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IMPACT OF INFORMATION ASYMMETRY ON ACCESS TO FINANCE BY SMES: THE MODERATING ROLE OF FINANCIAL REGULATIONS

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Abstract
This study examined the impact of information asymmetry on access to finance by SMEs and the moderating role of financial regulations. Cross-sectional research design was employed to collect data from the SMEs owners/managers in northern Nigeria. Population of the study consisted of SMEs in the sixteen states out of the nineteen states in northern Nigeria, including FCT. The study used data from 425 respondents out of 493 sample size adopted through stratified random sampling. Questionnaires were distributed and collected through the personally-administered method. A Partial Least Square Structural Equation Modeling (PLS-SEM) was used to analyse the data with the aid of Smart PLS 3.2.8 and to test the hypotheses of the study. The findings show that information asymmetry has negative and significant impact on access to finance. Again, financial regulations do moderate the impact of information asymmetry on access to finance by SMEs in Northern Nigeria. The study therefore, conclude that information asymmetry reduced SMEs access to finance and effective financial regulations improve access to finance. Thus the study recommend that CBN should continue to implement policies that will reduce information asymmetry and SMEs be encouraged to make information more available to enable access to finance.
Keywords: *Information Asymmetry, Access to Finance, Financial Regulations, Moderator, Small and Medium Enterprises (SMEs).*

1. Introduction

Small and Medium Enterprises (SMEs) offer a significant contribution to economic growth through creating jobs, alleviating poverty, distribution of income, and innovation (Maneesha, 2020). SMEs have been globally acknowledged as the backbone of the world economy, accounting for most businesses across nearly every country. These contributions vary widely across firms and across countries and sectors. For instance, according to Lauckner (2020), SMEs accounted for 51.9% and 53.6% of all private sector jobs in the UK in 2020 and 2021 respectively. Small businesses employ 58.9 million people, which make up 47.5% of total employee workforce in the US. In Africa, SMEs provide an estimated 80 percent of jobs across the continent, representing an important driver of economic growth (Runde, Savoy & Staguhu, 2021). In Nigeria, statistics show that as at December 2020, small businesses provide about 87.9% employment (NBS, 2020). SMEs has therefore, continue to attract the attention of policy makers around the world due to its importance.

However, despite the important roles of the SMEs to world economies, its performance suffers due their inability to access to finance (Egwakhe & Odumesi, 2019). Access to finance is vital to the survival of all businesses particularly SMEs which are considered as the backbone of all economies and drivers of economic growth and development (Oke, Uthman and Ademokoya, 2020). Limited access to credit have constrained the growth of such enterprises into large-scale businesses that would create jobs and contribute to overall economic growth (Gbadebo, 2020; Usaini & Elija, 2020). According to Price Waterhouse Coopers (PWC) 2020 survey, SME credit market is characterized by market failures and imperfections such as information asymmetry. Hence, the inability of banks (in Nigeria like other emerging markets and developing economies) to offer credit facilities to SMEs.

Banks require certain information on SMEs performance before approving credit to ensure that the project is commercially viable. However, this information is not readily available from SMEs due to the fact that owners/mangers of small businesses possess more and better information about the performance of their businesses than banks. This was emphasized by Balogun, Agumba and Ansary (2018) who pointed that due to information gap between the deficit unit (SMEs owners) and deposit money banks and poor credit rationing by the banks to SMEs has adversely affected SMEs profitability. Thus leading to collapse of SMEs businesses and their inability to contribute to economic activities and create employment.

Lack of access to finance is almost universally indicated as a key problem for SMEs (Fouejieu, Ndoye & Sydorenko, 2020). Obtaining finance is the most pressing problem SMEs face. Access to finance, particularly credit, is a critical enabler for the growth and development of SMEs. PWC 2020 reported that only 10% of SMEs in Nigeria got the amount they requested from the banks in 2020. Thus SMEs source of finance is mainly from family and friends according to the report which is grossly inadequate. This collaborates with the studies of Worku and Muchie, (2019) and Abraham and Schmukler, (2017).

Empirical literature on SMEs access to finance differs in terms of scope and approach. Some studies are limited to measurement of access to finance (World Bank, 2018), while others are based on developing countries (Fouejieu *et al.* 2020; Hrenko and Nugent, 2021). Most studies focus on a single country or a number of countries (Chowdhury & Alam 2017; Qubbaja, 2019) and none focussed on orthern Nigeria. Meanwhile, access to finance by SMEs is a concern in Nigeria. Enhancing Financial Innovation and Access (EFiNA), 2020 statistics stated that North West, North East and North Central have 68%, 50% and 26% respectively as persons excluded from financial services. Hence Northern Nigeria is important due to its population and economic potential.

Many studies reported information asymmetry as a significant factor that hinder access to finance (Ghulam & Iyofor, 2017; Asikhia, *et al.*, 2020). These studies found existence of relationships between information asymmetry and access to finance (Ezeagba, 2017; Ghulam & Iyofor 2017; Manage & Tigro, 2017). Studies such as John-Akamelu and Muogbo (2018) establishes that lack of access to finance by SMEs is attributed to information asymmetry. Asongu and Odhiambo, (2018); and Tewodros, (2018) find the relationship positive and significant but Nanyondo *et al*., (2014) find a negative and significant relationship. However, most did not introduce a moderating variable to deepen the relationship between the independent variable and the dependent variable (Tambadini & Bemani, 2021; Boushnak, Rageb, Ragab & Sakr, 2018 and Ezeagba, 2017). Hence this study seeks to estimate the impact of information asymmetry on access to finance using financial regulation as a moderator. Financial regulation is vital to the operations of financial institutions (Brunnermeier *et al.*, 2009) particularly commercial banks. Consequently, this study envisaged that financial regulation could play a significant role on the impact of information asymmetry on access to finance.

Furthermore, many of the studies used Ordinary Least Square (OLS) such as Adegbite and Alli (2021); Nwokediuko *et al.*, (2019). This study proposed the use of Partial Least Square – Structural Equation Modeling (PLS-SEM) which is more robust as argued (Ringle, Sarstedt & Straub, 2012). It is a high-quality instrument for a statistical model structure and prediction. Since this research attempted to establish the effect of the variable (impact of information asymmetry on access to finance and financial regulation as a moderator between the independent variables and the dependent variable) in the structural model, employing the use of PLS SEM techniques is suitable for better prediction.

CBN as financial regulator will find the study result relevant to their policy and decision making in the area of financing for SMEs, particularly improving information symmetry. The findings would also help SMEs make information more available and remove any barriers to information by maintaining good quality financial records as these would strengthen their capacity to access finance.

Consequent upon the above highlighted gaps, the main objective of this study is to examine the impact of information asymmetry on access to finance by SMEs and the moderating role of financial regulations. The specific objectives are as follows:

i. To determine the impact of information asymmetry on access to finance by SMEs in Northern Nigeria.
ii. To examine the moderating role of financial regulations on the impact of information asymmetry on access to finance by SMEs in Northern Nigeria.

To address the above objectives, the following hypotheses were formulated and stated in null form:

Ho_1: - There is no significant impact of information asymmetry on access to finance by SMEs in Northern Nigeria

Ho_2: - Financial regulations do not moderate the impact of information asymmetry on access to finance by SMEs in Northern Nigeria.

2. Literature Review and Theory

2.1 Conceptual Framework

According to Chowdhury and Alam (2017), access to finance refers to the degree to which SMEs in need of finance have access to formal lenders who are willing to offer affordable and suitable financing. Gap in accessing finance refers to the difference between demand for funds by SMEs and supply of the necessary financial resources by providers of finance (Ahmad and Chowdury, 2020). Therefore, the operational definition of access to finance implies lack of financial and non-financial barriers in accessing financial resources and services by SMEs.

There is no standard international definition of SME. SMEs are defined differently across countries which provide basis for comparability. Canada and United States of America for example according to Muriithi (2017), refer to businesses with less than 500 employees as medium enterprises while small businesses are those with less than 100 employees, in Germany SME is limited to 250 employees, while in Belgium it has a limit of 100 employees.

The most used definitions are generally quantitative in nature with focus mostly on number of employees, assets, size and revenue. Nevertheless, the most agreed definition from numerous researchers such as European Union as reported by Mahmudova and Katonane-Kovas (2018) define SMEs as those with less than 250 employees. In Nigeria, Small and Medium Enterprise Development Agency of Nigeria/National Bureau of Statistics, 2017 (SMEDAN/NBS) adopted a dual-criteria class limits, employment and assets (excluding land and buildings) as definition for MSMEs. This study adopts the definition of SMEs in line with SMEDAN/NBS as business firms that employ fewer than 200 employees and total assets, excluding land and building valued at minimum of ten million but do not exceed one billion Naira.

Asymmetry information also known as information failure occurs when the seller in this case the financial institution has more knowledge than the buyer (the borrower). However, the reverse dynamic is also possible (which is usually the case with SMEs) where the SME is not willing to disclose his true and actual financial affairs to the banker. The study considered information asymmetry as the available information that could contribute to access to finance.

Moderation model explain a situation in which the relationship between two constructs is not constant but depends on the values of a third variable known as a moderator variable (Hair et al., 2014). That is, a moderating variable changes the strength or even the direction of a relationship between two constructs in the model (Hair et al., 2017). This study hypothesized that financial regulations serve as a moderator variable that accounts for heterogeneity in the determinants of SMEs access to finance. Although financial regulation revolves around multiple-agency regulator model in Nigeria (Akujuobi, Anyanwu & Eke, 2021); Central Bank of Nigeria (CBN) and Nigeria Deposit Insurance Corporation (NDIC) jointly regulate Banks; National Insurance Commission (NAICOM) regulates insurance companies and Securities and Exchange Commission (SEC) regulates securities firms, this study focussed on CBN as the financial regulator of banks operations in Nigeria.

2.2 Review of Empirical Literature

McLaughlin and Safieddine (2008) examined the potential for regulation to reduce information asymmetries between firm insiders and outside investors by examining differences in long-run operating performance, changes in that performance, and announcement-period stock returns between unregulated industrial firms and regulated utilities that issue seasoned equity. They also segment the samples by firm size, since smaller firms are likely to have greater asymmetries. Their findings indicate that regulation reduces information asymmetry. Thus, regulation or mandated disclosure may be appropriate in industries/markets where information asymmetry is severe.

Ghulam and Iyofor (2017) examined the effect of firm and owner characteristics on the availability of bank credit to SMEs in Nigeria using firm-level data from the World Bank Enterprise survey. With the use of binary response regression model, the findings reveal that SMEs with audited financial statement are more likely to have credit than SMEs that do not have. Medium sized firms are more likely to have credit than small firms whilst higher performing firms are more likely to have credit than SMEs that have lower performance. Additionally, they found that firms with a sole proprietor are less likely to have credit than partnerships or corporations. Thus their findings provide empirical support to the theory that a reduction in information asymmetry reduces the perceived higher lending risk and hence the bank is more likely or willing to lend in these circumstances. The study used secondary data, the use of primary data or mixed method would have enhanced the originality of the work and in depth findings which could be used to solve issues peculiar to SMEs.

Asongu and Odhiambo, (2018) investigated whether information sharing channels that are meant to reduce information asymmetry have led to an increase in financial access. The study employed a Generalized Method of Moments technique using data from 53 African countries during the period from 2004-2011. The study used two information sharing channels: private credit bureaus and public credit registries. The study found that both information sharing channels have a positive and significant impact on financial access. The data was however, limited to 2011. Recent developments have since taken place such as the adoption the International Financial Reporting Standards (IFRS) which could affect the result of the findings.

Mwasiaji (2019) investigated the legal framework of government policy and its effect on the performance of medium scale manufacturing enterprises in Kenya. Descriptive research design was adopted in obtaining data from 56 management staff of sampled SMEs. The collected data was analysed using descriptive statistics. The study's findings on the regulatory framework shows major impediments to MSMEs' attempt to reposition them for competitiveness. The regulatory framework, coupled with overlapping roles of regulatory institutions not only increased the cost of doing business but also consumes huge amounts of resources. There is however, need to enlarge the sample size and replicate the study in Nigeria.

Asikhia, Fasola, Makinde and Akinlabi (2020) examined the effect of business credit affordability (interest rates, collateral requirement, and loan administration) on revenue growth of SMEs in Southwest, Nigeria. The study adopted cross-sectional survey research design. Data was obtained through primary source using self-developed structured and validated questionnaire. The population of the study comprised 26,744 registered SMEs operating in South West, Nigeria. Cochran’s sample size formula was employed to determine sample size of 843 SME owners/managers. PLS-SEM through Smart PLS 3.2.8 was employed to analyze and test hypothesis. The result revealed that information asymmetry, bank density, and credit rationing have positive and significant effect on SMEs business profitability in Southwest, Nigeria. The study however, was limited to South West of Nigeria. The study can be replicated in other geographical region like Northern Nigeria for comparison.

Fouejieu, Ndoye and Sydorenko (2020) provided empirical evidence on the drivers of SME access to finance for a large sample of countries, and identified key policy priorities for MENAP (Middle East, North Africa, Afghanistan and Pakistan) and CCA (Caucasus and Central Asia) regions. Using multidimensional data from World Bank Enterprise Survey (2018) as secondary data the analysis show that improving credit information, economic competition, the business environment along with economic development and better governance would help close the SME financial inclusion gap between MENAP and CCA regions. The study concludes on the need to adopt holistic policy strategies that take into account the full range of macro and institutional requirements and reforms. The reforms furthermore, should be prioritize in accordance with each country's specific characteristics. The study focus was MENAP and CCA countries. There is need to replicate in Sub Saharan Africa which is inclusive of Nigeria.

Tambadini and Bemani (2021) determined the effectiveness of accounting information on the performance of SMEs in Masvingo, Zimbabwe. The study adopted the quantitative approach. Questionnaires were administered on 60 respondents. The study discovered that keeping proper accounting records and the use of accounting information enables SMEs to produce timely and accurate reports for various purposes such as accessing loans and helps in business profitability. The study recommends SMEs to use consultancy services where necessary on preparation of financial statements. The study however, did not state the methodology used for the research. The sample size of 60 respondents is considered inadequate for generalization.

Yahaya, Dutse and Bello (2021) examined the impact of government policies on the growth and development of SMEs in Bauchi State Nigeria. The research design was cross-sectional survey design using both quantitative and qualitative approaches. The target population was 754 registered small and medium scale owned enterprises registered with the Bauchi State government as at December 2019. The sample size was 172 respondents derived using Fisher's formulae. Closed and open-ended questionnaire was administered on 70 management staff through purposive sampling method. The study used descriptive statistics method with Statistical Package for Social Sciences (SPSS) version 24. Regression analysis and correlation analysis were used to determine the direction and strength of the relationship between the independent and the dependent variables. The study reveals that Government policies have a significant impact on the growth and development of SMEs in Bauchi State. The study however, used purposive sampling which is prone to error of judgment, the use of scientific/probability sampling such as stratified sampling would improve accuracy and reduce sampling bias.

Although past studies found the existence of relationships between information asymmetry and access to finance (see Ezeagba, 2017; Ghulam & Iyofor, 2017; Asongu & Odhiambo, 2018). These studies failed to consider theories deem appropriate to institute conceptual connection between the variables.

2.3 Theoretical Framework

The underpinning theory for this study is Credit Rationing theory supported with Information Asymmetry theory. Credit Rationing is the rationing by lenders of additional credit to borrowers who demand funds. The demand for credit in this scenario is greater than the supply. This consequently leads to adverse selection or moral hazard. Adverse selection is a situation where potential bad debtors are likely to be selected in the credit process. Thus, good borrowers either do not get the desired amount or their request is declined. Credit rationing therefore, tends to exclude good borrowers from credit market. It is an example of market imperfections or market failure as argued by Theory of Asymmetry Information developed by Akerlof (1970). Stiglitz and Weiss (1981) explain that the rational for credit providers to engage on credit rationing is due to problems of asymmetric information. Thus, when there is excess demand for loans, bankers, instead of raising the interest rate, may ration credit.

To overcome asymmetry information problems, the lender/bank demand for collateral in form of building or landed property from the borrower as condition for loan (Besanko and Thakor, 1987; and Bester, 1985). After disbursement of the loan, banks also monitor the utilization of the credit by the borrower to ensure it is in line with the purpose of the loan as agreed in the offer letter to avoid moral hazard.

3. Methodology

The study adopted quantitative research approach. Survey research design was employed and data collection was cross sectional. The population target of this study was 29,184 SMEs from Northern Nigeria using SMEDAN/NBS 2017 Survey Report. It however, excluded Borno, Yobe and Adamawa due to incomplete data from the survey and lack of access to respondents. This study employed a stratified random sampling procedure with the use of Krejcie and Morgan (1970) Table. The study utilized the highest sample size of 379 from the Krejcie and Morgan Table, with an additional 30% due to high non response rate on survey data, as suggested by Israel (1992). With this view, the study sample size was 493 respondents from the target population out of which 437 questionnaires were duly completed and returned. However, 425 were found usable and considered for further analysis.

The study used PLS Technique using Smart PLS 3.2.8 software in the analysis. Relevant technique of statistical methods was used to address the research objectives and hypothesis of the study. This is by path measurement model and structural equation model. Further, the study utilized the predictive relevance and PLS Predict of the model. The variable measurements on information asymmetry and access to finance were adapted from Nanyondo, Tauringana, Kamukama and Nkundabanyanga (2014); and Chirchir (2017). However, the variables on financial regulations were developed and approved by experts in the field.

4.1. Analytical Procedure

Prior to the main analysis, this study ensured assumptions about outlier check, normality and multicollinearity check (Hair, Hult, Ringle & Sarstedt, 2017). Mahalanobis Distance was used to ascertain outliers. To assess whether the data collected from the respondents conform to the normal distribution. This study applied the statistical tests of the Kolmogorov-Smirnov test and the Shapiro-Wilk test (Sarstedt & Mooi, 2014). Correlation matrix was examined (Chatterjee and Yilmaz, 1992) to test the existence of high correlation (i.e., multicollinearity) of the independent variable. Also the Variance Inflation Factor (VIF) and corresponding tolerance value (Hair, Ringle, and Sarstedt, 2011) were conducted. After successfully satisfying all assumptions, the study adopted the Partial Least Squares (PLS) path modeling method.PLS method was used because the study is aimed at predicting the dependent variable (Duarte & Raposo, 2010). In order to validate and evaluate the research model, Hair, Sarstedt, Ringle and Gudergan (2017) suggested using two stages of evaluation. They are measurement models (also called external models in PLS-SEM) and structural models (also called internal models in PLS-SEM).

4.2. Measurement Model

To evaluate the measurement model of this study, the researchers evaluated the reliability of the individual items measuring each potential structure, the internal consistency reliability (i.e, the composite reliability), the Discriminants Validity, and the convergence validity of each reflective construct (Hair, *et al.*, 2017). Although, Hair, *et al.* (2017) recommend using an outer loading of 0.70 as reliable and acceptable, they argued that an indicator should be deleted only if deleting the item increases the constructs AVE or Composite reliability. Hence, only items greater than 0.70 where maintained for further analysis.

Table 1: Measurement Model

Constructs	Indicators	OuterLoadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Access to finance	AFIN1	0.94	0.97	0.97	0.88
	AFIN2	0.95			
	AFIN3	0.95			
	AFIN4	0.93			
	AFIN5	0.91			
Financial Regulations	FRG1	0.88	0.94	0.95	0.80
	FRG3	0.89			
	FRG4	0.91			
	FRG5	0.88			
	FRG7	0.90			
Information Asymmetry	INFA1	0.66	0.87	0.91	0.62
	INFA2	0.84			
	INFA3	0.83			
	INFA4	0.76			
	INFA5	0.78			
	INFA6	0.84			

In addition, the composite reliability and Cronbach's alpha value were evaluated to determine the internal consistency of the reflective structure (between 0 and 1) thus the higher values represent higher reliabilities. All of these constructs are reliable because their respective composite reliability and Cronbach alpha values are above the threshold of 0.70. Again, the convergent validity was also met as all the AVE values were all above 0.50.

Furthermore, to ascertain the discriminant validity, Duarte and Amaro (2018) proposed the use of multitrait-multimethod (HTMT) matrix as a more adequate and sensitive approach to detecting discriminant validity.

Table 2: Heterotrait-Monotrait Ratio (HTMT)

Indicators	AFIN	FRG	INFA
AFIN			
FRG	0.77		
INFA	0.49	0.46	

As can be seen from Table 2 above, the HTMT statistics are given based on the correlation between their reflective construct items. Since the HTMT value is lower than the 0.85 threshold proposed by (Hair *et al.*, 2017), the reflective latent variable of this study has discriminant validity.

4.3 Structural Model

After all the requirements of the measurement model are met, the structural model is evaluated. The first part of the structural model evaluation involved the testing of theoretical relationships. Specifically, the direct and moderating effect was assessed on 425 cases using 5000 bootstrap samples (Hair, *et al.*, 2017).

Table 3: HypothesesTest

Relationship	Beta Values	Standard Deviation	T Statistics	P Values
FRG -> AFIN	0.62	0.04	16.17	0.00
FRG*INFA -> AFIN	0.11	0.04	2.80	0.01
INFA -> AFIN	-0.20	0.04	5.64	0.00

The direct relationship result presented in table 3 showed that FRG has significant positive relationship with AFIN (Beta= 0.62, P=0.00) while INFA has significant negative effect on AFIN (Beta= -0.20, P=0.00). This means that the higher the information asymmetry the lower the access to finance among SMEs. In other words, higher information asymmetry among SMEs leads to a significant decline in access to finance. On the moderating relationship, FRG*INFA shows significant positive relationship with AFIN (Beta=0.11, P=0.01). In other words, the introduction of financial regulation to the information asymmetry effect on access to finance has improved the result from negative to positive. All the hypotheses were assessed at 5% level of significance.

Effect size and Coefficient of Determination (R^2)

The effect size outlines the potential effects of specific exogenous latent variables on endogenous variables. The general criteria for evaluating $f2$ include the values of 0.02 (small), 0.15 (medium), and 0.35 (large) (Cohen, 1988).

Table 4: f-Square and R-Square

Constructs	AFIN	Effect Size
FRG	0.610	Large
INFA	0.072	Small
FRG*INFA	0.015	Medium
R-Square		
Construct	**R Square**	**R Square Adjusted**
AFIN	0.575	0.575

As can be seen from Table 4 above, based on the standards highlighted by Cohen (1988), that FRG, INFA and FRG*INFA have a large, small and medium effect size. The coefficient of determination or assessment of the R-square level (Hair *et al*., 2017) for the model was assessed in order to evaluate the amount of variance explained by the exogenous latent variables on the endogenous latent variables. The R^2 value indicated that information asymmetry and financial regulation explained 57.5 percent variance in access to finance. Thus, based on the suggestion of Chin's (1998), the R^2 value of 57.5% on access to finance is considered moderate.

4.4 Results and Discussions

The result of the direct relationship indicates that information asymmetry affect access to finance in a significant and negative way. This means that the higher the information asymmetry the lower the access to finance by SMEs. The first null hypothesis which state that there is no significant impact of information asymmetry on access to finance by SMEs in Northern Nigeria is rejected thereby supporting the alternate hypothesis. This implies that, the more the information asymmetry the more difficult to access to finance, whereas the lower the information asymmetry the more access to finance.

The result of this study support the work of Ghulam and Iyofor (2017) and that established that information asymmetry significantly affect access to finance. This study also supports the information asymmetry theory and credit rationing theory. According to Stiglitz and Weiss (1981) the rational for credit providers is to engage on credit rationing is due to problem of asymmetric information theory. Thus it is an example of market imperfections or market failure as established in 2020 survey of PWC. This finding is in line with Balogun, Agumba and Ansary (2018) who argues that information gap between SMEs owners and banks and poor credit rationing by the banks to SMEs has adversely affected SMEs profitability.

Furthermore, the interaction term of financial regulation and information asymmetry has a positive effect (0.08) on access to finance. This shows that financial regulation changed the effect of information asymmetry on access to finance from negative to positive. This finding confirmed the assumption that financial regulations could address the gaps between information asymmetry requirements and access to finance among SMEs in Nigeria. The second null hypothesis which state that financial regulations do not moderate the impact of information asymmetry on access to finance by SMEs in Northern Nigeria is therefore, rejected. This result support Asongu and Odhimbo (2018); and McLaughlin and Safieddine (2008) that argue that regulation reduce information asymmetry. This can be seen with the introduction of Credit Bureau of Nigeria in 2008 by a financial regulator CBN. The initiative was implemented by CBN to obtain information by financial institutions in respect of prospective borrowers. Banks and financial institutions are mandated to update lists of borrowers which subsequently constituted profiling to determine the eligibility of intending borrowers. One of functions of credit bureau is to maintain a database of borrowers from financial institutions, provide credit information, and eliminate discrepancies in information of borrowers thereby improving access to credit.

5. Conclusions and Recommendations

The result of the direct relationship shows that financial regulation has positive and significant relationship on access to finance, while that of information asymmetry and access to finance was found to be negative and significant. However, financial regulation deepened the relationship between information asymmetry and access to finance. The study provided empirical support to Ghulam and Iyofor (2017) that a reduction in information asymmetry reduces the perceived higher lending risk and hence the bank is more likely or willing to lend in these circumstances. The study therefore, concluded that information asymmetry reduced access to finance and that with the interaction of financial regulation with information asymmetry access to finance is improved.

It is therefore, recommended that both the financial institutions and the SMEs should make information more available and remove any barrier to information. SMEs should have reliable audited financial information and other business development services which would address the issue of information asymmetry from the perspective of SMEs owners/managers to improve their access to finance. Also Credit Bureau operations introduced by CBN in 2003 should be maintained and additional credit bureaus be licensed to improve information symmetry. This is necessary with the financial regulators mandate to banks to maintain a loan to deposit ratio of 65% in a bid to improve lending to the real sector.

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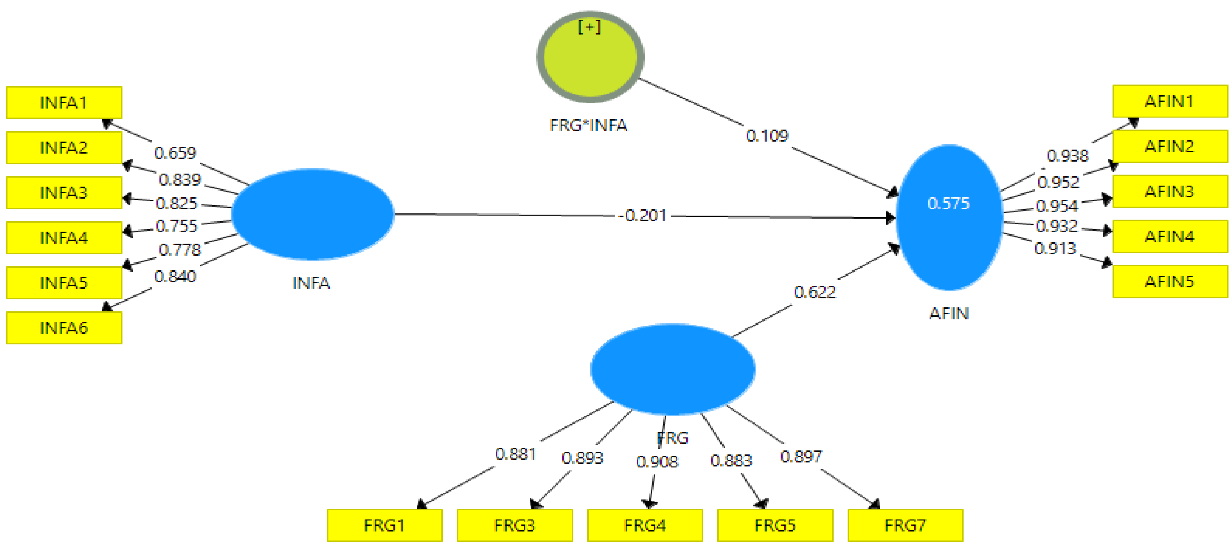
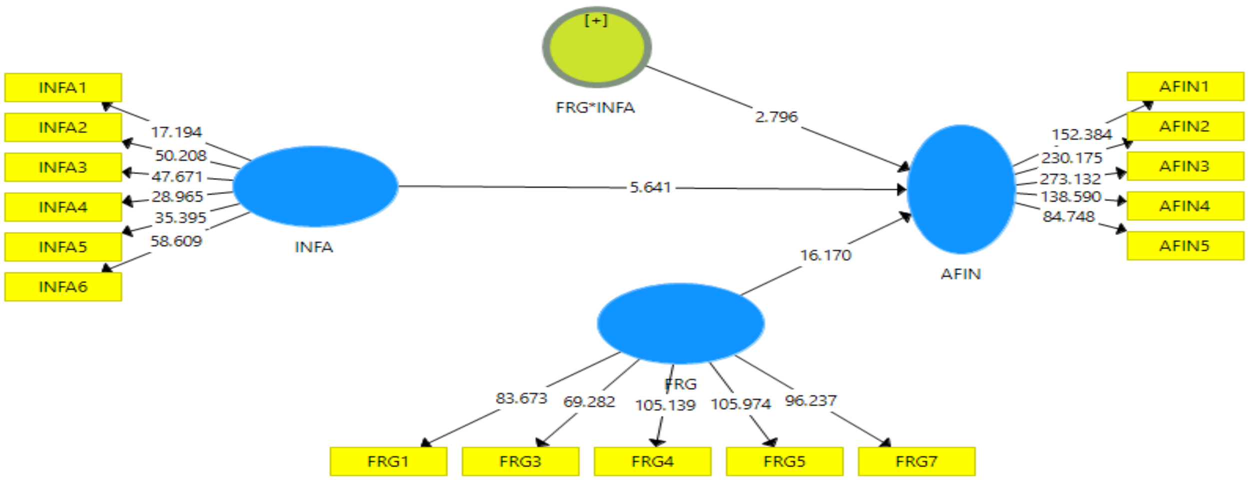
Appendix



PLS ALGORISM



BOOTSTRAPPING

Normality Test: Skewness and Kurtosis Statistics

	Skewness		Kurtosis	
Constructs	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**
Acc.Fin.	-0.61	0.12	0.43	0.24
InfoAsym	0.13	0.12	-0.08	0.24
FinReg.	-0.45	0.12	0.56	0.24

MulticollinearityTest: Correlation Matrix

Constructs	Acc.Fin.	InfoAsym	FinReg.
Acc.Fin.			
InfoAsym	.213**		
FinReg.	.662**	.253**	

Multicollinearity Test: Tolerance and VIF

	Collinearity Statistics	
Constructs	**Tolerance**	**VIF**
InfoAsy	0.34	2.97
FinReg	0.38	2.63