Effect of Financial Inclusion And Financial Literacy On Performance Of Agro-Based SMEs In Yobe State, Nigeria

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ABSTRACT

Agro-based SMEs experience resource constraints and poor access to finance and resources; hence the importance of finance to the success of SMEs cannot be overemphasized especially in the agricultural sector. This study is therefore, an attempt to ascertain the impact of financial inclusion and financial literacy on the performance of agro-based SMEs in Yobe State, Nigeria. A cross sectional research design was adopted. The population of the study was registered agro-based SMEs in Yobe State and the sample size of the study was 300. Questionnaires were used for data collection while hierarchical regression was adopted as data analysis technique. The result revealed that availability, accessibility, affordability and usability of financial services all have significant effect on the performance of agro-based SMEs in Yobe State. Also, financial literacy fully mediated the relationship between the availability of financial services and the performance of agro-based SMEs in Yobe State while partially mediating the relationship between accessibility and affordability of financial services and performance. The study recommended that financial inclusion should be encouraged by both the government and financial institutions and also that formal financial institutions should ensure the availability, accessibility, affordability and usability of financial resources to agro-based SMEs to improve their performance. Also, the government should implement training programmes at the grassroots to improve the financial literacy of agro-based business owners as this helps in the improvement of their business performance.

Keywords: financial inclusion, financial literacy, performance, agro-based SMEs, Yobe State

INTRODUCTION

The agricultural sector plays a strategic role in the process of economic development, wealth creation and income redistribution in any economic system. It is touted as fundamental to the growth and development of any nation and is recognized as the bedrock of economic growth, development and poverty reduction. This situation is not different in the case of Nigeria. Agriculture continues to be the largest employer of labour with reported figures of 36.55% of the total employment in 2017 (World Bank, 2017). The sector has also recorded landmark impacts in agricultural produce such as cassava, rice etc. For example, the sector is the highest producer of cassava in the world producing 50 million metric tons annually (20 percent of the world output, 34 percent in Africa and 46 percent of West Africa) from a cultivated area of about 3.7 million hectares as reported by the Food and Agricultural Organization (2017). Furthermore, besides providing food security for the country, the sector has continued to be a provider of inputs and raw materials for manufacturing activities in the country. Coupled with the huge potentials of the country in terms of arable land (98.3 million hectares), good vegetation and topography for cultivation of various agricultural produce, the agricultural sector has continued to impact positively on the Nigerian economy's Gross Domestic Product (Izuchukwu, 2011; Oluwatoyese & Applanaidu, 2013; Ebere, 2014) with recent reports estimating the contribution of the sector to real GDP at 22.82%, Q2 2019 (Nigeria Bureau of Statistics, 2019).

Despite the positive contribution of the agricultural sector to the Nigerian economy, there exist challenges inhibiting the growth of the sector. The root cause of the problems was the discovery of oil, which led to the neglect of the sector. Other notable challenges of the sector include an outdated land tenure system that constrains access to land (1.8 hectares per farming household), a very low level of irrigation development (less than 1 percent of cropped land under irrigation), limited adoption of research findings and technologies, high cost of farm inputs, inefficient fertilizer procurement and distribution, inadequate storage facilities, poor access to markets and credit have all combined to keep agricultural productivity low with high post-harvest losses and waste (FAO, 2019). All these challenges have impacted negatively on the growth and performance of the sector and invariably the operators or actors in the sector. Statistics have indicated that agro-based SMEs experience resource constraints, low value-addition to agricultural produce, poor financial and operational performance, poor access to finance and resources etc. Recognizing the importance of promoting agro-based businesses, government over the years have developed and implemented numerous programmes to mitigate the negative effect of the challenges in the agricultural sector.

Earlier policies promoting the agricultural sector and indirectly, agro-based businesses include Operation Feed the Nation, Green Revolution, National Food Acceleration Production Programme, Directorate of Food, Road and Rural Infrastructure (Nwankpa, 2017), various policies focusing on seed, water, agro-chemical and fertilizer supply; industrial raw material production targeting cereals, roots and tubers, vegetables and fruits, sugar targeting agro-industries and policies focusing on support services. These policies target agricultural extension, technology development and transfer and agriculture credit, which involve making adequate investment funds available to agro-based SMEs at the right time and at such rates as will make returns from agriculture more attractive than before (Federal Ministry of Agriculture, 2019). The strategies designed to address agricultural credit involves structural adjustment in fiscal and monetary policies (increase in loans and grace period, revision of interest rates, regulation which makes it mandatory for banks to grant loans of up to 50% of deposit generated in areas under rural banking scheme to borrowers in rural areas etc) and policies targeting operators or institutions set up to provide agricultural loans (which involves increase in the number of branches and share capital of the Nigerian Agriculture and Cooperative Bank, abrogation of tangible securities such as Certificate of Occupancy, rural socialized banks, rural infrastructure etc) (Federal Ministry of Agriculture, 2019). But how effective are these policies especially the agricultural credit policies on the performance of agro-based small and medium scale businesses in Nigeria? This is the major question addressed in this study.

Financial inclusion has been recognized as essential for people who operate in an increasingly complex business environment. Governments and international entities around the world are interested in finding effective approaches to improve their populations' levels of financial inclusion through the creation or improvement of national strategies for financial services availability to people and businesses at all levels (Atkinson & Messy, 2012). The concept financial inclusion seeks to ensure that all members of an economy have access to use a broad range of formal financial services that meet their needs at affordable cost. However, despite the government's agricultural credit policies, the reality is that agro-based businesses have failed to benefit from such policies to achieve the desired performance in terms of liquidity, long term solvency and profitability hence leading to business failure. Such a scenario has created doubts raising questions on how effective the so-called policies contribute to the improvement of agro-based SMEs performance. This is the practical reality despite empirical evidence that seems to indicate that financial inclusion contributes to business performance (Murigi, 2014; Sunday, Gloria & Aiwanehi 2015; Onaolapo, 2015; Ombi, Ambad & Bujang, 2018; Cherugong, 2015; Nkwede, 2017). This is the research gap that has influenced the decision to embark on this study. In the context of the agro-based businesses, does financial inclusion contribute to the improvement in their business performance? This is the question that begs for answers. Specifically the study explored the effect of financial inclusion (proxied as availability, access, affordability and usability of financial services) on performance of agro-based SMEs in Yobe State?

THEORETICAL AND CONCEPTUAL FRAMEWORK

The Financial Liberalization Theory forms the foundational theory guiding this study which is supported by the goal setting theory. The Financial Liberation Theory was brought into limelight with the seminal work of McKinnon and Shaw (1973). They popularized the concept of financial repression as a financial system with policies that distort domestic financial markets and credit controls. The observation is that such a system interferes with the economic development of a country as the intermediaries are not well developed for mobilization of savings while allocation of financial resources among competing users is inefficient. The early hypothesis of McKinnon and Shaw (1973) assumed that liberalization (absence of repression) which would be associated with higher real interest rates would stimulate savings which would lead to higher levels of investments and therefore to economic growth. McKinnon and Shaw also suggested that liberalization of financial markets allow penetration of financial services among the poor population. These groups of people are always on the lower cadre of the social cycle. Therefore, providing them with accessible tools of finance could be considered a very significant step towards achieving economic growth as it gives them the opportunity to expand their business activities. Financial inclusion could be considered a financial framework that agrees with the financial liberalization theory as it targets liberalization of the financial markets to make capital and resources available to not only those in the top of the financial chain but most importantly those at the bottom to expand their operations and processes to add value to the society.

The success of the financial inclusion system is dependent on the goals of those the framework is intended for, which in this study are the agro-based businesses. Goal Setting Theory as a supporting theory is grounded in the belief that conscious goals and intentions drive results. According to the goal setting theory, individual goals are likely to determine how well they perform to related tasks (Locke, 1986) as cited in Ajide (2015). Specifically, clearly defined and more challenging goals yield higher performance than vague, easy or do-your-best goals. To be effective, goal setting theory assumes that individuals must be committed to the goals, must get feedback and must have the ability to perform the task. This means that financial inclusion programs would be more effective if agro-based businesses are committed to making their businesses successful and have the ability to be actively engaged in the performance of their task. Therefore, both the financial liberalization theory and the goal setting theory better capture the phenomenon of financial inclusion as conceptualized in this study.

Concept of Financial Inclusion

There are many different views on what 'financial inclusion' means or entails in the literature, but the key point of the concept is access to formal financial services - payments, savings, insurance, credit, and so on – by vulnerable/low income groups at an affordable cost (Aduda & Kalunda, 2012). Usage, accessibility, affordability (fair price), convenience, timeliness, adequacy, and product knowledge are among the issues emphasized by many definitions of financial inclusion. According to Aduda and Kalunda (2012), financial inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups and low income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players. It ensures the ease of accessibility, availability, and affordability of formal financial services for all members of an economy (Sharma, 2015). It refers to a state in which all people especially low-income earners have access to appropriate, desired financial products and services in order to facilitate enhanced financial and economic well-being (Han & Melecky, 2013). In contrast, financial exclusion is the opposite of financial inclusion, and connotes a situation where individuals have zero or limited access to financial services (Han & Melecky, 2013; Popov & Udell, 2012).

In the words of Mohan (2016), financial exclusion has manifested prominently in Nigeria with the bulk of the money in the economy staying outside the banking system. The issue of financial exclusion has therefore become a major economic challenge that has received the attention of the various governments over the past four decades. Prior to recent efforts to promote financial inclusion, the Nigerian economy was largely a cash-based economy with significant proportion of the money outside the banking system. However, at present the percentage has decreased significantly. The decline in the ratio is attributable to a combination of developments, including increased literacy and government policies directed at encouraging financial sector growth (Mohan, 2016).

One of the critical initiatives in this direction was the incorporation of financial inclusion as one of the cardinal objectives of the Nigerian Financial System 2020 (FSS 2020). The FSS 2020 represents a holistic and strategic road map and framework for developing the Nigerian financial sector into a growth catalyst that will enable Nigeria to be one of the 20 largest economies by 2020. The Financial System Strategy (FSS 2020) identified six stakeholders within the financial sector. These were the providers of financial services, which are regarded as the suppliers in the value-chain of financial inclusion. The group included the banking institutions, non-bank financial institutions, insurance companies, capital market players, pension institutions, and technology providers together with their regulatory bodies, all important to the process of financial inclusion (Ayadi, Adegbite & Ayadi, 2008). Of the six initiatives adopted to strengthen the domestic financial market, four directly addressed financial inclusion. These initiatives included the development of varied financial products, enhancement of payment processes, development of credit system and encouragement of a savings culture. Broadly, the FSS categorized all the key stakeholders in the drive to achieve financial inclusion in Nigeria into three as providers (providers of financial products and services, and their partners that provide the needed infrastructure and technological support); enablers (enablers refer to regulators and public institutions responsible for setting standards for the achievement of financial inclusion; and supporting institutions (these include organizations that assist regulatory institutions in attaining the national financial inclusion objectives). In the context of this study, financial inclusion is intended to improve agro-based SME performance. So what then does performance imply?

Kim and Patel (2017) describe performance as an action or achievement considered in relation to how successful it is. Looking from the Kim and Patel, (2017) definition, it can be reasonably concluded that performance is synonymous to success. What connotes performance varies from one organization to another (Jamil & Mohamed 2011). According to Chepngetich (2016), performance of small enterprises is viewed as its ability to contribute to job and wealth creation through enterprise start-up, survival and growth. This research study adopts subjective measures of SME performance targeted on performance indicators such as profitability, sales, net profit, asset and market share.

Following from the proceeding arguments and in line with the theoretical position, the following framework is adopted for this study. Financial inclusion is defined using four variables: availability, accessibility, affordability and usability of financial services as conceptualized by the Central Bank of Nigeria (2012). This model has been tested and confirmed by studies carried out by Adebisi, Alaneme and Ofuani (2015), Onaolapo (2015), Ombi, Ambad and Bujang (2018), Cherugong (2015), Migap (2017) and Nkwede (2017). This framework is presented in Figure 1.

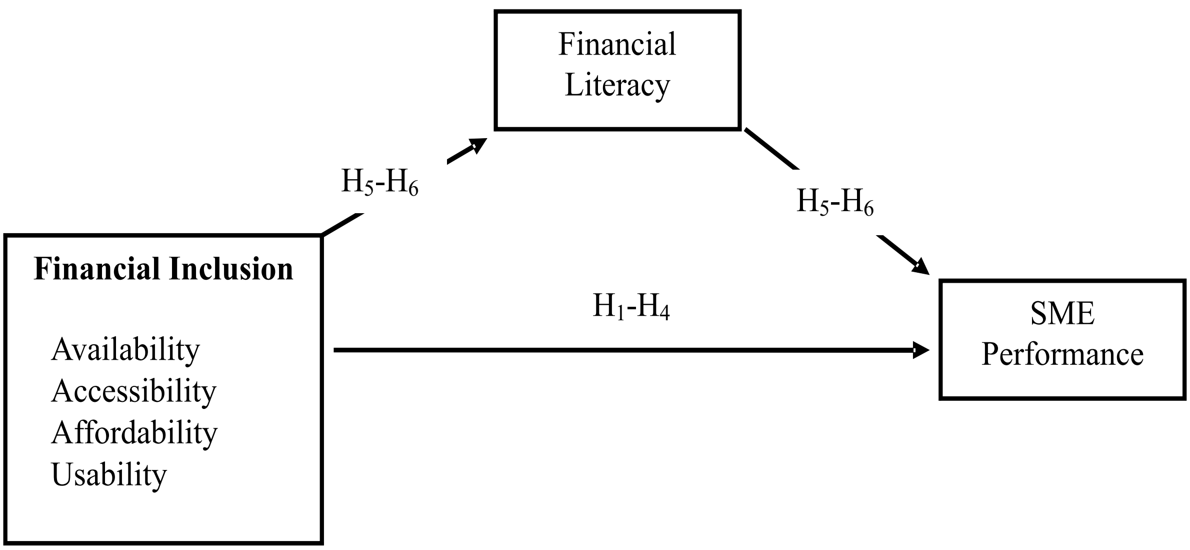

Figure 1: Conceptual Framework

Availability of Financial Services and Performance of Agro-based SMEs

One of the critical elements of financial inclusion is availability of financial services, particularly to the poor, majority of who reside in the rural areas with extremely low levels of infrastructural development. Quality of service delivery in finance involves having timely access to the right products at an affordable price and at convenient locations. Hence, the provision of quality service by existing and new service providers should be enhanced to achieve a greater level of financial inclusion (Claessens, 2006). Nkwede (2017) examined and found a significant relationship between financial inclusion proxy of financial availability and business performance in Africa, using Nigeria as a case study. Harrison, Lin and Xu (2014) also showed that a wide array of financial services leads to firm performance, sales growth and productivity. Also, Turkmen and Yigit (2012) assessed the relationship between a wide range of bank financial services and SME's financial performance and found a significant positive relationship between the two variables. Following from this the following hypothesis is proposed:

Hypothesis One: Availability of financial services has no significant effect on the performance of agro-based SMEs in Yobe State.

Accessibility to Financial Services and Performance of Agro-based SMEs

Access is a wider concept. One way to understand access is the absence of price or non-price obstacles for use (World Bank 2012). In that sense, the concept is related to the supply side. Thus, access is related to physical proximity and affordability concepts. The problem with this view is that it implies the existence of an underlying demand for financial services, and that once service points are available, individuals will use these services, which is not always the case. A more recent definition of financial access is related to the ability to access available financial services and products from formal financial institutions (Simeyo, 2011). This corresponds to the idea that having financial service points nearby does not automatically imply their use, a decision that may result from voluntary or involuntary exclusion from financial services. Individuals may self-exclude from using financial services (even if they are available to them) because of lack of need, religious or cultural reasons, or access to other sources, while the involuntarily excluded may be so as a consequence of risk, discriminatory policies, contractual deficiencies, and price and product features (World Bank, 2008). Murigi (2014) and Adebisi, Alaneme and Ofuani (2015) all indicated that accessibility of financial services have a positive significant effect on performance of business organization. In line with the above, the second hypothesis is proposed as:

Hypothesis Two: Accessibility of financial services has no significant effect on the performance of agro-based SMEs in Yobe State.

Affordability of Financial Services and Performance of Agro-based SMEs

Affordability of financial services is the ability to afford available financial services from formal finance providers at a fair cost. Affordability is dependent on the conditions for opening and using a bank account, the location of the financial institution to the people and the charges paid to the financial institution for operating an account (Serrao, 2013). Affordability of formal financial services or financial inclusion in developing economies is critical to economic growth and reduction in inequality among citizens of a nation (Onaolapo, 2015). Serrao (2013) asserted that the lack of affordability of finance is a critical mechanism for the persistent income inequality, as well as slower growth presently experienced in the economy which influences resource allocation and the comparative economic opportunities of individuals and firms in the economy. Affordability of finance creates opportunities for people and firms to increase their income and productivity through purchase and sales of goods and services with possibility of reduction in poverty and improvement in standard of living. Empirical research has established the relationship between affordability of financial services and firm performance. On his part, Onaolapo (2015) study on the effects of financial inclusion on the economic growth of Nigeria from 1982-2012 found that a significant relationship exists between affordability to financial services and economic growth in Nigeria. Also, Ombi, Ambad and Bujang (2018) study found that affordability of financial services impacts positively on the performance of small and medium scale enterprises (SMEs). Similarly, Harley, Adegoke and Adegbola (2017) found that the availability of financial services in an economy has a significant relationship on increased performance of firms. Also, Okoye, Adetiloye, Erin and Modebe (2017) similarly found that low rate of interest can increase borrowing capacity of SMEs and thereby boosting their performance generally. It is on this basis that the third hypothesis is proposed:

Hypothesis Third: Affordability of financial services has no significant effect on the performance of agro-based SMEs in Yobe State.

Usability of Financial Services and Performance of Agro-based SMEs

Usability of financial services represents the regularity, duration and frequency of use of financial services over time which also includes the combination of services used by individuals and organizations other than financial institutions (Serrao, 2013). Increase in number of bank branches may not necessarily lead to improvement in financial inclusion especially where those new branches are located where other banks already exist. But if bank branches are located where there are no existing banks, financial inclusion will increase as new accounts are opened for those that are hitherto unbanked. With this, financial inclusion in Nigeria may be a mirage because according to Mbutor and Uba (2013), absolute number of bank branches does not necessarily imply increasing financial inclusion, because the practice of stationing many bank branches, in a small geographical location is common to banks, and the resultant effect of this practice is customer poaching rather than financial inclusion. Cherugong (2015) carried out a study on the effect of financial services usage on performance of small and medium enterprises in Trans Nzoia County, Kenya. Contrary to the expectation, Migap (2017) study revealed that non-financial services usage has no effect on firm's performance. It is on the basis of the above that the fourth hypothesis is proposed:

Hypothesis Four: Usability of financial services has no significant effect on the performance of agro-based SMEs in Yobe State.

Mediating Effect of Financial Literacy on Relationship between Financial Inclusion and Performance of Agro-based SMEs

The term financial literacy was first coined in 1787 in the USA, when John Adams in a letter to Thomas Jefferson admitted the need for financial literacy for overcoming the confusion and widespread distress in America that had arisen due to ignorance towards credit, circulation and nature of coin (Financial Corps, 2014). Thereafter, several developments took place and the term financial literacy was used again and again by different researchers, organisations and governments and was addressed differently (Hung, Parker & Yoong, 2009). The concept financial literacy is multidimensional in nature meaning different things to different people. Not surprisingly, different definitions exist (Noctor, Stoney & Stradling, 1992; Morgan, 2003; Commonwealth Bank Foundation [CBF], 2004). Noctor, et al. (1992) define financial literacy as the ability to make informed judgments and to take effective decisions regarding the use and management of money. The CBF (2004) defines financial literacy as the ability to balance a bank account, prepare budgets, save for the future and learn strategies to manage or avoid debt while Morgan (2003) defines financial literacy as enabling people to make informed and confident decisions regarding all aspects of their budgeting, spending and saving and their use of financial products and services, from everyday banking through to borrowing, investing and planning for the future.

Financial literacy improves utilization of financial resources because literate entrepreneurs are more likely to utilize and access financial services which help to improve the performance of their business (Fatoki, 2014). Low degree of financial literacy can prevent the performance level of entrepreneurs from adequately assessing and understanding different financing provision (Vincent, 2014). Financially literate entrepreneurs or as this study conceptualizes, agro-based SME owners make better financial decisions and maintain a better overall financial well-being. SME owners who are financially literate have a higher chance of being successful in their business more than their illiterate equivalents; therefore, the inclusion of financial literacy in the relationship between financial inclusion and performance is proposed to be significant. Financial literacy is proposed to mediate the relationship between financial inclusion and performance. It is expected that the inclusion of financial literacy would strengthen the proposed link between financial inclusion and performance of agro-based SMEs. It is on the basis of this that the following hypotheses are proposed:

Hypothesis Five: Financial literacy mediates the relationship between the availability of financial services and the performance of agro-based SMEs in Yobe State.

Hypothesis Six: Financial literacy mediates the relationship between the affordability of financial services and the performance of agro-based SMEs in Yobe State.

Hypothesis Seven: Financial literacy mediates the relationship between the accessibility of financial services and the performance of agro-based SMEs in Yobe State.

Hypothesis Eight: Financial literacy mediates the relationship between the usability of financial services and the performance of agro-based SMEs in Yobe State.

METHODOLOGY

This research adopted a cross sectional research design. The study involved agro-based SMEs registered with the Ministry of Agriculture, Yobe State. The population of the study consisted of 315 agro-based SMEs. Because the population was small, the 315 agro-based SMEs formed the sample size of the study. Questionnaire items were developed and used for data collection based on validated items developed. To ensure validity of the measuring instruments, a carefully drafted and wide-ranging questionnaire aimed at eliciting right responses was constructed and pilot tested in order to detect any ambiguities or inherent problems. To ensure reliability, this research used Cronbach alpha coefficient to test reliability. The Cronbach's alpha results was 0.717 for availability of financial services; 0.761 for accessibility of financial services; 0.766 for affordability; 0.709 for usability of financial services; while 0.719 was calculated as the reliability for performance of agro-based SMEs.

Financial inclusion was measured by adopting items proposed by Central Bank of Nigeria (2012), while performance was measured using scales developed by Murphy, Trailer and Hill (1996). Lastly, financial literacy was also measured using validated scales developed and extensively used by Atkinson and Messy (2012). Furthermore, hypotheses were tested using hierarchical regression analysis. The result shows the t-statistic and p-values for the coefficients which results in either rejecting or accepting the hypotheses at a specified level of significance. The null hypothesis is rejected where the p-value is less than the critical value at 0.05. Also, the result shows the coefficient of determination (r^2) which measures the proportion of the dependent variable that is explained by the independent variables. The range for the coefficient of determination varies between 0 and 1; that is $0 = r^2 = 1$. As r^2 approaches 1, the more the independent variable explains the variation in the dependent variables. Statistical Package for Social Sciences (SPSS 23.0) computer program was used.

RESULTS

This study was aimed at assessing the effect of financial inclusion on the performance of agro-based SMEs in Yobe State. Specifically, the study assessed the positive effect of availability, accessibility, affordability and usability of financial services on the performance of agro-based SMEs on the one hand and also assessing the mediating role of financial literacy on this proposed relationship.

Of the 315 questionnaire administered, 247 were received but only 202 were finally used for data analysis. Therefore, 45 questionnaires were eliminated for wrongly filled questionnaires. A careful assessment of the dataset revealed the absence of missing values, which has made it appropriate for use in this analysis. Furthermore, the dataset failed to show that the assumptions of linearity, normality etc were violated given further justification of the use of the dataset for regression analysis. The appropriateness of the dataset for regression analysis was also arrived at by inspection of the histogram, Normal P-P Plot of Regression Standardized Residual and Scatterplot. This was also confirmed by calculation of the Tolerance and VIF values. Tolerance values was 0.398, 0.883, 0.639, 0.896 and 0.428 and VIF values were 2.510, 1.133, 1.565, 1.116 and 2.335 for availability, accessibility, affordability, usability and financial literacy respectively all within acceptable threshold indicating that the dataset poses no multicollinearity problem.

It is important to note the coefficients among the main variables in the study. Firstly, performance of agro-based SMEs correlated significantly with availability of financial services ($r = 0.659$, $p<.001$), accessibility of financial services ($r = 0.275$, $p<.001$), affordability of financial services ($r = 0.466$, $p<.001$), usability of financial services ($r = 0.272$, $p<.001$) and financial literacy ($r = 0.730$, $p<.001$). However, accessibility failed to correlate with affordability and usability otherwise all the independent variables were significantly correlated with each other with the correlation ranging from 0.179 to 0.735. This information is presented in Table 1.

Table 1: Mean, Standard Deviations and Correlation

	Mean	SD	1	2	3	4	5
Performance of agro-based SMEs	3.42	1.119	1.000				
Availability of financial services	3.41	1.452	.659**	1.000			
Accessibility of financial services	3.13	1.396	.275**	.258**	1.000		
Affordability of financial services	2.96	1.448	.466**	.570**	.071	1.000	
Usability of financial services	3.26	1.221	.272**	.283**	-.050	.179*	1.000
Financial literacy	3.31	1.417	.730**	.735**	.279**	.527**	253**

**p<.001; *p<.01

Source: Author Computations (2019)

A hierarchical regression analysis was used to test the hypotheses. To test our hypotheses, the study adopted the procedures developed by Baron and Kenny (1986). According to the logic of this procedure, mediation is suggested if the following conditions are met: (a) the independent variable is a significant predictor of both the dependent variable and the mediator, (b) the mediator is a significant predictor of the dependent variable, and (c) the effects of the independent variable on the dependent variable are reduced when the mediating variable is added to the regression equation. Full mediation is indicated if the effect of the independent variable is no longer significant when the mediating variable is added, whereas partial mediation is suggested if the effect of the independent variable is reduced but remains significant. The result of the multiple regression result is presented in Table 2 and 3 below.

Table 2: Result of Regression Analysis

	Financial literacy	Performance of agro-based SMEs	
	Model 1	Model 2	Model 3
Availability of financial services	.574**	.392**	.166*
Accessibility of financial services	.120*	.111*	.064
Affordability of financial services	.168*	.113*	.047
Usability of financial services	.072	.100*	.072
Financial literacy			.394**
R^2	.572	.471	0.577
Adjusted R^2	.563	.460	0.566
F	66.070**	44.023**	53.763**

N = 202; **p < 0.001; *p<.05

Table 3: Regression Analysis – Financial literacy and Performance of agro-based SMEs

	Performance of agro-based SMEs
	Model 4
Financial literacy	.577**
R^2	.534
Adjusted R^2	.531
F	229.880**

N = 202; **p < 0.001

Four regression models were used to test the study's hypotheses. Model 2 was used to answer hypotheses 1 – 4. The Model 2 is significant at F (4, 198) = 44.023, p < 0.001 explaining 47.1% of the variation in the performance of agro-based SMEs. Specifically, the result indicates that availability of financial services (β = 0.392, p < .001), accessibility of financial services (β = 0.111, p < .05), affordability of financial services (β = 0.113, p < .05) and usability of financial services (β = .100, p < .05) are all significant predictors of performance of agro-based SMEs in Yobe State. Therefore, hypotheses one to four are all rejected.

Following the recommendations by Baron and Kenny (1986), successive regression equations were tested for mediation. In Model 1, the availability of financial services (β = 574, p < .001), accessibility of financial services (β = 0.120, p < .05), and affordability of financial services (β = .168, p < .01) are significant predictors of financial literacy, satisfying the first condition by Baron and Kenny while usability of financial services (β = 0.072, p = .209) violated the first condition indicating that financial literacy does not mediate the effect of usability on the performance of agro-based SMEs in Yobe. As earlier indicated, availability, accessibility, affordability and usability of financial services are all predictors of performance of agro-based SMEs satisfying the criteria. In addition, as indicated in Table 3, financial literacy has significant positive effect on the performance of agro-based SMEs (β = 0.577, p < .001) also satisfying the second condition of the recommendation. In Model 3, where financial literacy is included in the model, whereas the availability of financial services (β = 0.166, p < .01) is still significant, accessibility (β = 0.064, p = .108) and affordability (β = 0.047, p = .297) are not significant. The result indicates that whereas financial literacy fully mediates the relationship between accessibility and affordability of financial services and the performance of agro-based SMEs, it partially mediates the relationship between availability of financial services and the performance of agro-based SMEs in Yobe State (Baron & Kenny, 2006).

DISCUSSION OF FINDINGS

The importance of finance to the success of SMEs cannot be overemphasized especially in the agricultural sector. This study is therefore, an attempt to ascertain the impact of financial inclusion and financial literacy on the performance of agro-based SMEs in Yobe State, Nigeria. The result of the analysis revealed that availability, accessibility, affordability and usability of financial services proposed as dimensions of financial literacy all have significant effect on the performance of agro-based SMEs in Yobe State. These findings agree with earlier research conclusions by Nkwede (2017), Harrison, Lin and Xu (2014), Murigi (2014), Adebisi, Alaneme and Ofuani (2015), Onaolapo (2015), Harley, Adegoke and Adegbola (2017) and Cherugong (2015) variously indicating the positive impact of financial inclusion on organizational performance. The implications of these findings shows that when formal financial institutions make available, accessible financial resources to business organizations, then the performance of such business organizations will be improved. Furthermore, agro-based SMEs performance will also be enhanced if the financial resources offered by formal financial institutions are used by them because of the affordability of such financial services.

Furthermore, the result of the analysis also revealed that financial literacy fully mediates the relationship between the availability of financial services and the performance of agro-based SMEs in Yobe State while partially mediating the relationship between accessibility and affordability of financial services and performance. Similar findings were reported by scholars such as Mabula and Ping (2018) and Bongomin, Munene, Ntayi and Malinga (2018) who also reported the mediating role of financial literacy on the relationship between financial inclusion and organizational performance. This finding implies that agro-based business owners who are financially literate will be better positioned to improve their business performance when formal financial services are available to them. Furthermore, the findings indicate that financial literacy is the most important factor in the relationship between both accessibility and affordability of financial services and the performance of agro-based SMEs in Yobe State. It is surprising that financial literacy is not important in assessing the relationship between usability of financial services and the performance of agro-based SME performance, perhaps because of its low contribution to the variation in SME performance, which calls for further studies.

CONCLUSION

Agro-based SMEs experience resource constraints and poor access to finance and resources, hence the importance of finance to the success of SMEs cannot be overemphasized especially in the agricultural sector. This study is therefore, an attempt to ascertain the impact of financial inclusion and financial literacy on the performance of agro-based SMEs in Yobe State, Nigeria. A cross sectional research design was used on a population involving registered agro-based SMEs in Yobe State. A sample size of 315 was used. Questionnaires were used with hierarchical regression adopted as data analysis technique. The results revealed that availability, accessibility, affordability and usability of financial services all have significant effect on the performance of agro-based SMEs in Yobe State. Also, financial literacy fully mediated the relationship between the availability of financial services and the performance of agro-based SMEs in Yobe State while partially mediating the relationship between both accessibility and affordability of financial services and performance.

RECOMMENDATIONS

The following recommendations are suggested:

1. Formal financial institutions should make available financial resources to small and medium scale businesses as it is the most important factor in the improvement of business performance.
2. Besides making financial resources available, formal financial institutions should also be encouraged to make these financial resources accessible so that business organizations make use of them to enhance their business performance.
3. Making available financial resources should also be complemented with affordability; therefore, formal financial institutions should ensure that abundant financial resources are made available to agro-based business as it contributes to their performance.
4. Because usability of financial services contribute to the performance of agro-based businesses, agro-based SMEs should be encouraged to avail themselves the opportunity of using financial services in order to boast their business performance.
5. Government should also implement training programmes (by way of extensive agricultural extension services) at the grassroots to improve the financial literacy of agro-based businesses in order to improve business performance.
6. Government should also encourage formal financial institutions to lend to agro-based businesses as this has the capacity to impact positively on their business operations and performance.
7. The effectiveness of financial inclusion on the performance of agro-based SMEs would be strengthened if their financial literacy is significantly improved, therefore, financial institutions should support and encourage agro-based SMEs to be proficient to improve their financial literacy and ultimately their business performance.
8. Financial inclusion as a policy should be encouraged by the government, formal and informal financial institutions and indeed the policy should be adopted especially in the agricultural sector to boost the performance of businesses operating in the sector, which will ultimately impact positively on the growth and development of the country.

LIMITATIONS AND SUGGESTIONS FOR FURTHER STUDIES

This study is limited to registered agro-based SMEs in Yobe State, which only provides a microscopic view of the phenomenon. Future studies could look at a larger scope to better understand the impact of financial inclusion on the performance of agro-based SMEs in Nigeria. Also, it would be appropriate to extend the study to cover other industries and countries. Another limitation is the cross-sectional nature of the study which could be overcome by using a longitudinal research design. Also, the study is limited by variable definitions as other dimensions of financial inclusion could be used including using mediators besides financial literacy as implemented in this study. Therefore, future studies could use other dimensions of financial inclusions and also other mediators to better capture the influence of financial inclusion on the performance of business organizations.

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