

Financing MSMEs (Micro Small and Medium Enterprises) in Nigeria: Implications of Transaction Costs

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Abstract

This study investigated the roles of transaction costs in MSMEs access to finance. This was done by investigating the impact of transaction costs on access to credit from both MSMEs and financial institutions (commercial banks and microfinance banks). From the MSMEs' side, borrowing experience, decision lag, firm size and borrowers' distance to the loan office were investigated. On the financial institution's side, active portfolio efficiency, portfolio profitability and team productivity were investigated. We used the questionnaire survey method, in-depth interviews and case studies, as well as the annual financial statements of the banks. We identified interest rate and collateral value as constraints to access to finance for MSMEs. We also found financial institutions' attitude to MSMEs access to credit was not friendly. We also found that banks with the highest active portfolio efficiency and portfolio profitability, has the least team productivity. This shows that bank institutions in Nigeria are not all that cost effective. Financial institutions need to do more to bring down transaction cost of lending. This hopefully can be achieved by investing more in agent banking which would lower operating costs, as well as spreading risk, and ultimately increase credit intermediation to small businesses.

Keywords: Micro Small and Medium Enterprises, Transaction costs, Small businesses, Credit accessibility

1.0 Introduction

Transaction cost is the cost that both lenders and borrowers have to bear in order for the exchange of credit to take place. It is a cost that can prevent the credit market from operating efficiently or prevent the market from taking place. It is also an established fact that the market only takes place whenever an intermediary finds a buyer for a price, which is expected to cover all costs of production, including direct and opportunity costs (Benston and Smith, 1976). As it affects the lender, transaction costs involve the costs of information gathering, loan administration, enforcement and loan approval, while for the borrower it includes all charges imposed by the lenders beyond the cost of capital (i.e. the interest rate). including application fees, service fees, cost of the passport photograph, transportation costs, travel time spent in obtaining the loan, cost of phone calls, processing duration, etc. (Cuevas & Douglas, 1985).

The higher the transaction costs, the higher the cost of intermediation and the lower the credit facilities (Fachini et al., 2008). It has been observed that transaction costs in developing countries far exceed those in developed economies (Igwe & Egbuson, 2013). This is the major reason why the constraints on access to finance are more pronounced in developing countries.

The growth of MSMEs depends on their ability to overcome the credit constraints and develop their potential in the physical and human capital. Investing in capital requires greater access to finance. Ogujiuba et al. (2004) also noted that lack of adequate and timely access to finance is a key obstacle to the growth and profitability of MSMEs in developing countries. The absence of efficiently operating rural financial markets is a serious constraint on sustainable rural MSME development in the developing countries. Financial access by MSMEs increase income through productive investment and help to create employment opportunities through an increase in MSME activities (Isern et al., 2009).

In accessing finance, the most preferred external source of finance for MSMEs is the debt financing option as explained by the pecking order theory (Myers & Majluf, 1984). Commercial banks offer the highest chunk of debt finance in an economy (Abe et al., 2012). Bank lending to MSMEs is not without challenges. High transaction and administrative costs stemming from problems of asymmetric information and high-risk perception, and lack of collateral remain major constraints of MSMEs' access to appropriate debt financing. Observations from the angle of financial institutions show that transaction costs (such as credit assessment, processing, servicing and monitoring) are usually above average for MSMEs because of the small loan size. Another factor detected is risk: MSMEs are perceived to be more prone to default on loan repayment and less likely to have appropriate collateral. These issues are reinforced by the high level of information asymmetries concerning the financial operations of MSMEs. Lack of a proper residential address system, weak institutional capacity for property registration and contract enforcement curtail commercial banks from extending credit facilities to MSMEs.

The purpose of this study is to investigate the transaction costs of obtaining credit from the perception of both the lenders (the commercial banks and MFIs) and the borrowers (the MSMEs), with the aim of identifying the aspect of transaction costs that actually pose the constraint to MSMEs access to credit.

2.0 Literature review

There are two broad categories of transaction costs in the literature, proportional and fixed transaction costs. Coase (1960) identified the presence of transactions cost associated with information, negotiation, monitoring, coordination and enforcement of contracts to be the factor which led to the emergence of intermediary firms. Others have grouped transaction costs into tangible (transport costs, communication costs and legal costs etc) and intangible (uncertainty, moral hazard, opportunity cost of time etc) costs (Cuevas & Graham, 1986; Holloway, Barrott & Ehui, 2005; BIRTHAL, Joshi & Gulati, 2005). This transaction costs affect all forms of enterprises but disproportionately. Pandula (2011) identifies three reasons why it affects small businesses more, to be: the firm's characteristics, the financial characteristics and the entrepreneur characteristics. The firm characteristics that affect MSMEs ability to access bank credit are but not limited to, firm size, firm age and firm's ownership structure. The financial institution characteristics include interest rate, proximity to the market, and efficiencies, especially in the area of decision lag. The entrepreneur characteristics that impede MSMEs access to credit include entrepreneur's level of education, experience and training, and entrepreneur's network and training (Aliero & Yusuf, 2017).

2.1 Firm size

There are several theoretical reasons why a firm size is a determinant of a firm's access to finance. First, smaller firms may find it relatively costly to resolve informational asymmetries with lenders and financiers, since they will have little or no collateral in terms of hard assets. Consequently, smaller firms are offered less capital or are offered capital at significantly higher costs than larger firms, which discourages the use of outside financing.

The transactions cost associated with financing may also affect financing choices as transaction costs are more likely to be a function of size, with financing for smaller firms tending to have higher transaction costs (Titman & Wessels, 1988; Wald, 1999). A related issue is the marginal effects of market access for different firm sizes (Scherr et al., 1993).

Another point of note with the firm size is the amount of collateral that the firm can pledge. Storey (1994) stated that bank financing of SMEs will depend on whether the lending can be secured by collateral or not. Which means that firms with less tangible assets are likely to have less access to credit, compared with firms with more tangible assets.

2.2 Age of the firm

The age of a firm is a standard measure of reputation for access to credit. From the life-cycle perspective, as a firm age, it establishes itself as a continuing business and it therefore increases its capacity to take on more debt; hence age is positively related to finance. Berger and Udell (1995) found that smaller and younger firms are more likely to face higher costs of financing and are required to pledge higher collateral because of their opacity. Being in business for many years suggests that the firm on average is competitive. Information that financial institutions require to evaluate and process loan applications maybe more available with older firms than newer ones.

2.3 Firm's ownership structure

The legal status of an MSME is another factor that determines access to credit. Banks tend to give preference to firms that are legally recognised by the relevant authorities. MSMEs that are incorporated are more likely to be less credit-constrained than those that are not. For example, Storey (1994) found that legal status influences bank lending. He further stated that corporate status at start-up appears to be associated with a greater likelihood for bank lending.

2.4 Interest rate

Following from the law of demand and supply, the higher the interest rate, the lower the level of intermediation. Mensah (2004) reported that MSMEs have less debt financing because of high interest rates charged by financial institutions. Similarly, Binks and Ennew (1996) mentioned interest rates as one of the major problems preventing MSMEs from accessing credit.

2.5 Level of education of the entrepreneur

The higher the level of education of an entrepreneur, the easier it is to process information and adapt to the changing business world. Literature has found the level of education to be directly related to access to credit. Sanusi (2010) identifies ignorance and lack of requisite knowledge as some of the challenges facing manpower in Nigeria. Ferreira et al. (2009) found a positive correlation between access to credit and household level of education.

2.6 Entrepreneur's managerial training

Lack of familiarisation with the loan process is a cost that increases transaction costs. Entrepreneurs need training on loan procedures and modalities to ease the cost associated with debt financing. Dogondaji (2006) reported that lack of familiarisation with government and bank loan procedures are some of the problems that threaten the growth of SMEs and access to credit. Carbo-Valverde et al. (2005) opined that the major reason for SMEs credit constraints is the

inability of the SMEs to provide relevant information that will help banks to assess their creditworthiness and determine the risk involved in extending credit to them.

3.0 Model specifications

The models investigate problems with access to credit for MSMEs in Nigeria by looking at the impact of transaction costs in accessing credit from commercial banks and MFIs. It also takes into consideration the MSMEs characteristics, the macroeconomic environment in Nigeria and the lending policies of commercial banks.

3.1 Modelling the determinants of transaction costs

The determination of the transactional cost of both borrowers and lenders is in two stages. The first stage looks at the borrower's transaction costs and the second looks at the lender's transaction costs independently.

It is imperative to examine the true transaction costs on the demand side because a borrower's demand for credit will depend on his/her ability to obtain the credit at a minimum transaction cost (Olomola, 1999). Our work follows from the works of Masuko and Marufu (2003) and Fachini et al. (2008), where transaction-costs equation is specified as a function of all elements in the loan contract (interest rate, collateral, loan amount) and a vector of risk-related characteristics of the borrower and/or the investments assumed to be associated with the loan. This study examines borrowers' transaction costs on:

- (1) Borrowing experience (if the borrower has ever borrowed money before from any loan office and in particular from the same loan office which will assume 1, otherwise 0).
- (2) Decision lag (when the loan application was submitted and when the loan was actually approved or rejected, in days).
- (3) The size of firm or loan (the assumption here is that small firms usually apply for small loans which range between 1 and 3 for micro, small and medium enterprises respectively, or alternatively, the number of permanent employees).
- (4) The borrower's distance from the loan office (this looks at the cost of travelling, feeding, phoning and accommodation during the process of the loan).
- (5) Documentation (application fees, service fees, cost of photography and photocopies).

(6) The opportunity cost of time to the borrower (by this, we tried to quantify the time spent using the monetary unit: we used the average income the borrower is supposed to earn during the time period spent on the loan application).

On the lender's side, the transactions cost indices employed is adopted from the research work of Fachini et al. (2008). This is presented in Table 1.

Table 1: Lenders' transaction cost indices

Active portfolio efficiency	$(\text{Transaction cost}/\text{Active portfolio}) * 100$
Portfolio Profitability	$(\text{Operating revenues} - \text{Financial investment revenues}) / \text{Active portfolio} * 100$
Cost per Borrower	Transaction costs/number of active clients
Team productivity (units)	Total number of active clients/number of employees (credit agents and administration team)

Source: Fachini et al., 2008

Active portfolio efficiency is the lender's transaction costs which was modelled on portfolio profitability, cost per borrower and team productivity. Portfolio profitability measures how much the bank has effectively received on interest and fine payment per loan unit for a given period. The cost per borrower shows the average cost to provide a loan to each client of the bank, and the team productivity, which evaluates the efficiency of credit agents both in the administration of their loan portfolios and in attracting new clients to the bank.

3.2 Sources and methods of data collection

This research analysis collects information from two sources: primary data from surveys of both MSMEs and banking institutions, and secondary data source from the financial year book of each individual banking institution. The modality employed to collect data for this research work will be discussed hereafter. Methods of collecting the primary data are discussed first, and the sources and types of the secondary data for the analysis follows.

3.2.1 Primary data using survey method

3.2.1.1 Study area and the target population

The study was conducted in the urban and sub-urban area of Lagos State, Nigeria. Lagos state lies on the coordinate 60 35' 0" N, 30 45' 0" E, with a total land area of 3,577km² (1,381 sq. mi), and a population estimate of 21 million (NPS, 2012). Lagos state comprises five main divisions: Lagos Island, Ikeja (the capital city), Badagry, Ikorodu and Epe, and is administratively divided into 20 local governments. Lagos state was selected for the research because it is one of the major commercial cities and the financial hub of the country. The targeted population of the study is the various types of MSMEs covering manufacturing, trading, services, and agriculture. Primary and secondary data were collected on financial institutions (basically commercial banks and MFIs) that extend credit to small businesses in the country.

Two surveys were conducted covering the borrowers (MSMEs) and the lenders (financial institutions) in the study area (Lagos state). The primary data was a non-experimental research design. This study employed a triangulated method to generate both qualitative and quantitative data, using a cross-sectional survey, in-depth interviews and a case study. The cross-sectional survey method was used to generate quantitative data; in-depth interviews elicited qualitative data from relevant stakeholders (commercial banks, microfinance banks, ministries and relevant agency bodies), while the case study was used to obtain information on the life history of firms whose enterprises have a life span of over ten years, concerning access to finance. The choice of a triangular methodological standpoint became imperative in recognition of the need to capture the maximum information possible that would be unbiased and comprehensive.

The first stage of the survey that involved the MSMEs was carried out using multi-stage stratified random sampling to select the sample from the targeted population of MSMEs which was stratified by attributes such as location of the firm (it is relevant to determine the key access and proximity factor as well as ensuring that the survey represents the population well), the sector of the enterprise (manufacturing, services, trade and agriculture), and the size of the enterprise (micro, small and medium enterprises).

Stage 1: involves using the five divisional areas in the state (Lagos Island, Ikeja, Badagry, Ikorodu and Epe).

Stage 2: each sub-group was further stratified by type of business (manufacturing, trade, services, and agriculture) being another key determinant in the analysis to ensure that the analysis is comprehensive and all-encompassing.

Stage 3: MSMEs within each locality and business type substrata were further divided by size of the firm (micro, small and medium) using the number of permanent employees as the yardstick for classification: firms with between 0 and 5 employees were termed micro, those with between 6 and 20 employees were labelled small and those with between 21 and 100 were labelled medium.

To adequately represent these groups, a sub-sample was selected from each location-business type-firm size group. Variable sample fractions were used to allocate the total sample between these strata depending on availability of an appropriate, adequate and up-to-date sampling frame. The selection was then performed in stages. In stage one, the sample size in each of the five localities was selected. In the second stage, the sample size in each locality was further divided into micro, small and medium firms, using snowball sampling techniques. Finally, in each locality and within firm sizes, we ensured that different business types (Manufacturing, Agriculture, Services, and Trade) were well represented.

Primary and secondary data were also collected from commercial banks and MFIs in Lagos state. There are 22 commercial banks, two merchant banks, one discount house and over 100 MFIs in Lagos state. For the analysis on financial institutions, we focused on 16 commercial banks and one MFI who published their financial year book.

3.2.1.2 Calculation of the sample size

The following are the steps used in identifying the sample size used for this analysis.

Step 1: Sample size calculation

The appropriate sample size for a population-based survey is majorly determined by three factors: (i) the estimated prevalence of the variable of interest – Population in this instance, (ii) the desired level of confidence, and (iii) the acceptable margin of error.

For a survey design based on a simple random sample, the sample size required can be calculated using Yamane's (1973) formula:

$$n = \frac{N}{1+N(e)^2} \quad i$$

Where

n is the required sample size; N stands for the population of MSMEs in Lagos which according to SMEDAN & NBS (2014) survey is 3,235,987 enterprises of which 3,224,324 were micro, 11,044

were small, and 619 were medium. 'e' stands for the degree of freedom, which in this case was 5%.

This yielded a simple random sample size of:

$$n = \frac{3235987}{1+3235987(0.05)^2} = 399.95 \quad \text{ii}$$

Step 2: Nonresponse

In surveys, it is expected that some of the samples to be surveyed will not respond. It is common practice to cater for such expected nonresponse by applying a built-in factor in the sample size using a statistical model. The nonresponse built-in factor is usually estimated either from previous surveys of a similar nature or from the response to the pilot survey. For this research, we employed the response to the pilot survey which yielded a nonresponse rate of approximately 20%.

$$n = \frac{3235987}{1+3235987(0.05)^2} * 1.2 = 479.94 \quad \text{iii}$$

This sample size of 480 was therefore the proposed sample size for this survey. It was proportionately allocated to the 80 strata as described below (Table 2).

For sample allocation purposes and to avoid sample misrepresentation, sampling fractions were done using the enterprise's density in each of the five administrative stratifications of the state. The weighted average for each substratum was computed by dividing the number of MSMEs in each substratum by the total population of MSMEs in Lagos state. The weight factors (sampling fractions) in each division were then multiplied by the total sampling size to determine the sample size for each stratum.

Table 2 shows the distribution of MSMEs sampled in each of the five administrative areas of Lagos state and the distribution of the enterprises according to their size and sectors in each area.

Table 2: Sample distribution of MSMEs by strata

		ENTERPRISE TYPE
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Region	Sector	Micro	Small	Medium	Total
Ikorodu	Manufacturing	10	6	0	16
	Agriculture	5	3	0	8
	Trade	7	3	0	10
	Services	5	3	2	10
	Total	27	15	2	44
Ikeja	Manufacturing	49	26	10	85
	Agriculture	7	5	0	12
	Trade	40	19	8	67
	Services	43	24	13	80
	Total	139	74	31	244
Badagry	Manufacturing	12	7	3	22
	Agriculture	3	2	1	6
	Trade	9	5	3	17
	Services	8	4	2	14
	Total	32	18	9	59
Lagos Island	Manufacturing	20	10	6	36
	Agriculture	0	0	0	0
	Trade	20	10	6	36
	Services	15	10	6	31
	Total	55	30	18	103
Epe	Manufacturing	11	6	4	21
	Agriculture	3	2	0	5
	Trade	8	3	1	12
	Services	8	3	1	12
	Total	30	14	6	50

Source: Computed by the Authors

3.2.2 Survey instruments and data collected on variables of interest

Data for MSMEs were collected using a structured questionnaire (see the structured questionnaire in Appendix B). The questionnaires used were first pretested in a pilot survey to check the validity of the questions, and suitability of the unit of measurement, as well as the order of the questions, an estimate of the length of interview time, and the best time for survey visit. We also identified major sources of non-random errors and the percentages of non-responsiveness. Based on the results of the pilot surveyed, the main survey plans and schedules of the field work were developed and implemented by the enumerators through direct interviewing of selected and willing respondents. The enumerators used were professional researchers working directly with collecting primary data from field and this makes the training easier. The survey of MSMEs was carried out during the month of November and December 2016, by five enumerators, one for each administrative area. In the end, the enumerators were able to obtain 427 adjudged valid responses in the five-administrative regions of Lagos state.

The survey for banks was carried out simultaneously during the period of November and December 2017 by the researcher. The survey covered the 19 commercial banks that have their

head offices in Lagos. The questionnaires were distributed to the banks to be filled by the bank officials in the credit unit of the banks. At the end of the entire exercise, only 12 banks returned the filled questionnaires but the information needed was not elicited.

3.3 Socioeconomic characteristics of MSMEs and the borrowing transaction costs

3.3.1 Attributes of MSMEs in Lagos State

This section presents the socio-demographic and economic characteristics of the MSMEs and the triangulation and cross tabulation of these socioeconomic characteristics with the borrowing transactions cost attributes of the MSMEs in the Lagos state of Nigeria. This section also identifies those characteristics that have significant correlation the borrowing behaviour and attitudes of the MSMEs in the sample area.

Based on the sample size formula discussed in chapter 5 and given the size of MSMEs in Lagos state, the minimum number of MSMEs that should be sampled is 400 and in order to give room for non-response and invalid response, five hundred questionnaires were distributed as against 480 prescribed by the formula used. Efforts were made to retrieve all the questionnaires but after collation and scrutiny of the responses, not all the questionnaires were found admissible for analysis.

Out of the 500 questionnaires, only 427 (85.4%) were adjudged correctly filled with consistent valid responses. The retrieved responses, and adjudge correctly filled, based on the five administrative districts of Lagos is presented in Table 5.3. It shows the MSMEs population, the number of questionnaires distributed, questionnaires retrieved and the percentage response. Ikorodu (44), Ikeja (227), Badagry (31), Lagos Island (95), and Epe (20), with 100%, 93%, 53%, 92% and 60% response respectively. The overall response rate (85.4%) is considered consistent with response rates of other similar studies in Lagos state such as Oke (2005), and Bowale & Akinlo (2012) with both response rates of approximately 70%.

Table 3: Sample distribution of MSMEs by Strata

	MSMEs Population	Questionnaire Distributed	Questionnaire Retrieved	Percentage Response
Ikorodu	282,765	44	44	100
Ikeja	1,576,516	244	227	93
Badagry	381,585	59	31	53
Lagos island	670,232	103	95	92
Epe	325,889	50	30	60
Total	3,235,987	500	427	85.4

Source: Computed by the Authors from the Field Survey, 2017

3.3.2 Analysis of socio-demographic characteristics of MSMEs respondents

Table 4 shows the distribution of the respondents according to age and educational attainment. The distribution of the MSMEs by the age of the respondents shows that the bulk (91.5%) of owners of the MSMEs in Lagos state are within the 21 to 50 age bracket which implies they are in their active years. Specifically, about 30.1 percent of the respondents were between the ages of 21 and 30 years while 37.4 percent were in their 30s. A substantial proportion (24.1%) of the respondents also fall between the ages of 40 and 50 years while less than 8 percent are people older than 50 years, and 12 respondents refused to disclose their age

The distribution of education attainment of the respondents showed that majority of the respondents were literate and well educated, although more than 50% (246) did not answer the question. Of the respondents, only 1.2 percent did not complete secondary education, 5.1 percent of the respondents have never been to university. Less than 2 percent have not completed their university education. 7.5 percent of the respondents were university graduates, 4.4 percent are undergoing a post-graduate degree program, 24.1% have completed their post-graduate degree. This implies that quite a sizeable number of business owners are likely to be knowledgeable and can have a reasonable grasp of the global trends of ICT and e-business and hence, education may not really constitute a serious hindrance to MSMEs inability to explore and take advantage of the financial services in Nigeria.

Table 4: Socio-Demographic Profile of MSMEs Respondents

Age-Group	Frequency	Percentage
Less than 20 years	3	0.7
21-30 years	125	30.1
31-40 years	155	37.4
41-50 years	100	24.1
51-60 years	25	6.0
60 and above	7	1.7
Total	415	100
Educational attainment	Frequency	Percentage
Primary School incomplete	2	0.5
Secondary School incomplete	3	0.7
Secondary School complete	12	2.8
Advance Technical School complete	5	1.1
University Undergraduate incomplete	5	1.1
University Undergraduate complete	32	7.5
University Graduate incomplete	19	4.4

University Graduate complete	103	24.1
Those who did not respond	246	57.6
Total	181	42.4

Source: Computed by the Authors from the Field Survey 2017

3.3.3 Nature and characteristics of MSMEs in Lagos State

The characteristics of firms also form part of the background information that was examined. Based on the year in operation, the MSMEs were classified into three categories: the starter firm, the growing firms and the matured firms. The starter firms were MSMEs that were less than three years in operation while those whose year of operation is between 4 and 10 are regarded as the growing firms, and 11 years and above are regarded as mature firms. As depicted in Table 5, most of the MSMEs are growing and mature firms. Only 13.4% of the firms surveyed were just starting up and only 12 (2.8%) of the respondents did not answer this question.

Table 5: Age of the Firms

Firms' Age	Frequency	Percentage
Starter firm (0-3 years)	55	13.4
Growing firm (4-10 years)	163	39.8
Matured firm (11years - ∞)	192	46.8
Total	410	100

Source: Computed by the Authors from the Field Survey 2017

In terms of the type of businesses, we narrowed this down to four, for easy understanding. Manufacturing and construction are regarded as manufacturing, all services (transport, education, health etc) are grouped under services. Those engaged directly in land and animal farming are grouped to be in agriculture and those in retail and wholesale are grouped to under trade. The survey shows that 112 (26.2%) are in trade, 154 (36.1%) in manufacturing, 143 (33.5%) in services, and 18 (4.2%) in Agriculture. The category engaged in agricultural business is really low because Lagos state is a metro city that has little or no land for agricultural practises across the five administrative regions of the state. Manufacturing seemed to dominate, followed by services sector by the small margin.

Table 6: Businesses by sector

Sector of the firm	Frequency	Percentage
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Trade	112	26.2
Manufacturing	154	36.1
Services	143	33.5
Agriculture	18	4.2
Total	427	100

Source: Computed by the Authors from the Field Survey 2017

In terms of the number of employees, those with between 0 and 5 employees are termed micro firms, those with between 6 and 20 employees are labelled small firms and between 21 and 100, medium firms. The survey consists of 238 (55.7%) micro, 153 (35.8) small and 36 (8.4%) medium firms. The recorded data of medium firms was low. This is believed to be because most of the employees seemed unwilling to fill the questionnaires and would not allow us to see the owners. However, the state is littered with micro businesses which reflect the level of development in the economy as a whole. Lagos state has a recorded data of 3 224 324 micro firms, 11 044 small firms, and 619 medium firms according to NBS and SMEDAN (2014) data.

Table 7: Number of MSMEs surveyed

MSMEs	Frequency	Percentage
Micro	238	55.7
Small	153	35.8
Medium	36	8.4
Total	427	100

Source: Computed by the Authors from the Field Survey 2017

We cross-tabulated MSMEs and the type of businesses to see the actual distribution of the survey in terms of size and the sector or business type. For trade, 89 (79.5%) micro firms, 17 (15.2%) small firms, and 6 (5.4%) medium firms. For manufacturing, 59 (38.3%) were micro, 75 (48.7%) were small, and 20 were medium firms. For services sector, we had 88 (61.5%) micro, 45 (31.5%) small, and 10 (7.0%) medium firms. Lastly, for agriculture, we had 2 (11.1%) micro, 16 (88.9%) small, and 0 for the medium firms. Micro firms dominated in almost all the type of businesses with the exception of manufacturing and agriculture where small firms dominated. Relative to the size of the firms, micro firms have an almost equal number of surveyed, in trade 89 (37.4%) and services 88 (37.0%). This is followed by manufacturing 59 (24.9%), and finally, agriculture constitutes the least 2 (0.8%). For the small firms, manufacturing clearly dominated with 75 (49.0%), followed by services 45 (29.4%), while trade and agriculture have almost the same number of respondents 17 (11.1%) and 16 (10.5%) respectively. Finally, for the medium firm, 20 (55.6%) were in manufacturing, 10 (27.8%) in services, 6 (16.7%) in trade and 0 for agriculture.

Table 8: Bivariate analysis of MSMEs and the type of businesses

Sector of the firm	Firm size			Total
	Micro	Small	Medium	
Trade	89 (79.5%)	17 (15.2%)	6 (5.4%)	112 (100%)
Manufacturing	59 (38.3%)	75 (48.7%)	20 (13.0%)	154 (100%)
Services	88 (61.5%)	45 (31.5%)	10 (7.0%)	143 (100%)
Agriculture	2 (11.1%)	16 (88.9%)	0 (0.0%)	18 (100%)
Total	238 (55.7%)	153 (35.8%)	36 (8.4%)	427

Source: Computed by the Authors from the Field Survey 2017

4.0 MSMEs Accessibility to Loan and Transactions cost

4.1 MSMEs Accessibility to Loan

The starting point for the analysis of the implication of transactions cost on MSMEs access to credit is to determine the level of access. Based on the distribution of respondents depicted in Table 9, 213 (49.9%) of the MSMEs surveyed have applied for loans from either commercial Banks or microfinance banks. The survey further revealed that majority of MSMEs that have applied for a loan, applied to commercial banks (i.e. 170 out of 213 that have applied for a loan, representing 79.8%) and only 37 (17.4%) applied to microfinance banks only, and 6 (2.8%) applied to both commercial banks and microfinance institutions. Specifically, 170 (39.8%) of the MSMEs surveyed applied for a loan from the commercial bank and only 37 (8.7%) applied for a loan in Microfinance bank while 6 (1.4%) applied to both commercial banks and microfinance institution. There is an evidence that the MSMEs patronised commercial banks for credit much more than the Microfinance institutions despite the fact that Microfinances were established purposely for servicing small businesses in Nigeria, coupled with the fact that over 200 (around 50%) licensed and operating microfinance institutions operate in Lagos state, giving credence to Abel et al.'s (2012) assertion that commercial banks remain the greatest source of credit in an economy.

Table 9: Application for credit

Application for credit	Frequency	
	Yes	No
Has your firm ever applied for a loan from Commercial/Microfinance bank?	213 (51.3%)	202(48.7%)

If yes, type of bank:	Frequency	Percentage
Commercial Bank	170	79.8
Microfinance Bank	37	17.4
Both	6	2.8
Total	213	100

Source: Computed by the Author from the Field Survey, 2017

Table 10: Loan amount applied

Amount (In Naira)	Frequency	Percentage
15,000-100,000	8	3.8
101,000-300,000	23	10.8
301,000-500,000	20	9.4
>500,000	162	76.1
Total	213	100
	Yes	No
Was the loan granted?	183 (85.9%)	30 (14.1%)

Source: Computed by the Author from the Field Survey, 2017

In terms of the loan size, the survey revealed that just 8 (3.8%) of the MSMEs that applied for loan, applied for less than 100 000 Naira (\$ 333.33), while 23 (10.8%) applied for a loan between 100 000 and 300 000 Naira (\$333.33-\$1000), and 20 (9.4%) applied for a loan between 300 000 and 500 000 naira (\$1000-\$1666.67). The average loan requested by a majority of the MSMEs is around N500 000 (\$1666.67) and above, which constitutes 76.1 percent (162) of the MSMEs that applied for a loan. The size of the loan requested seemed higher than what most microfinances can give without collateral, and hence the only option for the MSMEs is to seek the credit facility from the commercial banks. Therefore, MSMEs faced a mismatch between their needs and the capacity of the microfinance as most microfinances may not be able to meet their financial needs.

From table 10, is seen that 183 out of the 213 loan applications were granted while 30 loan applications were rejected. This means that 85.9% loan applications were granted while 14.1% loan application from the firms interviewed were rejected. This demonstrates that the bulk of the problem lies with firms actually coming out to apply and not in the rejection rate. Out of 427 surveyed, only 213 (49.9%) have ever applied for credit, and the majority of these surveyed firms have been in existence for more than three years. In actual figure 355 (83.1%) of the firms surveyed have been in existence for more than 3 years.

In digging deep to ascertain why these firms were not applying for loans from the financial institutions, we listed five options ranging from (i) firms just starting operation, (ii) not knowing the procedures, (iii) long process, (iv) costly process, to, (v) not interested in loan facilities. However, we gave room for an open-ended question by providing an option for the respondent to give other reasons outside these listed options. For the listed options, 12 (7.9%) indicated that their firms just started operations (with time they may join the credit market), 11 (7.2%) indicated that they do not know all the procedures involved in applying and obtaining credit (these firms need to be educated), 13 (8.6%) responded that the process for applying for loan takes too long (perception problem which education or right advertisement can solve) and 110 (72.4%) responded that they are not interested in loan facilities (they have rationed themselves out of the credit market). This 110 (72.4%) constitute the bulk of those that have been rationed out of the credit market. In the in-depth interview, we found out that high interest rate, religion, cultural beliefs and or the information asymmetry in the financial market and the uncertainty in the economy constitute major reasons for non-interest in the loan facilities. One of the interviewed said:

If I borrow money and I am not able to pay back early enough, I may not be able to sleep and with the way the economy is, no one is sure of tomorrow, it is better I make do with what I have than sending myself to an early grave because of a bad loan.

This speaks volumes. The uncertainty (high interest rate, inflation and exchange rate volatility) in the economy hinders a lot of firms from engaging in any long-term plan (Ajuwon & Ogwumike, 2013), and this is limiting investment to short-term plans.

Table 11: Reasons why MSMEs are not applying for a loan

If you have never applied, why has your firm not applied for credit from a commercial bank?	Frequency	Percentage
My firm just started	12	7.9
I don't know all the procedures	11	7.2
The process takes a long time	13	8.6
The process costs a lot of money	6	3.9
I am not interested	110	72.4
Total	152	100

Source: Computed by the Authors from the Field Survey, 2017

The other reasons given were equally important. Two (0.5%) said the collateral requirement was too high, 6 (1.4%) said they do not have property to pledge as collateral. One (0.2) responded

that the process costs a lot of money, while 20 (4.7%) responded that the interest rate was too high. One (0.2%) also responded that it is not easy to obtain loan facilities from the financial institutions, while 2 (0.5%) each responded by saying that the terms and conditions were not reasonable, and the loan repayment procedure was too stringent.

Table 12: Other reasons why MSMEs are not applying for a loan facility

Other reasons for not applying for loans		
Collateral is too high	65	(33%)
Cost of borrowing is too high	21	(10.7%)
The interest rate is very high	35	(17.7%)
It is not easy to obtain loan facilities	39	(19.8%)
Terms and condition is not reasonable	28	(14.2%)
Loan and interest repayment procedure not favourable	10	(5.1%)

Source: Computed by the Authors from the Field Survey, 2017

4.2 Transactions Cost

(i) On the transactions cost, the first part of table 13 itemised other charges incurred outside interest rate. Responses from MSMEs surveyed shows that other charges are application fees (as obtained from 130 out of 213 who have applied for a loan, representing 61.0% response), and 15 (7.4%) said advance commitment fees, 13 (6.1%) said processing and administrative fees and 12 (5.6%) says renewal facility fees.

(ii) The second analysis asked if this was the first time the processing a loan for the firm would be doing so. Of the total number respondents, 96 (45.1%) said yes, while the remaining 117 (54.9%) said no. This shows that quite a number of firms seeking loan have done so more than once which is quite encouraging, and the number of new applicants was relatively high.

(iii) To dig deeper, we investigated the number of times the firm had applied for a loan and it showed that 102 (52%) had applied once, 60 (30.6%) had applied between 2 to 4 times, while 34 (17.4%) had applied more than 5 times.

(iv) We further asked if those that had applied for a loan more than once did apply with the same financial institution, and 34 (36.2%) out of the 94, applied for the loan with the same institutions.

(v) On the decision lag, some obtained credit within 24 hours (especially from microfinance institutions), 136 (79.1%) said they received the bank decisions in not more than 14 days, while 29 (16.9%) acclaimed that the bank decision was received within 30 days, it is only 7 (4.1%) respondents who claimed to have received bank decisions in more than 30 days.

(vi) On the monetary cost of time lost during the loan application process, only 86 respondents could estimate the price tag on the time lost. Out of the 86, 36 (41.9%) said it was not more than 5000 naira, 9 (10.5%) said it was not more than 10 000 naira, and 41 (47.7) said it was more than 10 000 naira.

(vii) Finally, on the interest rate, which is the cost of capital, this is a major challenge for both MSMEs and financial institutions. This challenge may be caused by the high cost of doing business in Nigeria. The physical infrastructure is a serious challenge in Nigeria. Firms operate self-generating power plants most of the time as alternative source of energy which can be rather expensive. The roads are bad and poor transportation network. All these result to a lot of time waste on daily basis. These costs are factored into the cost of capital by the banks and these costs also reduce the profit margin for MSMEs which makes it difficult to be able to bear the high cost of capital. The major items for MSMEs difficulties in accessing credit are the high interest rates and collateral demand, compounded by the high level of economic uncertainty. 32 (19.2%) of the firms surveyed paid an interest rate of between 10 and 14% on their loan facility, while 38 (22.8%) paid between 15 and 19%. 25 (15%) paid between 20 and 24%, and 58 (34.7%) paid between 25 and 29%. Finally, 11 (6.6%) paid between 30 and 34% interest and 3 (1.8%) paid between 35 and 39% interest rate. It shows that on average, the cost of capital in Nigeria is between 20 and 30% which is favourably comparable to what is obtainable in some other African countries and relatively high varying from another section of African countries. In Africa, and in the World at large, Madagascar has the highest prime lending rate of 60%, followed by Malawi 44.9%. The Gambia is next with 30%. This is followed by Nigeria and Ghana having commercial bank prime lending rate of 28.5% and 28.6% respectively. South Africa is 9.4% and Botswana is 9% according to the factsheet of CIA (2017). The least prime lending rate is Japan (1.5%), followed by Finland and Austria with 2% and 2.1% respectively.

Table 13: Transactions costs involved in loan applications

(i) Charges	Frequency (%)
Application fees	130 (61.0%)
Advance commitment fees	15 (7.4%)
Processing and administrative fees	13 (6.1%)

Renewal facility fees	12 (5.6%)
Total	170 (79.8%)
(ii) Is this the first time to process a loan for your company	
Yes	96 (45.1%)
No	117 (54.9%)
Total	213 (100%)
(iii) How many times has your firm applied for a loan facility from commercial/microfinance bank?	
	Frequency
Once	102 (52.0%)
2-4 times	60 (30.6%)
5 times and above	34 (17.4%)
Total	196 (100%)
(iv) Are your firm's previous loan and the current loan with the same bank?	
	Frequency
Yes	34 (36.2%)
No	60 (63.8%)
Total	94 (100%)
(v) Decision Lag	
1-14 days	136 (79.1%)
15-30 days	29 (16.9%)
More than 30 days	7 (4.1%)
Total	172(100%)
(vi) Monetary cost of time lost during Loan Application Processing	
#1,000-#5,000	36 (41.9%)
#5,001-#10,000	9 (10.5%)
#10,001 & above	41(47.7%)
Total	86 (100%)
(vii) Cost of credit (interest rates paid)	
10-14	32 (19.2%)
15-19	38 (22.8%)
20-24	25 (15.0%)
25-29	58(34.7%)
30-34	11(6.6%)
35-39	3 (1.8%)
Total	167 (100%)

Source: Computed by the Authors from the Field Survey, 2017

4.2.1 Estimation of borrowing transaction costs function

In this subsection, the relationship between borrowing transactions cost and the explanatory variables of loan size, distance, decision lag, firm size, firm age, education, collateral and

borrowing transaction cost is estimated. The relationship between transactions cost and each of these variables is examined in a transactions cost model which is specified implicitly as follows:

$$\text{BTC} = f(\text{Loan, Distance, Declag, Firmsize, Firmage, Education, Collateral}) \quad \text{iv}$$

Where:

BTC is the borrowing transactions cost; Loan is the amount/size of loan applied; Distance is the distance of borrowers from the loan office; Declag is the loan decision lag, defined as the number of days between when loan application is submitted and the approval or disapproval is received; firmsize is the firm size measured by the number of employees in the establishment; and firmage is the firm age measured by the number of years the firm has been in operation; education is the level of education attainment of the loan applicant; and collateral is the value of collateral the loan office is requesting or received before granting the credit facility.

We expect a positive a priori for Distance, Declag, and collateral value, and a negative a priori for Loan size, Firm size, Firm age and educational attainment of the loan applicant on Borrowing Transactions Cost (BTC).

Table 14: Analysis of Borrowing Transactions Cost Function

Variable	Coefficient	t value	Probability
Loan	-0.000	-2.090	0.041
Distance	-0.038	-1.780	0.080
Declag	0.030	4.220	0.000
Firmsize	-0.024	-2.460	0.017
Firmage	-0.044	-1.340	0.184
Education	-0.353	-1.930	0.059
Collateral	0.356	2.680	0.009
Constant	93.688	1.440	0.156
R-square	0.560	F statistics	11.460
Adjusted R-square	0.511	Probability of F	0.000

Source: Computed by the Author from the Field Survey 2018

The R-squared and adjusted R-squared are 56% and 51%, indicating that the explainable variables being used capture the average determinants of transactions cost of the sample used. However, it has been observed that primary data is always exhibiting this characteristic (Filho et al., 2013). The analysis shows loan amount to be negatively related to the transactions cost which implies that the higher the loan size, the less the transactions cost, this conforms with our a priori expectation and the coefficient is statistically significant. Distance is negatively related to

transactions cost, which is not in tandem with the a priori expectation, and the coefficient is statistically significant at 8% level of significance. Decision lag is positively correlated with the transactions cost and the coefficient is statistically significant at 1% level of significance. Firm size, Firm age and the level of education of the loan processing officer are negatively correlated with borrowing transactions cost, which is in tandem to our a priori expectation. However, the result of the firmage is not statistically significant. Collateral is positively related to borrowing transactions cost and it is significant at 1% level of significance. This means that the higher the level of collateral required, the higher the borrowing transaction cost. This result is similar to what Masuko & Marufu (2003) obtained in their transaction cost analysis. Masuko & Marufu (2003) found that loan amount, borrowing experience, firm size and decision lag are negatively related to the borrowing transactions cost, and distance is positively related. The variables display the appropriate sign and conform with theories on how those variables are supposed to impact borrowing transactions cost, with the exception of distance.

4.2.2 Estimation of Borrowers' Average Transactions Cost

In determining the average total transactions cost incurred by borrowers in the course of obtaining credit, we look at both the explicit and the implicit transactions cost. Total cost of obtaining credit is the financial cost (interest payment) and the transactions cost (these are other costs borne outside cost of capital):

$$TCC=IC+TC \quad v$$

Where TCC = total credit cost; IC = interest cost; and TC = transaction costs.

We found that on average, the decision lag takes about 38 days, which is rather high, and implying a huge cost. Transportation cost is around 300 naira on average which is reasonably okay, and shows that financial institutions are in close proximity with the market in Lagos state. On the opportunity cost of credit, this is rather on the high side, averaging 27000. Accounting services are also on the high side, with the same average of 27000 naira. Indicating that most of the small businesses are not in control of their accounting book. This area needs to be given proper attention. Lawyer services or legal costs is also very high with 48000 naira on average. Publication cost or paperwork cost is 300 naira on average which is a moderate cost.

On the cost of capital, which is the interest payment on the credit, it averages 19% and the collateral value placement averages 98.62%

Table 15: Estimation of borrowers' average transaction costs

Variable	No. Observ.	Mean	Std. Dev.	Minimum	Maximum
Decision Lag (Days)	195	37.76	38.10	1	180
Transport Cost (Naira)	124	287.69	295.29	50	1,500
Opportunity Cost (Naira)	86	26,891.86	41,500.30	1,000	150,000
Accountant service (Naira)	86	26,698.26	41,613.67	250	150,000
Lawyer service (Naira)	22	48,410.27	103,467.7	1	300,000
Publication cost (Naira)	10	301.90	481.74	1	1,000
Interest rate (Percentage)	167	19	1.33	10	35
Collateral value (Percentage)	118	98.62	4.64	0	180

Source: Computed by the Author from the Field Survey 2018

4.2.3 Analysis of the Lenders Transactions Cost

Interaction with commercial bank staff show that commercial banks pay lip service to the issue of credit to small businesses in Nigeria. All the commercial banks surveyed say that they are small businesses friendly and this can be seen in many sponsored programs for small businesses, such as sponsored training for small businesses and young entrepreneurs, an educative program on radio and television etc. However, when it comes to extension of credit to small businesses, it is not the same story. The yardstick used in evaluating loan officers is not about how many customers a loan officer is serving but about how much savings he is able to bring and how much loan he is able to grant, which does not favour small firms. What concerns the loan officer majorly is accruing big savings and being able to give out big loans, and the least, paying attention to the small firms. At the financial institution headquarters, the mode of giving loans is standardised, irrespective of the loan or firm size. This also is a disadvantage to small businesses.

The microfinance institutions also operate more like commercial banks to breakeven and therefore are more interested in firms that are highly profitable. Also, since microfinance institutions do not receive any form of financial support from the government, they tend to cherry pick projects to grant credit facilities.

Table 16: Lenders Transactions Cost Indices

Active portfolio efficiency	$(\text{Transaction cost}/\text{Active portfolio}) * 100$
Portfolio Profitability	$(\text{Operating revenues} - \text{Financial investment revenues}) / \text{Active portfolio} * 100$
Cost per Borrower	Transaction costs/number of active clients
Team productivity (units)	Total number of active clients/number of employees (credit agents and administration team)

Source: Fachini et al., 2008

Active portfolio efficiency is the lender's transactions cost which was modelled on; portfolio profitability, cost per borrower and team productivity. The portfolio profitability measures how much the bank has effectively received on interest and fine payment per loan unit for a given period. The cost per borrower will show the average cost to provide a loan to each client of the bank and the team productivity, which will evaluate the efficiency of credit agents both in the administration of their loan portfolios and in attracting new clients to the bank.

The bank officers refuse to fill the designed questionnaires due to the confidentiality clause, and those that offer to fill the questionnaires, refused to provide any data. It was the annual financial statement that provides the information used in analysing the portfolio profitability, active portfolio efficiency, and the team productivity. However, the number of active borrowers was not captured in their annual financial statement, which restricted the ability to calculate the cost per borrower.

The data is sourced from 2016 annual financial statement of the banks, with the exemption of Citibank, and Sterling Bank where we used their 2015 financial statement, and Fidelity bank, where we used the 2017 3rd quarter statement of account, because we could not lay hands on their 2016 annual financial statements. We were also able to get one microfinance institution (Fortis) annual statement of account and it was included.

The analysis of the lender transactions cost shows that GT Bank has the highest and most active portfolio efficiency but the least in team productivity for all the banks that were analysed.

For portfolio profitability, GT Bank tops the chart with 47.02 indexes. Fortis microfinance had the second-highest index of 8.39, while CitiBank has the third highest portfolio profitability (6.43), with Ecobank (0.01) at the bottom. For active portfolio efficiency, GT Bank (191.05) still tops the chart, followed by Citibank (33.73) and Fortis microfinance (23.16), while Standard chartered (5.43) rocked the bottom. However, when it comes to team productivity, GT Bank rocked the bottom with 5.73 indexes. The second lease team productivity is Union Bank with 15.68 indexes. Ecobank that had the least portfolio profitability is found to be with the one with the highest team productivity

index of 19078.9, followed by Heritage Bank (97.72), emerging second least in portfolio profitability (0.65). The inefficiencies exhibited in these indices are believed to be responsible for the high transactions cost. The financial institutions need to be proactive and more efficient.

Table 17: Analysis of the Lenders transactions cost

Bank	Portfolio Profitability	Active Portfolio Efficiency	Team Productivity
Access Bank	5.30478	13.21955	41.07155
Citi Bank	6.433553	33.72985	16.17685
Diamond Bank	5.949523	16.26549	30.08547
EcoBank	0.005869	15.48917	19,078.9
Fidelity	1.156875	17.14265	26.38173
FirstBank	5.831825	20.04476	26.70272
Fortis microfinance	8.38679	23.16465	35.22176
GTB	47.02014	191.0511	5.727892
Heritage	0.648917	5.047385	97.71938
Skye Bank	4.14261	14.00848	25.01057
STANBIC	5.852225	15.2918	22.49394
Standard Chartered	0.868103	5.426329	45.6354
Sterling	3.446739	23.88627	31.2449
UBA	5.253243	16.26195	25.84208
UNION	5.278736	19.46621	15.68451
WEMA	5.344282	19.57896	21.99273
ZENITH	3.947464	16.06804	34.35578
Total	6.611904	26.61951	1,089.181

Source: Computed by the Authors from the Field Survey, 2017

Due to the unwillingness of the financial institutions to release their data, it was impossible to make any further analysis of the equilibrium level of transactions cost.

5. Summary

This study investigated the impact of transactions cost on MSMEs access to loan from the financial institutions. The study identified high interest rate to pose a constraint to access to finance, as attested to by Beck and Cull (2014) who found that the biggest constraints facing SMEs in African countries are access to financing and its attendant problem of high borrowing interest rate. Another factor is the attitude of the financial institutions to MSMEs access to credit, and the collateral value and type. For the financial institutions, there is a wide discrepancy between portfolio efficiency and team productivity which affect portfolio profitability. Commercial

banks in Nigeria need to be pro-active to remain profitable. Also, Financial Institutions need to do more in the area of decision lag and efficiency in order to increase access to credit facilities.

In the light of the findings emanating from this study, there is an urgent need for government to reduce the level of economic uncertainty as well as improving the level of physical and soft infrastructure so as to bring down the cost of doing business in Nigeria, we believe this is the right path to bring down the high interest rate. Also, the financial institutions on their part, need to do more in bringing down transactions cost. This we believe, can be achieved by adopting group lending, and agent banking approach which would lower operating costs, as well as spreading risks, and ultimately increasing credit intermediation to the small businesses.

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