institutions, also, women entrepreneurs with tertiary education are more likely to collect loans from financial institutions.

The sign of the coefficient of marriage is negative and statistically significant, which implies that married women entrepreneurs are less likely to collect loans from financial institutions. Likewise, in the local government where the women entrepreneurs reside, the sign of the coefficient of Fagge LGA is negative and statistically significant. This implies that women entrepreneurs in Fagge LGA are less likely to collect loans from financial institutions. Also, the sign of the coefficient of Ungogo LGA is positive and significant. This implies that women entrepreneurs in Ungogo LGA are more likely to collect loans from financial institutions.

The result above shows that collateral requirement has hindered women from accessing credit facilities irrespective of their demographic characteristics. The issue of collateral has been

a serious impediment to accessing a loan from financial institutions and given the fact that most the women entrepreneurs are not buoyant enough to offer collateral to collect loans from financial institutions. In addition, more of the educated women, as the results shows, will be less likely to collect loans from financial institutions, this may be because, they fear that banks will come after their assets if they fail to pay the loans on time.

Table 3. Willingness to accept loan from financial institutions by women entrepreneurs.

VARIABLES	Coefficients	Odd Ratios
Legal_Status	-1.718* (0.941)	0.179* (0.169)
Operation	0.707** (0.301)	2.027** (0.610)
Collateral_Required	5.390*** (1.593)	219.2*** (349.2)
High_Interest_Rates	-3.137*** (1.114)	0.0434*** (0.0484)
Religion_Affiliation	-0.370 (0.767)	0.691 (0.530)
Religion_Affiliation	0.0612 (0.871)	1.063 (0.926)
Maximum_Loan_Willing	5.06e-06 (4.75e-06)	1.000 (4.75e-06)
Repayment	0.850*** (0.268)	2.339*** (0.628)
Accessibility_Financial_Institut	-10.59*** (2.637)	2.52e-05*** (6.64e-05)
Age	0.0312 (0.0522)	1.032 (0.0539)
Marital_Status	1.457* (0.759)	4.293* (3.259)
Education	-0.541*** (0.147)	0.582*** (0.0858)
Religion	-4.293*** (1.609)	0.0137*** (0.0220)
Hausa	1.568 (1.047)	4.798 (5.023)
Yoruba	3.990** (1.625)	54.03** (87.80)
Igbo	0.574 (1.858)	1.776 (3.299)
Household_Size	1.705*** (0.488)	5.500*** (2.684)
Constant	-7.762*** (2.900)	0.000425*** (0.00123)
Observations	189	189

Note: the asterisks ***, ** and * indicate significance at 1%, 5% and 10% respectively. The figures in parenthesis () are standard errors.

4.2 The willingness to accept loan by women entrepreneurs from financial institutions

This model used logit model to determine willingness to accept loans by women entrepreneurs from financial institutions in Kano Metropolis. The table below presents the logit estimate of the first model.

Table 3 shows the estimated logit model of the first model of the study. The estimated model shows the coefficients and the odds ratios of the estimated variables, which estimate the factors that determine the willingness to accept loans from financial institutions by women entrepreneurs in Kano Metropolis.

From the results, the variable operation, which measures the length of operating the business by women entrepreneurs was found to be positive and statistically significant, with the coefficient value of 0.707 at 5% level of significance. The longer they operate, the more willing to accept a loan from financial institutions. This is in line with a priori expectations as those women entrepreneurs who work more may need a loan to maintain the length of operations. The odd ratio shows that the odds of accepting loans is higher when they operate longer than when they operate less. This finding is in line with the work of Kweyu (2017), who found that years of operation have a significant influence on women's access to credit facilities.

In addition, the results show the coefficient of collateral requirement by financial institutions was found to be positive with a coefficient value of 5.390 and statistically significant at 1%. Collateral requirement is one factor that determines the willingness to accept a loan from financial institutions by women entrepreneurs. This doesn't conform to a priori expectation as collateral requirements should discourage women from seeking financial assistance. This is in line with finding of Akhabonje and Namusonge (2016), who tried to establish the factors influencing access to credit among small and medium scale enterprises in Kitale Municipality, and found out that collateral requirements by finance Institutions significantly influence access to credit facilities by SME from financial institutions.

Also, the coefficient of high interest rate was found to be negative and statistically significant at 1% with a value of -3.137. This result conforms to a priori expectations as higher interest will make women entrepreneurs to be less willing to accept/collect loans from financial institutions. This implies that with high interest rates, women entrepreneurs are less willing to collect loans from financial institutions. Interests prove to be a significant factor in women's decision to accept loans from financial institutions or not.

In addition, the coefficient of the variable length of repayment is positive and statistically significant at 1% with a value of 0.850. This implies that the length of repayment of loans is a significant factor in determining women's willingness to accept a loan from financial institutions. The result shows that women are more willing to accept loans from a financial institution when the length of repayment is higher. This should be a stochastic variable as which it can take any sign. By implication, if the time of repayment is long enough, women entrepreneurs could go for a loan, and if the length of repayment is short, women entrepreneurs will not go for a loan.

Also, accessibility of financial institutions has a negative coefficient value of -10.59 and found

to be statistically significant at 1%. The variable accessibility of financial institutions as proved to be a significant factor that determines women entrepreneurs' willingness to accept loans from financial institutions. The results show that the less accessible the financial institutions the less willing women are to accept a loan from the financial institutions. The sign of the coefficient is negative, which doesn't conform with the prior expectation because accessibility to financial institutions should encourage women entrepreneurs to accept a loan, the negative sign may be due to the fact that women entrepreneurs are less willing to accept loans because the financial institutions are close to them.

Also, education has a negative coefficient of -0.541 and is statistically significant at 1%, which implies that education is a significant factor that determines women entrepreneurs' willingness to accept loans from financial institutions. The sign is a stochastic variable which may take any sign as an educated person may be willing to accept or decline a loan offer depending on other factors she may be looking at. The result shows that the higher the level of education the less willing the women entrepreneurs to accept loans from financial institutions. This finding is in line with the work of Kweyu (2017), who posited that education level has a significant influence on women's access to credit facilities.

Likewise, the coefficient of religion is -4.292 and was found to be negative and statistically significant at 5%. The variable conforms to the a priori expectation since religion has distanced itself from loans with interest. The variable has proved to be a significant factor that determines the women entrepreneur's willingness to accept a loan from financial institutions. Due to religious regulations, women entrepreneurs are less willing to accept a loan from financial institutions. The result shows that Igbo women entrepreneurs are more likely to accept a loan than other tribes among the respondents.

Also, the sign of the coefficient of household size is positive and statistically significant at 1%. This conforms to the a priori expectation as persons with larger household size may seek for loan to maintain the house. The results show that the larger the household size of the women entrepreneur, the more willing they are to collect loans from financial institutions. This finding is in line with the findings of Boniface (2012), who investigated the effects of microcredit and social capital on female entrepreneurship. He found out that household size has an influence on access to credit facilities by women entrepreneur

The findings from the results above show that women are not likely to collect loans because of high interest rates, irrespective of demographic characteristics. This situation shows why all the religions and tribal backgrounds are against asking and collecting interest in business activities. Also, interest increase with time, and most women will find it difficult to pay the loans given the increasing interest rate. This problem has affected women entrepreneurs accessing loans from financial institutions.

4.3 Constraints Facing Women Entrepreneurs

Table 4 analyzes the constraints facing women entrepreneurs in Kano metropolis, Kano State Nigeria.

Table 4. Constraints to financial access by women entrepreneurs in Kano Metropolis.

Constraints	Frequency	Percentages
Cumbersome_Procedure	254	99.20%
High_Interest_Rates	262	99.60%
Small_Loan_Size	172	57.53%
Lack_of_Collateral	242	76.10%
Business_Plan	236	77.89%
Religion_Affiliation	243	77.88%
Inadequate capital	242	66.85%
Poor Patronage	120	33.15%
Total	1771*	

Note: * indicates multiple responses

Table 4 shows the responses on the various constraints affecting women entrepreneurs in Kano metropolis, Kano state Nigeria regarding financial access. The results show that 254(99.2%) of the respondents identify the cumbersome procedure of collecting loans from financial institutions as a major constraint affecting women entrepreneurs. This is because when the women go for a loan, they find the procedures too much to stressful. Also, 262(99.6%) identify high interest rates as a major constraint affecting women entrepreneurs' access to credit facilities in Kano metropolis. The level of interest has not allowed most women entrepreneurs to seek loan from financial institutions. This is due to their low returns on profit to even pay back the loan.

In addition, 172(57.53%) of the respondents identify that small loan size is a constrain affecting women entrepreneurs' access to credit facilities in Kano metropolis. This is because women entrepreneurs want a larger loan to expand their businesses but cannot get that amount from financial institutions. Also, 242(76.10 %) of the respondents identify the inability to get collateral as a constraint on women entrepreneurs' access to credit facilities. This is because demand for collateral when the majority of women entrepreneurs in Kano metropolis is small scale businesswomen with little or no collateral. While 236(77.89%) of the respondents identify the inability to draw a business plan as another constraint on women entrepreneurs' access to credit facilities. This is because majority of the women don't have the requisite knowledge to draw business plan.

Furthermore, 243(77.88%) the religious affiliation of women entrepreneurs is a major constrain to the ability of women entrepreneurs' access to credit facilitates. The religious factors of Islamic doctrine have prohibited interest likewise, the Christian faith, as such most of the credit facilities provided by the financial institutions go along with interest rate requirements which makes it a problem for women entrepreneurs to gain access to credit facilities. Likewise,

242(66.85%) of the respondents identify inadequate capital as a constraint affecting women entrepreneurs to expand their businesses. This is because women entrepreneurs in Kano metropolis have less capital to operate and expand their businesses. As 120 (33.15%) of the respondents identify poor patronage of their commodities is a major constraint affecting women entrepreneurs in Kano Metropolis. Another major factor affecting women entrepreneurs in Kano metropolis is the low patronage of their products this is because the products they sell have low value.

5. Conclusions and recommendations

The study further shows that high interest and collateral requirement prevent women entrepreneurs from accessing loan from financial institutions, while religious affiliations is a major factor affecting women entrepreneurs' access to credit facilities. The study recommends that financial institutions should prepare financial provisions or packages for women entrepreneurs who are willing to accept loans based on non-interest loan financing. The study recommends that financial institutions should make provisions for training women entrepreneurs on how to raise capital to expand their businesses and also give them incentives with fewer conditions attached to them.

References

- Abubakar. S. G, Shazali A. M., & Fariastuti D. (2013). Entrepreneurship and its Determinants in Nigeria: Empirical Evidence from Micro and Small Enterprises in Kano State. *Journal of Entrepreneurship and Management* 2(2), 2 -12.
- Balogun, U.O., Bustaman, U.S.A., & Johari, F.B. (2016). Determinant factors affecting women social enterprise performances in Sokoto State, Nigeria. *Asian journal of social sciences and Humanities*, 5(2), 47 -53.
- Baumol, W.J. (1990). Entrepreneurship: Productive, Unproductive, and Destructive. *Journal of Political Economy* 97: 721-739. <https://doi.org/10.1086/261712>
- Baumol, W.J. (2002). *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism*. Princeton University Press: USA. <https://doi.org/10.1515/9781400851638>
- Casson, M., Yeung, B., Basu, A., & Wadeson, W. (eds.), (2006). *The Oxford Handbook of Entrepreneurship*. Oxford, Oxford University Press: London. <https://doi.org/10.1093/oxfordhb/9780199546992.001.0001>
- Chen, C.C., Greene, P.G., & Crick, A. (1998). Does Entrepreneurial Self-Efficacy Distinguish Entrepreneurs from Managers? *Journal of Business Venturing*, 13(4), 295–316. [https://doi.org/10.1016/s0883-9026\(97\)00029-3](https://doi.org/10.1016/s0883-9026(97)00029-3)
- Chinonye, O., & Chima, M. (2010). Women entrepreneurship development in Nigeria: the effect of environmental factors. *Petroleum-gas university of ploiesti bulletin*, 1xii (4); 43 - 52.
- Danlami, A. H. (2019). Assessment of factors influencing firewood consumption in Bauchi State, Nigeria. *Journal of Sustainability Science and Management*, 14(1), 99 – 109.
- Danlami, A.H. (2017). An intensity of household kerosene use in Bauchi State, Nigeria: A Tobit Analysis. *Nigerian Journal of Management Technology & Analysis*, 8(2), 1 – 13.

- Danlami, A.H., Applanaidu, S.D., & Islam, R. (2017). From biomass cooking fuel to modern alternative for Bauchi State Households: A preliminary analysis. *Biofuels*, 8(3): 323-331. <https://doi.org/10.1080/17597269.2016.1226724>
- Danlami, A.H., Applanaidu, S.D., & Islam, R. (2018). Axiom of the relative income hypothesis and household energy choice and consumption in developing areas: Empirical evidence using Verme model. *Kasetsart Journal of Social Sciences*, 39, 422 – 431. <https://doi.org/10.1016/j.kjss.2018.06.010>
- Danlami, A. H., & Islam, R. (2020). Explorative analysis of household energy consumption in Bauchi State, Nigeria. In A. Editor (Eds.), *Energy efficiency and sustainable lighting –A bet for the future* (page number). London: IntechOpen. <https://doi.org/10.5772/intechopen.89597>
- Esther, M. M. (2016). Factors affecting access of women enterprise fund by women group in Nakuru west sub-country, Kenya.
- Gichuki, C.N., Milcah, M.M., & Kinuthia, L.N. (2014). Performance of women owned enterprises accessing credit from village credit and savings associations in Kenya. *Journal of global entrepreneurship research*, 4(16), 2 – 13. <https://doi.org/10.1186/s40497-014-0016-1>
- Holmes, T.J., & Schmitz J.A. (1990). A Theory of Entrepreneurship and Its Application to the Study of Business Transfers. *Journal of Political Economy* 98: 265-294. <https://doi.org/10.1086/261678>
- ILO. (2006). *Vulnerability and young women Entrepreneurs: A case study of Ethiopian Informal Economy*. Geneva: International Labor Organization.
- Karanja, J.G., Mwangi, A.K & Nyakarimi, S.N. (2014). Analysis of factors influencing access to credit services by women entrepreneurs in Kenya.
- Kofarmata, Y. I. & Danlami, A.H. (2021). A micro level analysis of the intensity of agricultural finance supply in Nigeria: empirical evidence. *SN Business & Economics*, 1(12), 1 – 17. Springer Journal. <https://doi.org/10.1007/s43546-020-00011-y>
- Kofarmata, Y. I. & Danlami, A.H. (2019). Determinants of credit rationing among rural farmers in developing areas: empirical evidence based on micro level data. *Agricultural Finance Review*, 79(2), 158 – 173. <https://doi.org/10.1108/afr-03-2018-0023>
- Lazear, E.P. (2004). Balanced Skills and Entrepreneurship. *American Economic Review* 94: 208-211. <https://doi.org/10.1257/0002828041301425>
- Machira, H.K., Njati, I.C., Thaine, K.S. & S, G.H. (2014). Accessibility of women enterprise fund and small and micro-women enterprise owners in Thoraka south District, Kenya. <https://doi.org/10.9790/487x-161379103>
- Muntai, M., (2015). What Do We Know about the Patterns and Determinants of Female Entrepreneurship across Countries? *European Journal of Development Research*, 22 (3), 277-293. <https://doi.org/10.1057/ejdr.2010.17>
- Ocholah, R. M., Okelo, S., Ojwang, C., Aila, F., & Ojera, P. B. (2013). Literature Review on the Relationship between Microfinance Provision and Women Enterprise Performance. *Greener Journal of Social Sciences*, 3(5), 278-285. <https://doi.org/10.15580/gjss.2013.5.022613502>
- Olateji, A.D., Aminu, A.W., & Danmola, R.A. (2017). The determinants of women entrepreneurs` access to microcredit progromme: a case study of cowrie`s microfinance bank Lagos, Nigeria. *International Journal of Development and Sustainability* 6(8), 783-791.
- Richardson, P., Howarth, R., & Finnegan, G. (2004). *The Challenges of Growing Small Businesses: Insights from Women Entrepreneurs in Africa*. SEED Working Paper No.47. Geneva: International Labour Office.
- Schmitz, J.A. (1989). Imitation, Entrepreneurship, and Long-run Growth. *Journal of Political Economy*, 97(3), 721 – 739. <https://doi.org/10.1086/261624>
- Schultz, T.W. (1975). The Value of the Ability to Deal with Disequilibria, *Journal of Economic Literature*, 13, 827-846.
- Tsauni, A.M., & Danlami, A.H. (2016). Social capital formation and implication for the achievement of Fadama III project development in Kano State, Nigeria. *Hyperion Economic Journal* 1(4), 37 – 48.
- Waari, D.N. & Mwangi, W.M. (2015). Factors influencing access to finance by micro, small and medium enterprises in meru county, Kenya. *International Journal of Economics, Commerce and Management*, 3(4), 1-15.
- World Bank. (2012). *The World Bank Annual Report 2012: Volume 1. Main Report*. World Bank Annual Report. <https://doi.org/10.1596/978-0-8213-9568-4>
- Wosowei, E.C., & Ifelunini, I.A. (2013). Constraints to women entrepreneurs` access to microfinance in south –south Nigeria. *Research Journal of Finance and Accounting*, 4(6), 6-13.