

Assessment of the Factors Constraining Women in Business from Accessing Formal Credit in Sokoto State, Nigeria

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Abstract

This study examined the factors constraining women entrepreneurs in Sokoto State from accessing formal credit; it is an exploratory cross-sectional survey study that adopted a multi-stage sampling technique, and collecting data directly from the field using a semi-structured questionnaire. The explanatory variables were subjected to a binomial logistic regression. The regression result revealed that of high interest rate (HIR) and lack of strong network system (NET) are not statistically significant while lack of collateral requirement (LCR), nature of business (NB), inadequate information about Loan (IIL) and Lack of regular income (LRI) are significant at 1% level. However, all the variables estimated have positive coefficient values, implying that they all constitute as constraints to accessing formal credit by the women. Nature of business (NB) and lack of regular income (LRI) revealed to be the two factors with the highest influence, with odd ratio values of 2.903 and 2.916 respectively implying that a unit increase in either will constrain the respondents 2.9 times further, other factors controlled. In line with the findings, the study suggests the need for the government of Sokoto state to create an enabling platform to promote interaction between the state and the women aimed at enabling the businesses of the women into the formal sector of the economy, this will improve the nature of their businesses through innovation and modernization resulting to a more regular income for the women.

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Background to the Study

Women in different nations play important roles like men in economic development through entrepreneurship, as Kpohazounde (1994), Omotayo (2005), Selvalamar and Sadiq (2006) reasoned, women entrepreneurs play diverse roles as mothers, wives, daughters concurrently with their need to generate income. There is compelling evidence that women entrepreneurs can be powerful drivers of economic growth, an analysis by Aguirre, Hoteit, Rupp and Sabagh, (2012) indicate that if female employment rates were to match male rates in the United States it would boost overall GDP by 5 percent, In Japan such initiatives could increase GDP by 9 percent while in developing economies the effect can even be more pronounced, especially in such countries where women are culturally constrained from economic participation like the united Arab Emirates which the study advocated that if participation of women in economic activities was boosted to match that of men it could lead to as high as 12 percent increment in GDP and in Egypt by 34 percent.

A report by World Bank (2009), indicated that women entrepreneurs comprise about a half of human resources in developing economies, identifying women entrepreneurs as key facilitators of micro economic development in their communities. Studies have also indicated that majority of women entrepreneurs own SMEs in developing countries and their contribution to growth domestic production (GDP) and household incomes cannot be ignored (ILO 2008, Ghosh 2009).

Despite the many contributions to be accredited to women entrepreneurs, a number of constraints have been identified as detriments to these achievements. A report by the united nation in 2006 revealed that there are many influences to be accredited to women entrepreneurs around the world, but there are number of constraints that are still at play in retarding their contributions such as lack of access to finance, lack of skills, lack of assets, the problem of gender discrimination to economic opportunities and other facilities that are enablers in business operation and growth. The report further identified difficulties in accessing finance, unfavorable government rules and regulations as well as difficulty or inability to build an ICT infrastructure that will enables their efficiency and growth as part of the challenges confronting women entrepreneurs.

Women entrepreneurs face different problems to men entrepreneurs hence it is imperative that a better understanding of women entrepreneurs and the specific constrains they face in starting or operating a business will help in developing appropriate assistance programs and policies (GPFI and IFC, 2011; Powers and Magnoni, 2010). They have also been reported to face discrimination in formal credit market (Buvinic, Sebstan and Zeidenstein 1979) Mohammed 2003; Morris and Meyer 1993) a condition more austere in less developed countries where women face more barriers to formal economic participation than those in developed countries (Allen, Chakrabarti, De, Qian and Meijun, 2012). These peculiar obstacles which they face either at starting-up or growing their businesses includes but not limited to; inadequate skill or training, limited access to capital or credit, lack of savings, social network and a limited choice of industry (Akanji 2006; Ibru 2009; Lakwo 2007; Martins 1999; and Ojo 2009).

A wide range of surveys suggest that SMEs report access to credit as their biggest constraint in both the developed and the developing world [Kallon (1990), Kiggundu (2001), Tagoe, Nyarko and Anuwa-Amarh (2005), Trulsson (1997), Yusuf (2013)]. Evidence also shows that, in general, women-owned businesses have more restricted access to external finance than male-owned businesses (GPFI and IFC, 2011; Powers and Magnoni, 2010). Among SMEs in the developing world, over one quarter of women entrepreneurs cite access to finance as a major barrier for their business (IFC, 2013). There is notable variability across the BRICs and N-11 countries that were studied with almost half of women-owned businesses in Pakistan and Brazil citing access to finance as a severe constraint. This number is higher in many Sub-Saharan African countries studied (GPFI and IFC, 2011).

Theories on economic development have also emphasized the importance of access to finance or capital in the development process. It is required by an entrepreneur to start up business as well as continue; it determines the size of the business and the level of output, number of employees, machineries as well as the performance of the business. It indicates that as more enterprises are introduced or are expanding, there is an increase in economic growth and development via increase in output/GDP and the developmental components, providing employment opportunities and income growth, leading to poverty reduction and improvement in the standard of living of the people (Ciravegna, Fitzgerald and Kundu, 2014). In light of this countries all over the world have adopted strategies to make available funds to businesses especially micro, small and medium enterprises as they have been reported as the fastest engine of economic growth in an economy (Schumpeter, 1934; 1954). In Nigeria, a direct effort to provide fund to this group of businesses which in most instance is owned by low-income vulnerable groups in the society, who cannot meet the stringent collateral requirement by the formal credit providers, is the introduction of the National Collateral Registry (NCR) by the financial policy and regulations department of the Central Bank of Nigeria in collaboration with the International Financial Corporation, which commenced operation in 2017.

Financing is of primary importance to business owners who may want to benefit from services provided by financial institutions who are expected to respond to the needs of women business owners, among others. Nonetheless, such women entrepreneurs are constrained from accessing formal credit facilities generally, while the few among them with this privilege still cite paucity of funds or capital as a major constraint (GPFI and IFC, 2011; Powers and Magnoni, 2010). While discrimination by lenders is a possibility that may not be ruled out altogether, it should be pointed out that the greater part of the traditional analysis ignores the demand side behaviour.

There is also the issue concerning the palpable non-empirical nature of most of the studies conducted so far on women entrepreneurs, especially women in the northern part of Nigeria who do not visibly participate in economic activities due to their socio-cultural positions (Sani, 2017; Shihabuddin, 2003). It should be pointed out that the closest attempt to the subject of the present study is Koko (2013) which investigated strategies adopted by

selected indigenous women entrepreneurs in Sokoto metropolis in accessing growth capital. However, what constitutes a difference between the two is that the latter is concerned essentially with analyzing the factors that constrains access to formal credit by women entrepreneurs and the scope is broader, covering all women entrepreneurs in Sokoto State. It is the believe that with access to formal credit, women entrepreneurs in Sokoto state will live up their full potentials as entrepreneurs and move up the poverty line.

Put succinctly, the main objective of this research was to analyze the factors constraining women entrepreneurs in Sokoto State from access to formal credit. To achieve the stated objective, the paper is divided into five sections. This section, the introduction, which is the background of the study, the next section is a review of literature relevant to the research this is followed by the methodology adopted for the study after which is the section presenting the data and discussing the research result. The final section is the conclusions and recommendations proffered from the findings of the study.

Review of Literature

The study adopted the gender aware-framework (5Ms' framework) proposed by Brush, DeBruin and Walter, (2009). The framework is rooted in the premise that entrepreneurship is socially embedded (Davidson, 2006; Steyaert and Katz, 2004) and therefore incorporates the household and family context of the female entrepreneurs considering the macro/meso environment which captures considerations beyond the standard entrepreneurship model of the 3Ms; money, market and management as described by Bate, Jackson and Johnson (2007) as the building blocks of business viability. This framework is considered appropriate because of the inclusion of social-cultural factors to other institutional consideration by adding 2Ms, motherhood, macro/meso environment to the traditional 3Ms; money, market and management, to make 5Ms. While money refers to the finance for starting-up and running the business, market refers to the business opportunity and management refers to the human and organizational capital, by incorporating a fourth and fifth Ms, 'Motherhood' and 'macro/meso environment', the model recognizes the household/family dynamics which is proposed by Jennings and McDougald, (2007) to have stronger impact on women than men in entrepreneurial process and activities.

Available literature on women entrepreneurship in Africa literally depict women-owned micro and small enterprises as being under financed and thus continue to record poor performance compared to male owned ones, Richard and Adams (2004). The World Bank (2005) argued that only 30% of the small firms in Sub-Saharan African countries have access to affordable and proper financial capital. Lack of collateral, low income, problems in filing tax repayment reports and unsound business plans are some of the major reasons for the unwillingness of the formal bank lending credit to majority of entrepreneurs who own micro and small enterprise (Sacerdoti, 2005), a sector of the economy majorly dominated by women. Stevenson and St-Onge (2005), observed that women entrepreneurs in Sub-Saharan Africa are even more disadvantaged when accessing credit from commercial banks because they lack control over family resources like land which can be used as collateral to acquire loans for expanding their micro enterprises.

Collateral is the main criterion for mainstream commercial banking credit and the kind of collateral usually considered by banks as appropriate security are; land or buildings, security papers, deposit, insurance certificate etc. The borrower must, i.e., the title documents must be in the borrower's name, exclusively own these securities. Accessing most formal credit requires collateral backings, this constitute a severe problem to women entrepreneurs because in most instances the ownership of assets remains a specific problem for women in many economies in transition, developing and least-developed countries. Sometimes, the ownership pattern is in favor of a male counterpart due to tradition and or in some cases due to religion (Raihan, 2007) and this poses a particular problem for women, who rarely have property in their name.

A study by Mole and Namusonge (2016), based on a Case of SMEs in Kitale Town of Kenya used the Krejcie and Morgan formula to sample 256 SMEs and collecting data from the field using questionnaires and interviews. The correlation analysis established that among the factors that collateral requirement to significantly, contributes 18% variability, influence access to credit facility by SME from financial institutions. This is supported by the work of Osano and Languitone (2016), which also found that there was a positive correlation between collateral requirement and small business support services ($r = 0.331$). It was also found that there was a positive correlation between collateral requirement and structure of financial sector ($r = 0.564$, sig. 0.1, two-tailed). This was further corroborated by a regression result which revealed an adjusted R squared of 0.703, this means the model, collateral requirement inclusive, explains 70.3 % the variance in the access to finance by SMEs in Maputo central business district of Mozambique. Subeyr and Muturi (2017)'s study found that the collateral requirement is very high while accessing credit by enterprises in Garowe, Puntland and this has constituted a constraint to them accessing credit from microfinance institutions.

This relationship between collateral and access to formal credit is no different in Nigeria, Yusuf (2013), studied the accessibility and Impact of credit on the performance of SMEs in Sokoto metropolis. Sampling 294 SMEs from the 1,710 SMEs in the state metropolis registered with the state ministry of commerce and industry as at 2011, the researcher analysed the impact of collateral on credit accessibility by using the value of landed asset owned by the SME as a proxy for the size of the SME's collateral and accessible loan size, the multiple regression analysis revealed the coefficient for collateral to carry a positive sign which implies the higher the value of the landed asset of SMEs the higher the size of loan it can acquire from the financial institution the result also revealed the coefficient for interest rate carried a negative sign implying that the higher the interest rate the lower the volume of credit accessed. The shortcoming of this study is the allusion that collateral size of an entrepreneur equates ability to access formal credit. In another study, Ibrahim and Aliero (2012), examined the factors that influence farmers' access to formal banking credit in the rural areas of Nigeria using data collected from 6 LGAs in rural areas of Katsina state, the researcher sampled 167 respondents and adopted a probit modeling approach for analysis and found that collateral requirement by the formal credit institutions have significant positive influence on farmers' access to formal credit while interest rate carried a negative coefficient implying that the higher the interest rate the lower the ability to access formal credit.

An econometric analysis of transaction costs reported by Hosseini, Khaledi, Ghorbani, and Brewin (2012), implied that the cost of credit is much higher for the borrowers who generally borrow smaller sums of credits, where most women entrepreneurs fall, the average transaction costs per loan size is positively affected by the loan size making borrowers who received larger loans to incur lower transaction costs per unit of borrowed money. In this light, Sawaya and Bhero (2017) conducted a study to determine if interest rates are a deterrent to SMEs Growth in Mozambique, although the researchers acknowledged that high interest rates on loans are the major factor restraining the creation of start-up SMEs and sustainability of ongoing SMEs, but the objective of the research was to show that even though high interest rates make loans to SMEs more expensive, nevertheless, on their own high interest rate are not the major impediment factor affecting SMEs growth. The study involved 485 sampled SMEs from a population of SMEs in Maputo city in Mozambique, using a dual tool for data collected; a structured questionnaire and face to face interview, the study found that most of the SMEs that benefited from financial support did not find high interest rates as a major constraint, rather the insistence on collateral backings has made formal loans less accessible in Mozambique, contributing to the slow development of SMEs and their sustainability.

Business size and types that women pursue has been reported to influence the general credit legitimacy of women entrepreneurs (Mirchandani, 1999). The majority of the women owned SMEs operate informally in the market, a preference or condition that can be attributed to hassle of the registration procedure largely due to the nature of their businesses and mode of operation which is usually a result of their socio-cultural characteristics. There is little or no scope for institutional financial support for informal entities, a situation more prevalent in developing and least developed countries, especially in rural and suburban areas. These types of businesses; part-time entrepreneurship and home-based businesses are usually deprived by the formal financial institutions (Mirchandani, 1999). According to Kuratko and Welsch (1994), women entrepreneurs have long been victims of gender related discrimination in financial markets due to the nature of their businesses which the study found to be majorly traditional and part-time in nature, falling within the informal group. Abor and Biekpe (2006), further emphasize that this discrimination against women seems to be worse in African countries where the financial sector is male oriented and the statistics on women's businesses and economic activities is quite scanty.

Ochieng and Sije (2013), argued that women tend to borrow money through informal channels rather than through banks because their access to the formal sector is generally low compared to men, the study suggest that this habit is tied to the fact that their main source of income is usually minor and irregular because they are mostly into the informal sector which is generally characterized by low-income generating activities such as farming and small businesses affording them neither regular nor high enough income to qualify them for formal sector loans, most especially long-term loans. Furthermore, analysis by Mohammed (2003) and Ibrahim and Aliero (2012) showed that the relationship between income levels and access to credit was also significant with a negative coefficient implying that those with lower income had less chance to access credit from formal and quasi-formal financial institutions.

Schmidt and Kropp (1987), argued that the type of financial institution and its policy can also determine access problem. Where information regarding; credit duration, terms of payment, required security etc .is not readily available or comprehensible by the target group and the provision of supplementary services do not fit their needs, potential borrowers will not apply for credit even when it exists. Bell (1990) further demonstrated that incomplete information or imperfect contract enforcement generates the possibility of loan default and eventually problems of credit rationing. The result is low loan supply and corresponding implied credit demand functions, both of which are simultaneously determinants of credit demand, arguing further that the credit demand function can only be interpreted from the borrower's participation decision, that is the decision to borrow or not to and from which sector to borrow from. Such decision will depend on, among other things, the available information and the borrower understands of the information.

Networking is one form of social capital that is scarce among female entrepreneurs in general. Studies like Aldrich (1989), and Renzulli, Aldrich and Moody (1999), have drawn attention to the gender specific deficits in the networking contacts of female entrepreneurs, pointing to the limited outreach and diversity of women entrepreneurs' networks as well as to their tendency to concentrate on weak relationships. Welter (2004), argued that female entrepreneurs spend less time in networking mainly due to family responsibilities, depriving them of important information concerning the acquisition of finance. Having access to a strong network of business partners can help achieve entrepreneurial success and in some instances help overcome collateral requirement when group-lending systems are adopted, this way women entrepreneurs are able to access formal credit facilities. Aldrich (1989), also observed that women usually engage in smaller networks consisting primarily of only women further pointing out that their household activities and other social obligations may result to their being more isolation than men. Moore and Buttner (1997), posited that membership of both formal and informal networks are useful for business development but are not always open to women, stressing that the risk of isolation is particularly serious for women running home-based businesses, which is the form of business most common among women entrepreneurs in Northern Nigeria.

On the flip side, a research by Eze, Emenyonu, Henri-Ukoha, Oshaji, Ibeagwa, Chikezie and Chibundu (2016), produced a contrary result. The study examined women entrepreneurs' access to microfinance bank credit in Imo state in Nigeria, using sampling frame of 80 and 71 obtained from beneficiaries and non-beneficiaries of the loans respectively to collect data in a bid to determine the amount of credit demanded and the amount of loan accessed by women entrepreneurs from microfinance banks from 2009-2013 and their repayment performance. The result of their study showed that the amount of credit demanded and accessed by women entrepreneurs between 2009 and 2013 were quite impressive, year 2011 showed to be the year with the highest loan accessibility at 90.78% while the lowest accessibility of credit was in 2013 at 60.50%. The result further showed that 80.26% of the overall credit requested for by the women entrepreneurs were accessed during the five year period amounting to the credit limit with the banks. The

mean amount demanded for and accessed were N6,434,000 and N5,164,000 respectively. This is an indication that the lending policies of the microfinance banks favored women entrepreneurs in the State since over 80% of the credit demanded by these women entrepreneurs was accessed. Although this result shows an impressive credit service to women entrepreneurs in the state, it does not suggest that access to credit was adequate because the study sample revealed a close to 50% non-beneficiaries and the study did not examine the factor/s behind this.

Literature have established that there exist a relationship between collateral and transaction costs like interest rate and access to formal credit, it has also been acknowledged by several researches that this relationship has significant impact on the operations and growth of the enterprise. Women entrepreneurs tend to lean more towards informal than formal credit providers for their financial needs, a choice attributed to among others; the types and nature of business, discrimination against them in the financial market and a variety of factors resulting from their socio-cultural position. Availability of information and the borrower understanding of the information have further been argued as constraints to accessing formal credit, likewise the ability to effectively network and or belong to an association. These factors affect women entrepreneur differently because most are tied to societal norms and values, which have different expectations from both sexes. Women's access to financial resources also determines the volume and regularity of their income to a significant extent and by implication their ability to access formal credit. To this end, this study aims to provide data on the factors that constraints women entrepreneur in sokoto state from accessing formal credit by econometrically analyzing how the preceding variables impact them , the choice of sokoto state is due to the economic position of the state as the poorest in the nation (NBS, 2019) and the strong socio-cultural practices which have limited the political, economic and social interactions of women in the state generally, contributing to the paucity of data on this marginalized group, hence the need to investigate and fill the existing data gap and provide information for the state policy makers.

Methodology

The study adopted an exploratory cross-sectional survey method; data collected are products of more than a stratum of respondents from a number of sub-settings of the representative sample. An exploratory design is appropriate when there are few or no earlier studies to refer to or rely upon to predict an outcome (Cuthill, 2002).

The study covered all women entrepreneurs operating within the boundaries of Sokoto State. The population of the study therefore, constitutes all women entrepreneurs within the state. The classification of women entrepreneurs studied included those that have been running their business from home and those that operate outside their homes either from shop/market stalls or physically moving from door to door to sell their products or services.

Data was sourced directly from the field using a semi-structured questionnaire. Adopting a multi-stage sampling technique (Saunders, Lewis and Thornhill, 2007) with the process of estimation carried out stage by stage, using the most appropriate methods of estimation at each stage. The first stage was to purposively stratified (Raj,1972) Sokoto state into three senatorial districts based on the existing districts; sokoto east senatorial district with eight LGAs, sokoto central senatorial district also with eight LGAs and sokoto west senatorial district with seven LGAs. The second stage was a random selection of four LGAs from each of the senatorial districts to give a total of twelve LGAs in all. Purposive technique was further employed in the next stage because of the absence of a sampling frame to select 25 women from each randomly selected LGA making the target respondents 300. The data collection was done with the help of bilingual female research assistants who were fluent in the local dialect (Hausa) and trained by the researcher to be familiar with the aim of the research and the type of data that were needed; each question was discussed and translated into Hausa language for deeper understanding.

Data collected were subjected to a binomial logistic regression analysis. Binary logistic regression model is perhaps the best alternative econometric model for handling regression equation whose dependent variable is dichotomous using the either basis. In other words, it is preferred to linear regression for this study because of the crucial limitation of linear regression not ideal with analysis of models whose dependent variables are dichotomous and categorical. Thus, in instances where the independent variables are categorical, or a mix of continuous and categorical, and the dependent variable are categorical, logistic regression is most ideal (David, 1958).

The research adopted a model developed with ideas/information derived from the literature reviewed which is estimated using a binomial logistic regression:

$$CFC_i = \beta_0 + \beta_1 LCR_i + \beta_2 HIR_i + \beta_3 NB_i + \beta_4 IIL_i + \beta_5 LRI_i + \beta_6 NET_i + e_i$$

Where:

CFC = Constraint to formal credit

LCR = Lack of collateral/high collateral requirement

HIR = High interest rate

NB = Nature of business

IIL = Inadequate information about Loan

LRI = Lack of regular income

NET = Lack of a strong network system (Associations)

Data collected were subjected to binomial logistic regression using the statistical tool SPSS version 23. Binary logistic regression model is perhaps the best alternative econometric model for handling regression equation whose dependent variable is dichotomous using the either basis. In other words, it is preferred to linear regression for this study because of the crucial limitation of linear regression not ideal with analysis of models whose dependent variables are dichotomous and categorical. Thus,

in instances where the independent variables are categorical, or a mix of continuous and categorical, and the dependent variable are categorical, logistic regression is most ideal (David, 1958).

Results and Discussion

Descriptive Results

Descriptive Statistics was used to examine the factors that constrain women entrepreneurs from access to formal credit in Sokoto state, the researcher first asked a base question if the respondents agree that access to formal credit is important to business growth and development. The result of the response to this question is presented in Table 1.

Table 1: Do you agree that access to Formal credit is important to business growth and development?

Options	Frequency	Percentage
Strongly Disagree	26	9.3
Disagree	30	10.7
Undecided	9	3.2
Agree	72	25.7
Strongly Agree	143	51.1
Total	280	100

Source: Fieldwork, 2018

With over 76% positive response it is clear that the respondents agree that access to formal credit is vital to any business's growth and development, the 20% response in disagreement could be explained by incidence that a number of these women are actually comfortable with the micro level of their businesses and for the cultural practice that limit their movement and ability to take unilateral decisions.

After this has been ascertained the researcher went further to inquired if the respondents have been able to access formal credit to aid their business, the response to this question can be seen in Table 2.

Table 2: Have you ever accessed a formal credit?

Response	Frequency	Percentage
No	273	97.2
Yes	8	2.8
Total	281	100

Source: Fieldwork, 2018

The result in Table 2 revealed a sad situation of women entrepreneurs in the state. With only 8 respondents out of 273 to have ever accessed a formal credit, this result is in consonance with so many research both in Africa and beyond that have established that women entrepreneurs are grossly underserved by formal credit institutions [(Nwagwu and Ifeanacho, 2009); (Roxin, Berkmuller, Koller, Lawonn, Pooya and Shappert 2010); (IFC, 2013); (GPFI and IFC, 2011); (Powers and Magnoni, 2010); (Yusuf 2013)].

The researcher further asked if they are constrained from accessing formal credit and the response in Table 3.

Table 3: Are you constrained from accessing Formal credit?

Response	Frequency	Percentage
No	75	26.7
Yes	206	73.3
Total	277	100
Source:		Fieldwork, 2018

The results showed that out of the 272 responses, 206 or 73.3% of YES responses grossly outweighing the 75 or 26.7% of NO responses, this reveals that there exist factors constraining access to formal credit.

In order to analyze the factors constraining women entrepreneurs in Sokoto State from access to formal credit, the researcher employed binomial logistic regression analysis on the model which the measurements and the parameters for estimation have been explained earlier, the result is displayed in Table 4.

Table 4: Summary of Binomial Logistic regression on Constraints to Formal credit

Dependent Variable: CFC			
Response Factors	B	Odd Ratio: Exp(B)	Wald X ²
LCR	0.941	2.562	18.332 (0.000)
HIR	0.218	1.244	1.092 (0.296)
NB	1.066	2.903	22.594 (0.000)
IIL	0.887	2.427	12.571 (0.000)
LRI	1.070	2.916	23.822 (0.000)
NET	0.456	1.577	2.405 (0.121)
Constant (@1df)	-11.005	0.000	28.349 (0.000)
Diagnostics			
Chi-Square X ²	146.132	Alternate	
P-Value	0.000	P < X ²	
-2 Log likelihood	107.157 ^a	13.01%	
Cox & Snell R square	0.449	44.9%	
Nagelkerke R square	0.697	69.7%	

Note: Figures in parenthesis indicates the significance level

Source: Author's Computation as extracted from SPSS version 23

Table 4 showed that the count statistic Chi-Square X^2 is 146.132 which is greater than the P-value (0.000), this indicates that the model is adequate and statistically significant at 1%. The Cox & Snell R square is 0.449 or 44.9% and Nagelkerke R square is 0.697 or 69.7%. This indicates that the minimum variation of all explanatory variables jointly is 44.9% and maximum is 69.7%. The joint R square (*Pseudo Statistics*) is very strong because the maximum of Nagelkerke R square is above 0.5 or 50%. The percentage of probability of error is 107.157^a or 13.01% as shown by the -2 Log likelihood.

Of the parameters estimated as the independent variables, only high interest rate (HIR) and lack of strong network system (NET) are not statistically significant. However, the model is adequate and all other variables estimated are statistically significant at 1% level. The result also revealed that all variables have positive coefficient values, implying that they all constitute as constraints to formal credit access. The result of the high interest rate as statistically not significant, even though proved to be contrary to *apriori* expectation, is in consonance with the result of the study by Sawaya and Bhero (2017) in Mozambique.

Going by the odd ratio, NB and LRI are the two factors with the highest influence with values of 2.903 and 2.916 respectively, implying that a unit increase in either will constrain the respondents 2.9 times further, other factors controlled. This suggest that women entrepreneurs in sokoto state are more constrained from accessing formal credit by the nature of their business and the irregularity of their income, these are factors that have been asserted to influence women entrepreneurs more than their men counterpart and these factors, as discussed earlier, can arguably be classified as being gender sensitive in nature and more or less a product of socio-cultural norms.

Conclusion and Recommendations

The study revealed that the majority of the respondents, precisely 73.3%, are constrained from accessing formal credit. The inferential result revealed that of the parameters estimated as explanatory variables, only High interest rate (HIR) and Lack of strong network system (NET) are not statistically significant with all other variables being significant at 1% level. We can thus conclude that women entrepreneurs in sokoto state are partly constrained from accessing formal credit due to their inability to meet the collateral requirement and unavailability of adequate information about loan products but are mainly constrained because of the nature of their businesses and the irregularity of their income. To address this, the research call to the government of sokoto state to create an enabling platform to promote interaction between the state and the women aimed at supporting the businesses of the women in order to propel them into the formal sector of the economy, this would improve the nature of their businesses through innovation and modernization with a resultant more regular income for the women.

Financial policy designing and implementation have clearly failed to address the financial needs of women entrepreneurs in sokoto state. The disappointing 2.8% access to formal credit revealed by the survey implies a lapse in financial inclusion policy on several levels, thus, suggesting a systematic marginalization of women entrepreneurs in the state. Consequently, this has undermined the country's quest for an inclusive growth because financial inclusion is clearly fundamental to inclusive growth. Even though the National Collateral Registry (NCR) initiative is a commendable effort aimed at making formal credit accessible to vulnerable groups that cannot meet stringent collateral requirements because it allows for the use of movable assets as collateral, however, it has failed to improve access to formal credit by this group of women. There is an urgent need for the government at both state and local government level to sensitize women entrepreneurs in the state on not only the existence and importance of the NCR but also other available sources of formal credits. This can be done by creating for the women a platform that would serve as an enabler to make necessary information easily available to ease the women's access to formal credit, organising them into associations and groups with special considerations for their socio-cultural characteristics is highly recommended to facilitate reach.

Furthermore, there is a need for the federal government to address the stringent policy of formal credit providers, which is that the value of loans cannot exceed the value of asset used as collateral. This policy also extends to NCR and the implication is that vulnerable

groups such as this study focus will not have access to any substantial amount of loan, resulting to under servicing. Another stumbling block for the women is also the rule that any asset to be used as collateral has to be insured by the owner before it can be accepted constituting another problem to the vulnerable group. Hence, a review of this is highly recommended for the women to better access formal credit.

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