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MP Shocks and Credit Behavior of Other Depository Corporations in Nigeria

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2021

Abstract

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MS, University of Ibadan, 2001

BS, University of Ibadan, 1999

Dissertation Submitted in Partial Fulfilment

of the Requirements for the Degree of

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Public Policy and Administration

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Abstract

The dearth of financial resources for the private sector remains a major constraint to economic growth and development in Nigeria. Amongst other causal factors, the inability of Other Depository Corporations (ODCs) to effectively mobilize financial resources to the productive sectors has been recognized. The gap in literature relates to the fact that previous studies used aggregated loan data, thus, failing to capture sector-specific idiosyncrasies. This study involved evaluating whether monetary policy (MP) has impacted credit creation for economy sectors. The policy feedback, institutional, and financial theories were used to study how MP actions affected deposit taking institutions' financial intermediation roles. Sectoral credit behavior and MP shocks association were addressed, as well as the effect of banking licensing regulations on credit in the private sector. Longitudinal time series data were analyzed via multiple vector auto regression models for economic sectors and survey data with crosstab and correlation analyses. Results showed that contractionary shocks reduced the availability of credit for businesses. The shock caused declines in credit for agriculture, mining, and quarrying, as well as increases to communication and education. However, the manufacturing sector witnessed insignificant impacts, thus the need to intensify credit intermediations towards the manufacturing sector. More effective MP for promoting access to business credit would restore financial funds access to progress residents' wellbeing and stimulate economic growth. The anticipated effective MP design will in turn improve households and firms' productivity, as well as profit and individual welfare to effect general wellbeing positive social change in Nigeria.

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Dedication

This work is dedicated to my father - Mr. J. Olatunji Bello, deceased mother – Mrs. M. Bolajoko Bello, immediate family, and siblings that were pillars of encouragement for always getting to the finish lines of every endeavor. I am indeed very grateful to the Almighty God for preserving my life.

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Chapter 1: Introduction to the Study

Introduction

Nigeria represents the largest economy in Africa with a total gross domestic product of US $397.27 billion and a total population of 195.87 million people in 2018 (World Bank, 2018). This large population, which was estimated to be growing at about 2.6% per annum, presents huge developmental challenges for the country. While the government has played significant roles in boosting production and providing enabling environments for sustainable economic development in the country, the private sector has huge potentials for complementing government efforts. However, in order to maximize collaborations between the government and private sector, the policies of the former must be in tandem with the expected behavior of the latter (Oishi & Diener, 2014).

Focusing on the financial sector, this study involved investigating the impact of monetary policy (MP) on credit behavior of other depository corporations (ODCs) in Nigeria, specifically, the extent to which the government's monetary policies (MPs) have influenced the ability of banks to lend to the private sector. ODCs are unwilling to sufficiently provide credit for the purposes of boosting the performance of the private sector. Findings of the study are expected to help the design of more effective MPs that are capable of boosting ODCs' lending to the private sector. Furthermore, increased credit to the private sector leads to increased economic activities with attendant effects on employment generation, increased income, poverty alleviation, and improved standards of living.

Background of the Study

The ultimate objective of public policy is to improve the general well-being of citizens (Oishi & Diener, 2014). Omoregie (2013) stated that various government agencies were established and had responsibilities of carrying out specific functions that are germane to the reasons for their existence. One such agency in Nigeria is the Central Bank of Nigeria (CBN), whose mission is to provide a stable framework for economic development in the country through the implementation of MP and management of the financial sector (Omoregie, 2013). While some efforts have been made over the years by the CBN towards the achievement of this mission, Nigeria's economic growth remains dismal, and a significant proportion of the Nigerian people still live below the poverty line (Okpara et al., 2018; Omoregie, 2013).

A major cause of this was the dearth of financial resources for the private sector to grow the economy due to the credit behavior of ODCs (Okpara et al., 2018). While the CBN formulates and implements relevant MPs (MPs), ODCs are directly responsible for channeling financial resources to firms and households. The policy challenge, therefore, relates to how the CBN should conduct MP in such a way that ODCs are able to provide sufficient credit to the private sector.

Unforeseen MP shocks have been known to affect ODCs' financial intermediation roles and produce negative and positive significant effects on the economy (Berger et al., 2000; Jeon & Miller, 2000; Kaminsky & Reinhart, 2000). Commercial banks in Nigeria are licensed based on regional, national, and international categories, with each of them having its own defined range of banking activities (CBN, 2010). Proper alignment of

financial intermediation roles could build a stable and robust banking sector with higher turnover (Buch et al., 2018; Buch et al., 2016). The Nigerian private sector has high unemployment and poverty rates, and this is related to the lack of access to the credit required to drive inclusive economic growth (Okpara et al., 2018). There is, therefore, the need for positive social change in this regard.

Existing studies investigated relationships between banks' credit behavior and license types based on aggregated loan data to the private sector. However, this did not include the impact of MP on ODCs' credit behavior towards different sectors of the economy, such as agriculture and manufacturing. No study has been conducted to evaluate the impact of MP on bank credit in different sectors of the Nigerian economy. Understanding these sectoral dynamics will help the CBN to further refine its MP to address sector-specific challenges confronting firms in order to effect positive social change in the country.

The overall purpose of this quantitative study was, therefore, to evaluate whether the MP in the last two decades has impacted ODCs' credit creation performance for different sectors of the Nigerian economy. First, I collected secondary data regarding bank credit in different activity sectors and evaluated relationships between MP decisions and credit. Second, a structured quantitative questionnaire developed involving MP and study objectives was administered for selected firms and households in Ibadan, Oyo State, to understand whether bank lending had contributed positively to their economic performance. The findings of the study will add value to effective MP formulation and implementation. Therefore, the objectives of the study were to estimate associations

between MP and credit actions of ODCs to different sectors of the Nigerian economy, evaluate the impact of commercial banking licensing regulations implemented by the CBN in 2010 on ODCs' credit behavior, and determine whether ODCs' credit creation activities enhance the economic performance of households and firms in Nigeria.

The inability of ODCs to effectively channel financial resources to productive sectors is one of the constraints on economic growth and development in Nigeria (Okpara et al., 2018). The focus of this study related to the sectoral analysis of the relationship between MP and credit behavior of ODCs in Nigeria. The first part of the analysis involved using the vector autoregressive model (VAR) to empirically investigate the relationship between MP decisions and sectoral credit behavior of ODCs. Secondary data used covered the period between January 2007 and June 2020. During the second part of the analysis, the extent to which bank lending has positively influenced the economic performance of the private sector was examined. Since ODCs are responsible for providing credit while households and firms are consumers of credit, primary data collection was designed to capture both the demand and supply sides of the credit market. The survey only covered the activities of selected ODCs, households, and firms in Ibadan, Oyo State.

The study contributes to the existing body of knowledge regarding the role of MP in terms of boosting the availability of finance to households and firms in Nigeria. This was achieved by providing up-to-date empirical evidence regarding whether MP decisions have supported or discouraged financial intermediation by commercial banks. No study had addressed the impact of MP on ODCs lending to different sectors of the

Nigerian economy. Thus, research findings are expected to enable some policy recommendations for MP makers to further design policies that will help promote private sector access to funds. Improved access to financial resources leads to promoting economic growth and improving citizens' welfare. Also, it is expected that the findings of this study will benefit ODCs in terms of how to better package their loan products to serve the private sector as well as firms and households in terms of increased availability of credit to help expand their economic activities. Therefore, major recommendations of the study were directed at the CBN with some recommendations for ODCs and the private sector.

Despite being a commodity exporter, the Nigerian economy has had dismal growth performances and high poverty rates (Afolabi et al., 2018; Okpara et al., 2018). Amongst other reasons, lack of credit for the private sector has been identified as a major and persistent factor (Okpara et al., 2018). Also, putting appropriate corrective policy actions in place to address emergency lending crises would motivate ODCs' lending performance. The MP Committee (MPC) of the CBN has noted the unwillingness of ODCs to advance credit to sectors of the economy and emphasized the need to promote lending to the private sector. A recent circular issued by the CBN increased the loan-to-deposit ratio of banks to 65.0%. This study provided up-to-date empirical findings related to how the actions of the monetary authority, central bank, impacts the credit behavior of banks. Findings of the study would be of use to policymakers, especially the CBN, in terms of the design of appropriate MPs for encouraging ODCs to lend to households and firms.

Problem Statement

MP to increase access to finance is a useful strategy for achieving economic growth and prosperity (Okpara et al., 2018). Existing studies investigating the relationship between MP and credit creation in Nigeria used aggregate loan data, ignoring peculiar factors affecting lending to different sectors of the economy. No study had studied the implications of MP decisions involving lending to Nigerian banks for different sectors of the economy. Also, the perspectives of ODCs, consumers, and firms regarding lending activities in Nigeria have not yet been explored by any previous study.

The performance of the Nigerian private sector, households, and firms has been poor over the years leading to high unemployment and poverty rates, and these social problems were linked to the lack of access to the credit required to drive inclusive economic growth (Okpara et al., 2018). Following Nigeria's 2016 economic recession and the slower than expected recovery afterward, policymakers have continued to emphasize the need for boosting real sector activities. The CBN (2019) noted the need for increased lending to the private sector for ODCs as well as their reluctance to advance credit to the private sector. Therefore, an empirical investigation regarding relationships between MP actions and ODCs' credit behavior is of great importance.

Studies regarding the impact of MP shocks on lending activities of ODCs in Nigeria are scarce. The few existing ones focus on aggregate loan data rather than sectoral data. Thus, the gap in the literature is that existing studies failed to address sector-specific issues. There was no information regarding the impact of MP on ODCs' credit behavior towards different sectors of the economy, such as agriculture and

manufacturing. Understanding these sectoral dynamics will help the CBN to further refine its MP to address sector-specific challenges confronting firms in order to effect positive social change in the country. In addition, no study had involved surveys of operators within the financial market to understand reasons why lending to the private sector has been low in Nigeria.

The performance of the real sector of the Nigerian economy requires deliberate policy actions aimed at addressing inhibiting factors such as lack of finance. Okpara et al. (2018) studied the relationship between financial sector development and economic development in Nigeria, using broad money supply and stock market capitalization and increased money supply leads to higher economic growth. A survey of selected ODCs, as well as consumers of credit such as households and firms, may provide deeper insights regarding constraints being faced by ODCs involving advancing credit to the private sector as well as the extent to which increased access to credit impacts economic activities of the private sector.

The major focus of this study was the relationship between MP and credit behavior of ODCs in Nigeria. Therefore, relevant variables for the empirical analysis include the key instrument of MP in the country, which is MP rate (MPR), as well as ODCs' credit to the private sector (CPS). The MPR is used by the CBN to signal the MP direction of the CBN and influence the level of money supply in the economy. Thus, an expansionary MP is tantamount to a reduction in the MPR, while a contractionary MP leads to an increase in the MPR. ODCs, which are licensed and supervised by the CBN, are responsible for providing retail credit to the private sector. Thus, an increase in credit

to the private sector increases economic activities and vice-versa. While the CPS was the dependent variable, the MPR was one of the independent variables. It was expected that a decrease in the MPR could increase the money supply and, in turn, lead to an increase in the CPS. The MPR was expected to exhibit a positive relationship with the CPS.

The Nigerian financial sector plays a critical role in ensuring the availability of short- and long-term financial resources to the credit-deficit units of the economy. Thus, policy measures had been deployed to enhance the lending ability of the ODCs. This was with the aim of ensuring real sectors of the economy are adequately funded. However, despite different initiatives, ODCs appeared reluctant to increase lending to the private sector (CBN, 2019). Perspectives of ODCs regarding constraints being faced when lending to the private sector was not addressed in existing studies. These research gaps were addressed in this study by examining the impacts of MP on ODCs lending to critical sectors of the economy and sector-specific impacts. This was complemented by analysis of survey data regarding factors determining credit behavior of selected ODCs.

Purpose of the Study

Investigating the relationship between MP and the credit behavior of ODCs in Nigeria requires considering sector-specific factors such as the gestation period of projects involved and risks associated with operating in different sectors. Thus, by studying the impact of MP on credit behavior, aggregating ODCs' credit for all sectors of the economy in a single analysis may yield biased or even erroneous conclusions. This study empirically examined the impact of on ODCs' credit behavior by employing sector-level data to resolve such bias. Consequently, the study developed sector-specific models

to address the relationship between the MPR and ODCs lending to different sectors and identify which sectors are more affected by such actions. In addition, this study complemented this analysis by surveying selected ODCs, households, and firms to obtain their perspectives regarding this phenomenon.

The study explored the relationship between MP and the credit behavior of ODCs using sector-level data. Deriving empirical relationships between MP and credit behavior of ODCs based on aggregated numbers may not yield realistic estimates, thus, limiting the usefulness of such analysis in terms of the policy. The overall purpose of this quantitative study was to evaluate whether the MP in the last two decades has impacted ODCs' credit behavior for different sectors of the Nigerian economy. Secondary data were collected regarding bank credit size for different activity sectors and evaluated the relationship between this and MP decisions. Second, a structured quantitative questionnaire developed involving MP and study objectives was administered for selected firms and households in Ibadan, Oyo State, to understand whether bank lending has contributed positively to their economic performance. The study's findings will add value to policies involving developing sector-specific interventions aimed at removing identified constraints.

The primary purpose of this study was to estimate associations between MP and credit lending of ODCs to different sectors of the Nigerian economy. In addition, this study examined whether ODCs' credit lending enhanced the economic performance of households and firms in Nigeria. This study estimated credit models for different sectors of the Nigerian economy - manufacturing, agriculture, solid minerals, real estate and

construction, and finance and insurance. There are five dependent variables: ODCs' credit for the manufacturing, agricultural, solid minerals, real estate, construction, and finance and insurance sectors. The primary independent variable was the MPR. Other independent variables were gross domestic product (GDP), foreign exchange rate, inflation, and real GDP. Inferences were drawn based on estimated regression models for each of the five dependent variables regarding the impact of MP on lending to different sectors of the economy. Lastly, the survey results corroborated the regression models to analyze perspectives of ODCs and private sector agents regarding lending activities in Nigeria.

Research Questions and Hypotheses

The research questions for the study are as follows:

RQ1: is there a statistically significant relationship between MP shocks and ODCs' credit behavior?

$H_0 1$*:* There is no statistically significant relationship between MP shocks and ODCs' credit behavior towards the identified five sectors of the Nigerian economy.

$H_a 1$*:* there is a statistically significant relationship between MP shocks and ODCs' credit behavior towards the identified five sectors of the Nigerian economy.

RQ2: Have commercial banking licensing regulations implemented by the CBN in 2010 improved ODCs' credit to the private sector?

$H_0 2$*:* Commercial banking licensing regulations implemented by the CBN in 2010 have not improved ODCs' credit in the private sector.

H_a2: Commercial banking licensing regulations implemented by the CBN in 2010 have improved ODCs' credit in the private sector.

RQ3: Do ODCs' credit creation activities enhance the economic performance of households and small businesses?

H_03: ODCS' credit creation activities do not enhance the economic performance of households and small businesses.

H_a3: ODCs' credit creation activities do enhance the economic performance- of households and firms.

Theoretical Framework for the Study

The policy feedback theory (PFT), in conjunction with the institutional theory (InT), was the theoretical framework for this study. Weible and Sabatier (2018) stated that the PFT always seeks to understand what happens after adopting a policy, focusing on how it affects the general public. The InT involves the historical structuring of corporations and how it affects behavior and also consists of advanced concepts that account for how social and cultural behavior influences individual behavior (Vadeboncoeur & Jennifer, 2018).

They developed a theoretical framework for explaining the growth-enhancing effects of financial liberalization while noting that financial repression produces the opposite effect. The financial sector plays an essential role in increasing the amount of savings in the economy, thus raising investment.

A policy of financial repression constrains the economy. The financial sector is capable of mobilizing large amounts of savings through the introduction of appropriate

incentives. In order to help in terms of promoting a savings culture, the Nigerian government needed to remove interest rate ceilings and manage inflation so that the real interest rate could rise (McKinnon, 1973; Shaw, 1973). An increased real interest rate encourages higher savings and investments, thereby leading to higher economic growth.

The study investigated whether MP committee decisions relating to the MPR matter in terms of the ability of ODCs to provide more credit to different sectors of the Nigerian economy. Regarding the role of financial intermediation in promoting economic growth, this study involved surveying ODCs, households, and firms to collect relevant information regarding their different experiences.

Financial intermediaries such as banks play an essential role in mobilizing savings, accumulating human and physical capital. Thus, a critical component of the financial intermediation theory relates to the ability and willingness of financial intermediaries to create credit. A primary focus of this study was to determine whether MP affects the financial intermediation behaviors of ODCs in Nigeria using sectoral credit data. Thus, increased financial intermediation will go a long way in designing and implementing favorable MP decisions. In addition, the study examined the extent to which ODCs' credit creation activities impacted the economic performance of the private sector using survey data to measure the credit activities.

Nature of the Study

In order to study the relationship between MP and credit behavior of ODCs, the study employed a quantitative time-series quasi-experimental longitudinal design. This design approach is suitable for describing variable occurrences and relating them in a

meaningful manner. For this study, the approach was efficient and effective for providing valuable information quickly using tables, charts, and model estimates. Thus, the analysis of archival data based on the VAR model to understand the private sector credit and MP decisions is in line. The VAR model was used to quantify the impact of MP on the size of credit advanced to households and firms and different sectors of the Nigerian economy. Also, Statistical Package for the Social Sciences (SPSS) was used to analyze primary credit data from the survey to determine whether ODCs' credit creation activities help enhance private-sector economic performance.

The research estimated the effects of MP on credit behaviors of ODCs across five different sectors of the Nigerian economy. The dependent variables for the five estimated models were ODCs' credit for the manufacturing, agricultural, solid minerals, real estate and construction, and finance and insurance sectors. The key independent variable was MPR. An increase in the MPR implies a contractionary MP stance, while a decrease in the MPR indicates an expansionary MP. The other relevant independent variables were rGDP, exchange rates, and inflation. rGDP measures the size of the economy, and there is an expectation that it will have positive relationships with credit for all sectors of the economy. Any increases so ever in inflation are expected to increase demands for credit by the private sector.

In order to analyze the relationship between MP shocks and credit behavior of ODCs, the VAR was employed. This study explored the model to analyze how MP innovations impact credit to different sectors of the economy. The study used archival data regarding activities of ODCs sourced from monthly regulatory data submitted to the

CBN from the CBN statistics database to achieve the objectives. The study used the econometrics software (EViews) to analyze the secondary credit data.

Furthermore, the research investigated the extent to which ODCs' lending behavior impacted the economic activities of households and firms using primary credit data from a survey of ODCs credit officers and customers. A survey administered a predesigned structured questionnaire to collect information regarding the contribution of ODCs to the economic performance of the private sector. The study also surveyed the ODCs credit officers via the purposive sampling technique using a predesigned structured questionnaire to solicit information regarding relevant aspects of their activities related to the study. The study used the SPSS software package for analyzing the primary credit data collected.

Operational Definitions

The study involved using the following terms:

Commercial banks: The most common designation for a deposit-taking corporation. The range of activities in which a commercial bank can participate varies widely among countries, depending on national banking regulations and practices, and the sophistication of the financial system in each country. The most common services provided by commercial banks are accepting deposits and granting business and personal loans. In many countries, they are required to place reserve requirements at the Central Bank in a certain proportion with deposit liabilities.

Credit: Credit involves the provision of resources by a deposit-taking institution who is the lender or creditor to another institution who is the borrower or debtor. The

creditor acquires a claim, and the debtor incurs a liability to repay. This helps finance production, capital formation, and consumption in the form of loans, trade credit, and advances and debt securities. However, credit excludes deposits, equity, and other accounts receivables other than trade credit.

Household: A group of persons who share the same living accommodations, pool some or all of their income and wealth, and consume goods and services collectively, mainly housing and food, in addition to jointly owning assets or incurring liabilities. Any production activities undertaken by households that are not legally registered such as production, farming, and selling of goods and services are integral part of households.

Merchant banks: Banks which specialize in financial activities that facilitate trade and commerce, typically involving international financing, long-term lending, and underwriting of securities. They also have banking relationships with multinational and other large corporations, but usually do not offer banking services to the general public.

Microfinance banks: Small community banks which provide financial services in rural areas. Due to the economic characteristics of their clients, they tend to specialize in microfinancing of rural and agricultural activities.

Mortgage banks: Banks which specialize in long-term lending for purchases of real estate.

Other Depository Corporations (ODCs): These are deposit-taking institutions that view financial intermediation as their principal activity (International Monetary Fund [IMF], 2019). The composition of ODCs varies per country, but at the broadest level, ODCs include commercial banks, savings institutions, credit unions, and money market

mutual funds, and excludes the Central Bank. ODCs in Nigeria include only commercial, merchant, microfinance, and primary mortgage banks.

Assumptions

In conducting this study, some assumptions were made. First, it was assumed that an increase in lending by ODCs to consumers and producers of goods and services generates higher output, which in turn leads to economic prosperity and poverty reduction. Secondly, it was assumed that the Nigerian government through the conduct of MP can positively influence the credit behavior of ODCs with the aim of increasing lending to different sectors of the economy. This study also assumed demand for loan and advances increases in response to MP shocks. Another critical assumption about bank credit that prompted this study was that availability of capital for households and small business would allow smooth running of business to enhance development and economic growth. Finally, the study assumed survey respondents provided honest feedback regarding the impact of credit on their economic activities.

Scope of the Study

This study involved examining the relationship between MP and the credit behavior of ODCs in Nigeria using sector-level data. The study used the VAR to empirically investigate the relationship between MP decisions and sectoral credit behavior of ODCs. Secondary sectoral credit data covered the period between January 2007 and June 2020 used for analysis. Credit behavior according to types of business license (commercial, merchant, and specialized) was studied in terms of MP shocks. The specialized group includes microfinance, mortgage, noninterest, and development finance

banks. Commercial banking licenses could be regional, national, or international, while specialized noninterest could be either regional or national alone. The study examined the extent to which bank lending had positively or negatively influenced the economic performance of the private sector. Therefore, since ODCs were responsible for providing credit while households and firms were consumers of such credit, primary data captured both the demand and supply sides of the credit market. The survey covered the activities of ODCs, households, and firms in the Ibadan metropolis of Oyo State, Nigeria.

The study period was chosen based on the need to capture current realities of the Nigerian financial sector, credit behaviors of ODCs, and unavailability of earlier years' credit data. The study did not consider political, environmental, and socio-cultural factors for analysis because of their difficulty in measuring them and the unavailability of their data.

Findings of the study about the economic implications of ODCs' credit behaviors for households and firms can be generalized to other parts of the country that share similar socio-cultural values. However, generalization required caution when generalizing the study findings to regions with slightly different value systems, especially regarding commercial bank loans. Results of the VAR model regarding the impact of MP on ODCs' credit behavior could be easily generalized. This generalization is possible because the financial sector has undergone significant structural and policy changes – reissuing operating licenses specifying bound of operations, resisting some investment ventures to mention a few in recent times.

Delimitations

For this study, a couple of delimitations incorporated to improve on the quality of the research. First, the study addressed economic factors affecting the credit behavior of ODCs, as it was difficult to incorporate political, environmental, and socio-cultural factors due to measurement problems. The design of the questionnaire was to collect information for 1 to 2 years before the survey data collection period. This time frame choice ensured that respondents could substantially recall their recent economic transactions, thus improving the quality of data used for analysis.

Limitations

In this study, the impact of MP actions on ODCs' credit behavior towards different sectors of the Nigerian economy examined. Therefore, a major limitation of the study related to credit data from a longer period. There were some inconsistencies in terms of categorization of loans to different sectors. Also, there were limitations in accessing potential respondents –those who have accessed credit, especially those whose loans had gone bad and ODCs had realized their collateral. As there is no place to access a list of households amd micro, small business that have accessed loan, selecting participants becomes an issue.

Household and small firms do not keep business records most of the time, thereby making pretest and posttest method almost impossible. Therefore, research involved posttests for those who had accessed bank credit based on information made available to this study in the survey. To enhance the validity of results, a control group of households

and small firm businesses did not have access loan for their businesses compared to those that had accessed bank credit, as a way of comparison.

A major bias that could influence outcomes of the study relates to improper classification of loans by ODCs. In order to address this, the study devoted ample time to the preprocessing of credit data to identify outliers and other unusual movements in amount of credit allocated by ODCs. Another possible bias related to deliberate falsification of survey responses by respondents. This falsehood may occur when respondents do not want to be identify as failing in business due to issues relating to loans, thereby leading to overestimating the positive impact of ODC credit on the economic activities of agents. In order to reduce this bias, survey respondents were to provide reliable information as the survey data would be for policies aimed at improving theirs and businesses welfare.

Significance of the Study

This study contributed to the existing body of knowledge regarding the role of MP to boosting the availability of finance to households and firms in Nigeria. This objective achieved by providing up-to-date empirical evidence regarding whether MP decisions have supported or discouraged financial intermediation by commercial banks. The research findings are expected to enable policy recommendations for MP makers to further design policies that will help promote private sector access to funds. Improved access to financial resources leads to promoting economic growth and improving citizens' welfare. Also, findings of this study will benefit ODCs in terms of how to better package their loan products to serve the private sector and firms and households in terms

of increased availability of credit to help expand their economic activities. Therefore, major study recommendations were directed at the CBN in charge of government's MP while some recommendations offered to ODCs and the private sector.

Findings of this study will be of benefit to economists, policy makers, and central banks in emerging and developing economies with less developed financial systems. Policy makers also benefit from the study in accessing useful information that could further improve the design of appropriate policies for enhancing credit to the private sector. An increase in lending to the private sector helps improve economic activities and leads to long-term economic growth.

Regarding challenges involving economic growth and development confronting Nigeria and other developing economies, urgent policy interventions were needed to lead to positive social change for households and SMEs to boost actiity performance and productivity. Thus, this study involved investigating the role of MP in enhancing the lending ability of the ODCs. Findings of the study will lead to the design of effective MPs aimed at positively influencing the credit behavior of ODCs toward identified sectors of the Nigerian economy. Improved financial access encourages higher accumulation of human and physical capital, which invariably causes more investments and long-term economic growth. Ultimately, improved economic growth leads to lower unemployment, increased welfare, lower poverty, higher incomes, and increased living standards. Thus, by contributing to the impact of MP decisions on ODCs lending to different sectors of the Nigerian economy, this study contributed to positive social

change, especially concerning employment generation and improved welfare of Nigeria citizens.

Summary and Transition

In this chapter, the background of the study was discussed, including research gaps and associated research questions. The study involved answering three key RQs. These research questions were useful for understanding the relationship between MP shocks and ODCs' credit behavior and the impact of credit on economic activities of households and firms. To answer the research questions, the quantitative analysis method was employed using data for the period between January 2007 and June 2020. In addition, survey data analyzed to gain insights regarding perspectives of households and firms concerning the impact of credit on their economic activities.

Chapter 2 includes a theoretical and empirical review of literature. For ease of presentation, the literature review grouped into studies involving developed countries and developing and emerging economies. Chapter 3 includes the methodology as well as data employed for analysis. Methods of analysis included both the VAR model used to address the first two RQs and the logistic model used for analyzing survey data. the study presented the results and discussed the finding in Chapter 4. Policy recommendations conclude the study in Chapter 5.

Chapter 2: Literature Review

Introduction

Despite the ultimate objective of public policymakers to improve Nigerian citizens' wellbeing, the performance of firms and households in Nigeria has been poor, leading to high unemployment and poverty rates. This social problem partly attributed to household and SMEs lack of access to required funds to drive inclusive economic growth (Okpara et al., 2018; Oishi & Diener, 2014; Omoregie, 2013). How MP impacts banks' credit behavior towards different sectors of the Nigerian economy has remained unknown. As a result, this research aimed to investigate the empirical relationship between MP actions and ODCs' lending activities to various economic sectors of the Nigerian economy since 2001. Second, the extent to which bank lending contributes to the economic performance of the private sector was examined based on primary data collected from selected firms and households in Ibadan, Oyo State.

King and Levine (1993) stated that aggregate measures of current financial depth affect current and future levels of economic growth. Thus, finance and financial institutions recognized as critical elements for sustainable economic growth. The growth-enhancing role of financial institutions derives from their ability to attract finance to productive sectors of the economy. Also, literature has focused on examining the relationship between MP and credit creation and MP transmission mechanisms. Also prominent in literature are studies involving determinants of banks' credit behavior.

The literature review organized into three major sections. A review of theoretical literature to address the conceptual framework, empirical literature for empirical

relationships between MP, credit behavior, and economic performance in different economies. A review of relevant literature followed this to guide the suitable methodology for carrying out this empirical analysis.

The theoretical literature review includes conceptual foundations upon which the study involves the effects of MP shocks on credit behavior. Relevant theories considered were the modern growth theories, finance and growth theories, PFT, and InT. The modern and finance and growth theories provide a framework for understanding finance and economic performance. Finance contributes to economic growth due to its ability to facilitate the accumulation of human capital and technological innovations. A critical component of this process is financial institutions responsible for mobilizing savings and investments for sustainable economic growth (Acemoglu, 2012). Also, the InT of Meyer and Rowan and the PFT were frameworks for studying the role of institutions such as the Central Bank and ODCs in facilitating credit creation. The empirical literature review covers five key themes involving different aspects of the relationship between MP and credit behavior of ODCs, including the role of finance in boosting economic performance. These aspects include the empirical relationship between MP shocks and credit creation, credit channels of MP transmission mechanisms, bank credit behavior determinants, determinants of the private sector's demand for credit, and determinants of households' access to credit. Methodological approaches involving credit creation responses to MP shocks examined in the last section of this literature review.

Literature Search Strategy

In order to investigate relevant theoretical and empirical issues involving finance and growth, literature was sourced from the following databases: Science Direct, Springer, Political Science Complete, EBSCO eBooks, SAGE Journals, ProQuest Central, and Dissertations and Theses Global. Relevant search terms were *MP*, *bank credit*, *credit rationing*, *financial credit*, *banks' credit behavior*, *economic growth*, *MP transmission mechanism*, *policy feedback theory*, *institutional theory*, *finance-led growth theory*, *credit creation theory*, *financial development*, and *repression*.

In order to ensure that current and up to date literature were used, the literature search was restricted to a five-year period between 2015 and 2019. However, the search was extended in a few instances in order to allow for the sourcing of literature regarding relevant theoretical frameworks. In terms of literature types considered, I used peer-reviewed journal articles, study reports, dissertations, eBooks, conference papers, discussions, and working papers.

Theoretical Framework

Relevant theories that provide the theoretical basis for this research include the modern growth theory, PFT, and IsT. These theories were essential to logically and effectively evaluate the impact of MP actions on ODCs' lending activities.

The financial sector has two main channels through which it directly affects the growth of a country (Acemoglu, 2012). The identified channels are through physical and human capital accumulation as well as through increasing the rate of technological innovation awareness that was fundamental to the financial-growth nexus. The preference

for this theory lies in the fact that it encompasses the need to mobilize savings and investment for long term economic growth, a process in which other depository corporations play a vital role.

Institutional Theory

The InT was introduced in 1977 by Meyer and Rowan and built upon by DiMaggio and Powell in 1983 to provide an exclusive perception for understanding key characteristics of the institutional-organizational interplay in the description of event occurrences and outcomes (Riaz, 2009). The theory assert that institutional environment can strongly influence the development of formal structure than market structure. On the other hand, the PFT analyses policy process by studying how policies made in the past affect future policy actions. The theory could be first traced to the work of Schattschneider in 1935, followed by Easton in 1957, Marshall in 1964, Lowi in 1964, Piven and Cloward in 1971. Others were Wilson work of 1973, Edelman of 1977, Bardach of 1977, Lipsky of 1980 and many other scholarly studies in the 1990s.

The InT illustrates the different social structures that have been put in place; the InT was defined by structures, norms, rules, and routines based on the particular governing party to establish the set authoritative guidelines for different social behavior (Montiel, 1995). Therefore, the institutional approach recognizes the various political institutions that determine the contexts in which policymaking takes place. In Nigeria, like any other country, institutions play a significant role in dealing with social problems and economic challenges. For instance, relevant institutions of government are able to regulate the different conflicts that generate suspicion and maintain political stability

(Lemay-Hebert, 2009). The InT was applicable to the financial sector as it provides a framework within which certain undesirable economic outcomes cab be addressed using financial institutions. (Lemay-Hebert, 2009). Thus, within the framework of InT, this study was interested in knowing the extent to which the Nigerian financial institutions serve to promote long term economic growth and development.

The choice of InT for this study was based on the fact that certain financial institutions are saddled with the responsibility of channeling financial resources from the surplus-spending unit of the economy to the deficit-spending unit of the economy. The financial system of Nigeria comprises of many institutions. Among others, these institutions include the Central Bank of Nigeria (which is an institution of government) and the other depository institutions (which are private institutions). The InT provides a theoretical basis for studying these institutions can be more effective in effecting positive social change in the country. In other words, it provides a framework for analyzing how the MP actions of the Central Bank of Nigeria can be fine-tuned to promote increased lending by the other depository corporations to households and firms. This would ensure that policies and regulations put in place are favorable to provide an environment that is fit for business operations, such that both SMEs and big private businesses can operate with ease.

Policy Feedback Theory

The PFT seeks to understand the impact of an adopted policy or change in policy direction on the well-being of an affected public (Weible & Sabatier, 2018). The PFT was dated to as far back as the 1990s: and it examines the effects of policy - political attitudes

on the general public (Mettler & SoRelle, 2018). The preliminary incentive of PFT arose from the ancient institutionalist practice, and Pierson's theory to deliver a scholarly connection connecting the logic of institutional development and path dependence to the study of individual political behavior (Mettler & SoRelle, 2018). According to Mettler and SoRelle (2018), PFT is the intersection of bringing political considerations to bear on policy analysis and measuring how a policy influences the essential phases of governance. Of interest to this study was the need to evaluate past MPs in terms of how it has affected the lending behavior of other depository corporations in Nigeria. This was with a view to coming up with recommendations that can lead to further improvements.

The PFT enhances policy process research by underscoring how existing policy affect the possibility and structure of future ones. This policy fee policy feedback helps to evaluate citizen commitment and involvement in the formulation and to empirically test its implementation. The analytic purview of the theory dignified to tackle a wide range of political changing aspects. Consequently, the PFT is crucial for scholars trying to comprehend how established policy reform political affairs but using the outputs of any public policy on the citizen wellbeing to understudy how the adopted policy could influence potential policies.

Financial Access Theory

Financial access explains both businesses and individuals' admission the identified financial services and products that are identified to be important for their daily commercial operations with ease (Sarma, 2008). A country that has the required financial presence gets the opportunity to motivate the local businesses to undertake their

transactions with ease. Moreover, the preference to ensure the required financial services and products have been availed guarantees the country to have the required facilities allows investors – households and small business owners, to be willing to take initiatives in their respective businesses.

In respect to the different institutions that are available, it was essential to have the required financial services and products which are identified essential for them to transact their identified credit facilities, payments, transactions, and insurance covers. Therefore, through financial access, both businesses and individuals are allowed to gain banking services and products without any form of discrimination (Sarma and Pais, 2011). Through this financial opportunity, every member in the community was given an equal opportunity to get the much desired financial services without evaluating their business, a social status which can otherwise make an individual shy from seeking the much desire education to make better decisions in several economic activities with ease (Sarma, 2008). In sections of the communities where there are economic challenges, financial inclusions ensure there was the provision of the right financial solutions that are considered paramount to allow the people to relinquish their current economic condition and instead have a chance to behave a fighting chance to get an equal business opportunity.

A government that seeks to offer financial access ensures everyone in the society can be actively involved in the country's economic management, which contributes to the overall country development with better business relationships made. Over the years, Nigeria governments, through its monetary institutions have put in place different

policies that are geared towards financial access in the Nigerian economy. For example, some policies have been put in place in the county, such as the establishment of rural banking program that metamorphous into microfinance banks to facilitate financial access to households and small-scale business (Sarma, 2008. The commercial banks have also been keen to offer innovations and activities whose aim was not only to attract deposits but also facilitates access to financial resources and provide credit to the small businesses (Sarma & Pais, 2011).

The ability to create credit separates the banks form other financial institutions. Credit creation theory emphasizes the ability of the banks to create expansions of deposits that are availed. Banks can expand their accounts demands depositions as multiple of their cash reserved given the demand deposits are identified to serve as the primary medium of exchanges. Therefore, through credit creation theory, the banking can create money. Hence, with the banks developed there was creation on the right kind of bank deposits that allows the banks to enhance their lending capabilities. Also, the sum of money deposited in the bank was not constrained by the deposit activities that are currently taking place and instead of the ability of the bank lending some of its reserves to the public allows the bank to create new purchasing power among the consumers a scenario that did not exist earlier (Harris et al., 2018). The credit creation theory was considered by many as a result of its ability to have at least 95 percent of all bank transactions that are conducted in the bank were identified non-cash in the banking system. The bank can combine the lending and deposit activities that are conducted in the bank. Thus, the banks act as their accountants within their respective financial systems,

which allow the banks to create a fiction that the borrower was borrowing the money that had been deposited in the bank. But the bankers can't have a clear distinction between the money that has been deposited and what was created.

Review of the Literature for Theoretical Framework

The InT had advanced concepts that account for how the behavior of individuals is influenced by the social and cultural context and has applied this perspective to the behavior of institutions (Vadeboncoeur & Jennifer, 2018). Also, there are different approaches that emphasized institutional functions as related to external pressures – reproductive, or as related to internal routines - productive, and have advanced a number of concepts through which the effect of the environment on the behavior of the institution could be explained (Vadeboncoeur & Jennifer, 2018). Vadeboncoeur and Jennifer highlighted that an organization becomes institutionalized when individual performances become formal routines, embedded in an impersonal structure. The routines become powerful factors or social facts in shaping the behavior of and the interaction between individuals, and also shape the interactions between institutions (2018).

In an institutionalized social structure, a corporation does not borrow money from another company, but from a bank that lends deposited funds – other corporation savings. Thus, the bank acts as an intermediary, attending to and enabling the transaction, making interpersonal qualities like trust become impersonal commodities that are marketed by banks as institutions (Vadeboncoeur & Jennifer, 2018). Vadeboncoeur and Jennifer (2018) said there are two distinct theoretical frameworks in the InT – environment and organization. The environment as institution focuses on institutions' conformity to

external pressures, from requirements to professional standards, while organization as institution focuses on the formalized routines generated within institutions, rather than external pressures (Vadeboncoeur & Jennifer, 2018).

The organization-as-institution framework focuses on productive and processes that regulate institutions are imitative - imitating other organizations, adopting formalized routines; while the environment-as-institution framework emphasizes reproductive and the processes that regulate institutions are coercive - conformity and meeting state and other external requirements. The theory was first developed by Powell and DiMaggio in 1991, improved upon in 1995 by Scott, however, some challenges highlighted by Knetter in 1989. Some recent application of the institutional framework includes the evaluation of the cost of legitimacy management in the context of corporate giving (Jeong & Kim, 2019); and evaluation of the progress made in understanding the impact of multi-level institutions on entrepreneurship (Zhai & Su, 2019) to mention few. Lastly, this framework in public policy was the ability of government to command the loyalty of its citizens, to enact policies governing the nation, and monopolize the legitimate use of force that encourages individuals and groups to work for enactment of their preferences into policy (Sanchawa, 2015).

Policy feedback (Skocpol 1992; Pierson 1993; Mettler 2002) is the idea that policies influence the political reality in terms of the legitimacy of the political order, mobilization, inclusiveness and even the formation of political beliefs (Beland, 2010).

The PFT enriches policy analysis by explaining how policy designs affect political actors, governance, and explains how existing policies affect probability and

design of future policies (Moynihan & Soss, n.d.). Thus, policy feedback refers to the variety of ways in which existing policies can shape key aspects of politics and policymaking. Originating in historical institutionalism, the study of policy feedback has expanded to address resource and interpretative effects on target populations and mass publics, the roles of policy elites, and how feedback effects are conditioned by policy designs and larger institutional contexts (Beland & Schlager, 2019). The policy feedback framework effects are not self-reinforcing in nature and its diversity reflected in manuscripts building from the social constructions framework and the thermostatic model. Sabbagh applied the framework to discover the experiences of individuals from a county in the Great Lakes region of the United States on the effectiveness of mechanisms distribution in helping meet food needs (2018). Another recent research that applied the PFT was the study that evaluate personal experience with public health insurance programs exerts a causal influence on attitudes toward both Medicare and the Affordable Care Act in the US (Lerman & McCabe, 2017)

Credit creation theory proposed that individual banks can create money, and banks do not solely lend out deposits that have been provided to the bank. This theory was widely held at the end of the 19th century and in the first three decades of the twentieth. The most important function of a ODCs is the creation of credit. Subsequently, money supplied by ODCs is called credit money. Commercial banks create credit by advancing loans and purchasing securities. A bank's ability to create new money, which is referred to as 'credit money', is a consequence of a range of factors (Starkey, 2017). They lend money to individuals and businesses out of deposits accepted from the public.

However, commercial banks cannot use the entire amount of public deposits for lending purposes. They are required to keep a certain amount as reserve with the central bank for serving the cash requirements of depositors. After keeping the required amount of reserves, commercial banks can lend the remaining portion of public deposits (Starkey, 2017). Other depository corporation creates bank deposits as a consequence of bank lending. Consequently, the amount of money that a bank can create was not constrained by their deposit taking activities, and the act of bank lending creates new purchasing power that did not previously exist. The repayment of existing debt destroys money, as a consequence of reducing bank loans and customer deposits (Starkey, 2017). According to supporters of Credit creation theory bank do not need necessary to collect deposits at first in order to issue the loan. MacLeod (1906) said that "the business of banking was not to lend money, but to create Credit: and by means of the Clearing House these Credits are now transferred from one bank to another, just as easily as a Credit is transferred from one account to another in the same bank by means of a cheque."

Financial Intermediations theory is referred whenever there was the need to explain ODCs' role in the economy through three major intermediation functions - liquidity intermediation, risk intermediation and information intermediation (Freimanis, & Šenfelde, 2019). These functions arise due to the absence of financial markets to provide full efficiency and completeness. Liquidity intermediation explained as reallocation of excess money provided by depositors to money need for projects in the form of credits. Risk intermediation explained as the reengineering of ODCs in collecting all type of issues relate to loss or gain of money when intermediating in the economy to

transform or repackage into securities with varying degrees of inherent threat. Such risks are credit, interest rate, and exchange rate to mention few. Information intermediation explained as a function of balancing interests of well-informed entrepreneurs and less informed savers in the conditions of information asymmetry when entrepreneurs' designed investment project presented to the ODCs (Freimanis, & Šenfelde, 2019). This theory originated from Keynes' work of 1936, "The General Theory of Employment, Interest and Money" where Keynes stated that savings are needed for investments to take place. Subsequently, this theory reflected in Keynesian models developed by researchers after Keynes, some of the latest of such are Mishkin and Eakins in 2016 referring financial institutions to Financial intermediation theory; and Osborne et al., evaluation of the relationship between bank capital ratios and lending rates in the United Kingdom in 2017 (Freimanis, & Šenfelde, 2019).

Finance led growth theory is the transition of the financial sector development into economic growth (Rousseau, 2002). The financial sector development takes place when financial instruments, markets, and intermediaries work together to reduce the costs of information, enforcement and transactions. A solid and well-functioning financial sector is a powerful engine behind economic growth. It generates local savings, which in turn lead to productive investments in local business. Subsequently, providing the rudiments for income-growth and job creation (Rousseau, 2002). This finance-led growth has been popular among governments in several developing countries as a means to promoting development and general well begin of the citizens (Habibullah, 1999). The financial system can and often does positively influence economic growth (Prochniak &

Wasiak, 2017). Also, Financial development, besides influencing economic growth, also influences the financial structure of firms and policy parameters that often leads to significant shifts in the debt-equity choice of firms (Chakrabarti et al., 2019).

Financial access and inclusion framework explain both businesses and individuals have to access the identified financial services and products that are identified to be important for their daily commercial operations with ease (Sarma, 2008). A country that has the required financial inclusion gets the opportunity to motivate its local businesses to undertake their transactions with ease. Moreover, the preference to ensure the required financial services and products have been availed guarantees the country to have the required facilities allows investors to willing to take initiatives in their respective companies. In respect to the different institutions that are available, it is essential to have the required financial services and products which are identified to be essential for them to transact their identified credit facilities, payments, transactions, and insurance covers. Therefore, through financial inclusion, both businesses and individuals are allowed to gain banking services and products without any form of discrimination to allow for economic growth (Sarma & Pais, 2011; Sharma, 2016). Through financial inclusion, every member in the community was given an equal opportunity to get the much desired financial services without evaluating their business, a social status which can otherwise make an individual shy from seeking the much desire education to make better decisions in several economic activities with ease (Sarma, 2008) and for growth (Sharma, 2016).

In sections of the communities where there are economic challenges, financial inclusions ensured there was the provision of the right financial solutions that are

considered paramount to allow the people to relinquish their current economic condition and instead have a chance to behave a fighting chance to get an equal business opportunity. Lastly, any government that seeks to offer financial inclusion ensures everyone in the society can be actively involved in the country's economic management, which contributes to the overall development with better business relationships and growth (Sarma & Pais, 2011; Sharma, 2016).

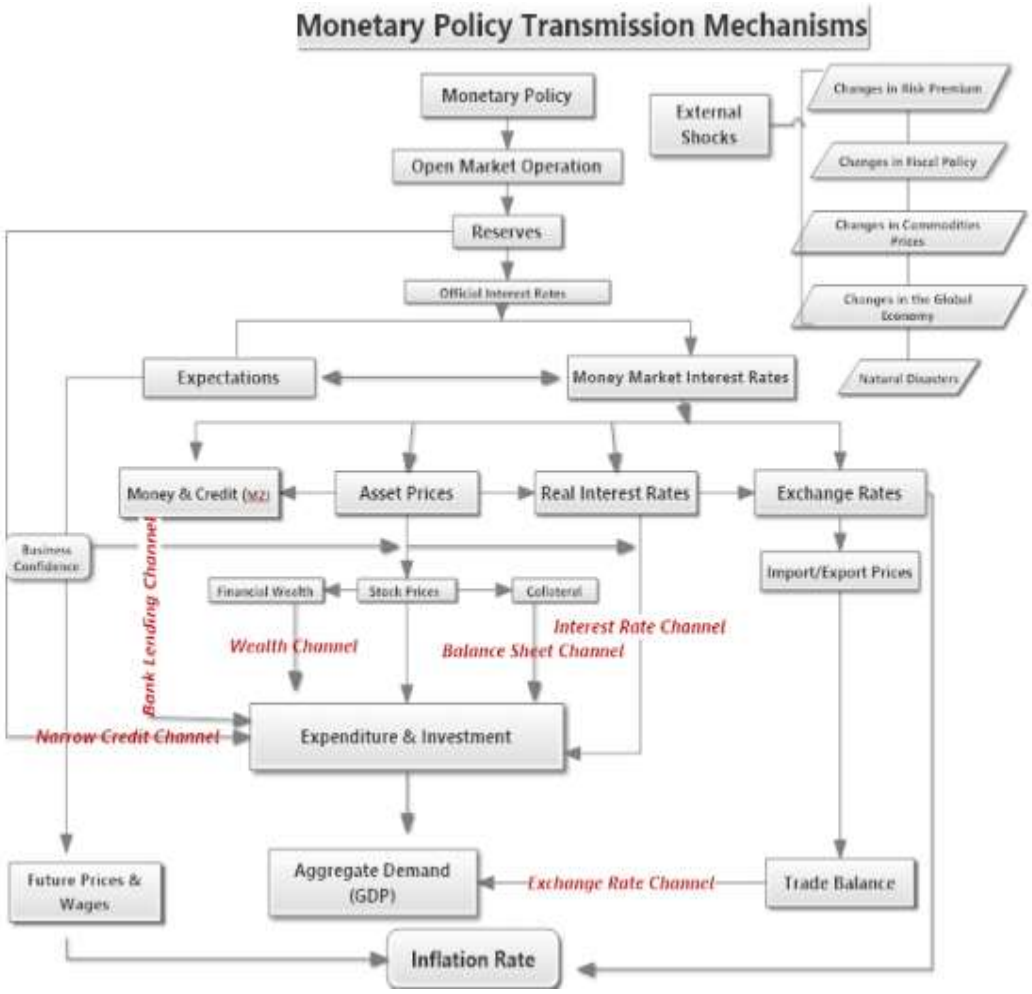
Monetary Policy and Its Transmission Mechanism

Mishkin (1995) said the monetary transmission mechanism to be the government initiated a process where there was an impact felt in the country's economic conditions and the prices of the assets in the country. The government is always intended to provide the best policies that positively affect a respective country; thus, the ruling government was careful to administer the correct monetary laws and regulations for proper development of the country. The effects the government's proposed policies can either be positive or negative and from there a country can make up its MP decisions. The preference to develop the fiscal policies was to influence interest rates, amount of money offered for credit, and interest rates that generally affect the country's economic performance. When there was an admission of a policy shift in the monetary transmission mechanism, there are different changes that are registered in the money stocks and they have a direct impact on the country's employment and output that was evident in the country businesses. The SMEs are directly impacted by different MPs that have been put in place; they directly feel the impact of the changes that have been proposed in the country.

The MP actions start with the central bank changing the monetary base with open market operations primarily through government bonds purchase (Salmanov et al., 2015). The identified growth rate of money supply changes with the established economic fluctuations in a country (Altunbas et al., 2010). For example, in every business cycle, when there was a growth rate of money supply, the output increased, and with every reduction in money supply, there was an identified decree in production. The CBN defined a MP to be the deliberate actions that are undertaken by the central bank to ensure there is regulation of costs, values, and the ease of access of money in the country to ensure proper attainment of macroeconomic goals (Triandhari et al., 2017). There are two means MPs have an impact. First, traditional interest channels, with an increase in the interest rates there are an effect identified with the consumer's spending, investments, aggregated demands, and consumer spending in the country (Onyeiwu, 2012). The second review identified with the changes in interest rates, by using financial friction in the different credit markets then there are additional channels that are developed to result to the identified aggregated demands with ease (Thierry et al. 2016). The designated channels are recognized to affect the banking lending capabilities, which was essential and indirectly impacts the country's cash flow with ease.

Figure 1

Monetary Policy Transmission Mechanism



Source: Adopted from Igharo et al. (2020)

Central Banking

The central bank is in charge of the country MPs. The central bank is a financial authority that nationality has been tasked with sole responsibility to give laws and regulations to different commercial banks, undertake the country MP and give other banks economic research that they require to make their independent guidelines while at

work (Blinder, 1998). The objective of central banking is to ensure the national currency is stabilized at all times, prevent any form of inflation, and the unemployment rate is kept low. In respective countries central banks in countries are governed elected board of directors who have bank membership (Willis, 1965). The central banks directly impact the economic growth of a county with its influence on MP.

The central banks control the liquidity in the entire country's financial system allowing the country to have a well-developed structure (Aikman et al., 2017). Additionally, central banks are high as they function as reserves and determine how much money respective banks can lead at a time without harming the country's financial structure. The central banks are designed to set the target on the different interest rates that are put in place to charge their member banks (Blinder, 1998). The preference was to ensure the interest rates are set as low as possible to stimulate a country's economic growth and prevent a recession in a country, thus avoiding high inflation rates (Bayangos, 2010).

Other Depository Corporations

ODCs are institutions for banking businesses and include commercial, merchant, specialized, micro-finance and mortgage banks. These banks were establishment to ensure individuals and businesses have the opportunity to get the required amount of credit from invested and saving funds in their custody by ensuring the correct transactions are made with ease. It referred to the different banking products and services that are primarily offered to other institutions, corporations, and at times, governments (Pawlowska et al., 2014). The products offered are both retail or wholesale and designed

to meet the individual needs such as checking, savings, time and term, and loan accounts. Also, services like foreign exchange, global payments, and letters of credit are carried out by ODCs (Berger & Humphrey, 1992).

The specialized services offered include business, real estate investment, auto dealer services and aircraft lending (Jayaratne & Strahan, 1998). This banking activities began in Nigeria in 1872 with the establishment of African Banking Corporation as the first commercial bank (Kolapo et al., 2012). Thereafter, Bank of Nigeria and Bank of British West Africa in 1894 and Barclays Bank in 1917 (Acha, 2012). Additionally, these banks attended to both national and multinational firms, public companies, and private financial institutions, both large- and small-scale businesses and individual customers (Birkenmaier, 2018).

These ODCs are responsible for offering loans and advances to different companies that required to ensure they meet the recommended guidelines for them to qualify for the right loans they are seeking (Acha, 2012). The banks were designed to uplift businesses, and they often ask for reasonable interest rate given their primary intent to act as catalysts of development as opposed to operating in a monopoly (Amidu, 2014). Over the years, industrialization has been advocated for in Nigeria, and the primary businesses which are currently being given the much-needed loans to undertake their operations are the small and medium scale enterprises (SMEs) who have met the financial regulations. Moreover, the ability of the commercial banks to work in a competitive environment, they ensured to delivered the best products and services to the

clients at all times which was identified to be excellent to both clients and businesses (Acha, 2012).

Banking Regulation Theories

Banking regulation theories are a form of government regulation that offers the different financial institutions on the requirements, guidelines, and set restrictions that aim to provide the desired integrity in the financial system (Lambo, 1977). The specific financial regulations are influenced by the structure of the banking sectors with the increase in the financial products necessary that need to be availed to the clients. The three key objectives of financial regulations are financial stability, market confidence and consumer protection (Acha, 2012). Any country with the correct financial regulations that have been put in place significantly boosts the country's growth and innovation rate with the availed resources. The established banking regulations in Nigeria are Central Bank of Nigeria (CBN) Act and Banks and Other Financial Institutions Act (BOFIA).

In reference to the latest CBN Act of 2007, the Bank was given the mandate to the ensure the introduction of right kind of reforms and regulates ODCs and other financial corporations (OFCs) supervision to ensure the promotion of general economic development with ease (Minni, 2016). Consequently, ensuring the development of a robust financial system for financial stability by promoting monetary and price stability. To achieve its mandates, the CBN had granted various banking licenses to ODCs and the latest was the banking license of 2010 that categories ODCs into commercial – regional, national and international; merchant – regional and national; specialized – regional and

national, microfinance – state, regional and national; and primary mortgage banks for ease of administration (CBN, 2010).

Monetary Policy and Credit Behavior of Banks

In evaluating the relationship between MP actions and credit behavior of ODCs, most researchers have employed an analytical strategy that involves deriving the quantitative impacts of MP shocks on the dynamic behavior of aggregate credit overtime. The VECM was useful for studying the short and long run relationships amongst the relevant macroeconomic variables being considers while the VAR captures the dynamic relationships amongst the variables, especially in the short run. These methods allow for the generation of Impulse Response Functions (IRFs) that traces out the effect of MP shock on ODCs' credit behavior at different time horizons.

The two main variables of interest to the study are the MP Rate (MPR), which represents the MP actions of the central bank as well as aggregate credit to the private sector. As earlier explained, this study also focuses on the impact of MP on ODCs' credit to the different sectors of the economy. Consequently, the amount of credit advanced to the different sectors of the economy, such as agriculture, industry, services are of interest to the study. For instance, Afolabi et al. (2018) examined the relationship between MP decisions and credit creation of Deposit Money Banks in Nigeria. The variables included in their VAR model include the MP rate, loan and advances of Deposit Money Banks in Nigeria, broad money supply, liquidity ratio, inflation rate, and cash reserve ratio. Lartey (2018) also employed average lending rates of the ODCs, Treasury bill rate, broad money supply, and the central bank's monetary policy rate (MPR). The MP rate set by central

banks at their routine MP committee meetings represents an important tool of MP; and has been used by many researchers to characterize MP shocks (Afolabi et al., 2018).

The empirical literature review was conducted along the line of five major themes, namely: the relationship between MP and credit creation; the credit channel of MP transmission mechanism; the determinants of banks' credit behavior; the factors driving the quality of financial institutions; and the determinants of private sector's demand for credit as well as the economic impacts of credit. On the relationship between MP and credit creation, studies such as Lartey (2018); Loredana & Daniela (2018); Afolabi, et, al. (2018); Alstadheim et al. (2017); Rodnyansky & Darmouni (2017); and Luan & Kingsbury (2019) showed that MP shocks affect macroeconomic activities, including the size of credit to the private sector through its effects on short- and long-term retail rates. Another interesting strand in literature relates to the investigation of the credit channel of MP transmission mechanism with a substantial number of studies confirming the existence of the credit channel (Dajcman, 2016; Ibarra, 2016; Mwabutwa et al., 2016). For instance, using a VAR model, Dajcman (2016) provided evidence for the existence of the credit channel of MP transmission in selected euro area countries and argued that the channel was more operational through the large enterprises than the SMEs.

Furthermore, it was shown that an increase in the MP rate leads to a significant increase in credit standards for both large enterprises and the SMEs. The third theme relating to the determinants of banks' credit behavior indicate that macroeconomic conditions as well as the attributes of the recipient sectors of the economy do matter

(Santos & Silva, 2019; Jimenez & Moral-Benito, 2018; Maloba & Alhassan, 2019). In view of the intermediation roles of financial institutions, the fourth identified theme relates to the factors affecting the quality of financial institutions, which include international spillover risks, business cycle fluctuations, and credit losses, among others. In another strand of the literature, studies such as Mardika et al. (2018) investigated the factors affecting the intention of SME owners to obtain bank credit. This theme covers the perspectives on the demand side for loans as well as the implications of credit access for economic performance.

MP has been known to impact on credit creation and macroeconomic activities through its effects on short- and long-term retail rates (Lartey, 2018; Loredana & Daniela, 2018; Afolabi et al., 2018; Alstadheim et al., 2017; Rodnyansky & Darmouni, 2017; Luan & Kingsbury, 2019). It was argued that a positive MP shock generates contractionary effect on the economy, leading to an increase in interest rate and a reduction in the capacity of ODCs to advance credit to the private sector. On the other hand, the central bank whose intention was credit to the private sector to boost embarks on an expansionary MP. For instance, Lartey (2018) studied the impact of MP on retail lending rates and ODCs credit behavior in Ghana during the period 2002-2017. It was found that a positive relationship exists between the MP rate and average retail lending rates. In other words, an increase in the MP rate translates to an increase in the average retail interest rates. More so, a contractionary MP shock (resulting from an increase in the MP rate) leads to a decrease in money supply, implying a reduction in the availability of credit to the private sector.

Country MPs are designed to make an influence on the country costs, quantity and availability of credit in the country to ensure the country is capable to attain its respective macroeconomic objective of both internal and external balances with ease. Data was collected of over 36 years ranging from 1981 to 2016 on CBN which were used on the data. The preference to check on the progress of the CBN operations was to allow the policy makers to evaluate records and make sound reforms that would be used to better govern the country. In the records review there was revaluation there was a direct relationship between the MPs that had been proposed in Nigeria and the Deposit Money Bank Loans and Advances in Nigeria. When there was any form of MP change there was a direct impact on the country economic reform (Loredana, & Daniela, 2018).

A country financial system of economy is essential as it comprises of the different institutional measures that can be undertaken to ensure correct investments that can be made by a country in different marketplaces to ensure they deliver the desires objectives. The different institutional arrangements are determined by a well-established framework that offers the correct guidelines that requires the banks to undertake specific financial practices that will encourage general development with ease (Obadeyi et al., 2016). Therefore, the banking system could be defined as s subsystem of a financial system that identified to play a pivotal in the MP deliverable in a country economy (Jegede, 2014).

The MP developed for a country identified to be fundamental in the country economy where different bank actions are conducted. Hence both depository money banks and MP are linked together to provide the country the much-desired economy growth with ease especially in areas that involve credit acquisition which can be gagged

with the implementation of different MP tools. Hence the bank plays a central role in financial spread mechanism and fluctuations that are identified in the country and this has ultimate economic impact in the country (Luan, & Kingsbury, 2019). Moreover, the banks are identified to be like any other businesses whose main intent was to create as much profit and ensure they satisfy their respective investors. Thus, the more loans they issue the more the banks are allowed to make much desired profits.

Akhatova et al. (2016) evaluated the credit channel of monetary transmission process of Islamic banks vis-à-vis conventional banks by focusing on their lending and financing behavior in responses to MP shocks. They analyzed whether Islamic banks are different in their roles as a conduit through which monetary impulses are transmitted to the real sector for the case of Malaysia by examining the sensitivity of aggregate credit, conventional credit and Islamic financing to monetary shocks as represented by the money market rate. Also, the dynamic behavior when facing shocks emerging from good markets and asset markets was evaluated. Real GDP, aggregate credit, CPI, convention credit, Islamic finance, real stock price and money market rate for the first quarter of year 2000 to the fourth quarter of the year 2013 (Akhatova et al., 2016).

Using the Structural Vector Auto regression (SVAR), the study validated the significant responses of both conventional bank credit and Islamic bank financing to MP shocks. However, the dynamic behavior of Islamic banks following MP shocks as well as other shocks tends to be different. Also, the Islamic bank financing tends to respond immediately while the conventional bank credit exhibits delayed responses to interest rate hikes. The analysis validated the role of Islamic financing in the monetary transmission

mechanisms, but the dynamic responses to interest rate shocks seem to differ from those by the conventional credit. Islamic financing drops immediately following positive interest rate shocks or monetary tightening. This result showed that the lending channel can be weaker for the Islamic banks and the impact of interest rate changes on interest-free Islamic financing to displaced commercial risk was not clear. Subsequently, policymakers must recognize the increasing strength of MP via Islamic banks and the potency of the lending channel via Islamic banks. The study concluded that further efforts in increasing Islamic financial instruments and further development of the Islamic money market was essential (Akhatova et al., 2016).

Rodnyansky and Darmouni (2017) investigated the effects of unconventional MP and its transmission mechanism by exploring the impact of the quantitative easing on other depository corporation lending in the United States. ODCs exposure to large-scale asset purchases affects lending following unconventional MP shocks. The difference-in-differences identification strategy was used to found that the first and third round of quantitative easing had significant effect on leading activities and concluded ODCs heterogeneously responded to the centrally targeted asset type to the easing. Information were extracted from various ODCs statutory reports for 2008Q1 to 2013Q1 for 95 holding corporations in the credit analysis (Rodnyansky & Darmouni, 2017). The direct empirical support for the importance of targeting specific assets rather than just quantity during any large-scale asset purchasing was provided alongside of evidence of lending stimulation by commercial banks with considerable holdings of mortgage-backed securities (Rodnyansky & Darmouni, 2017). Contrary to conventional wisdom,

Rodnyansky and Darmouni (2017) findings suggested that easing had a differential not equally effect on various types of financial corporations in the economy through the general equilibrium properties. Subsequently, understanding the redistributive effects of the mortgage backed securities holdings across the institution was vital to the unconventional MP transmission mechanisms.

Ouchchikh (2017) investigated external constraints to the transmission mechanism of MP in Morocco via a SVAR model to check the effect on shocks on the economy. The four channels of monetary transmission examined were credit, exchange, interest and asset prices channels about the exogenous external shocks. The analysis provides evidence that MP shocks are transmitted to the Moroccan economy principally via credit and interest rate channels, while exchange rate and asset prices channels are defective. Also, the monetary aggregate contains important additional information in the transmission of MP shocks and three policy implications highlighted for policy makers. the effect of externals shocks on MP should always be considered in any policy process as it allows a better appreciate for the functioning of the transmission channels. Also, interest rate channel functioning should be taken with high regards as it was essential for smooth transition to an inflation targeting regime to diversify the private sector financing alternatives. The bank credit that was identified as a strong transmission channel should be considered crucial as a pre-condition towards economic stability (Ouchchikh, 2017).

Alstadheim et al. (2017) checked the impact of MP on credit, ODC's funding and housing prices through the interest rate. The combined impact of MP, via both credit, property prices and banks' wholesale funding ratio, on crisis probability were also

assessed with first quarter 1994 to fourth quarter 2014 data. The study followed the "leaning against the wind" (LAW) methodology to show that the impact of MP on the likelihood of a financial crisis might be much stronger than earlier work suggested. When the banks' balance sheets and housing prices impact were considered, there was the probability of a financial crisis over and above the effect through credit channel. This finding highlighted the MP playing a more significant role than often assumed in financial stability (Alstadheim et al., 2017). Alstadheim et al. (2017) found that the impact of a MP shock on crisis probability was about ten times larger than the figure suggested in previous researches. This large was highly associated to property prices and banks' wholesale funding decreases response to a contractionary MP shock. In contrast, and in line with existing literature, there was more limited contribution to reduced crisis probability from the impact of MP on credit. Also, the impact of MP on credit and its growth was the relevant link between MP and financial stability. The reason was that the impact of MP on credit was mostly found to be very limited and there were still existing challenges in MP and financial stability modeling structural links (Alstadheim et al., 2017).

Afolabi et al. (2018) examined the relationship between MP tools - money supply, interest rate, liquidity and cash reserve ratio; and ODCs credit in Nigeria for 1981-2016 reflect and capture many periods of direct and indirect MP regulations. The significance of money in daily life had made strategy makers and other relevant participants to accord exceptional acknowledgment to the ways of MP, and annual dataset from the CBN database used to apprehended the essential policy changes. The study highlighted that

structural changes in MP system had a positive significant impact on ODCs credit creation ability in Nigeria (Afolabi et al., 2018). Also, a bidirectional relationship between policy rate and ODCs loan and advances were established, while broad money supply, liquidity ratio, inflation rate and cash reserve ratio do not granger cause ODCs credit creation. The research concluded that the structural change in MP system and rate have significant impact on ODCs loan and advances and recommended policies formulation that will stabilize interest rate to boost investors' confidence (Afolabi et al., 2018). Lastly, it was highlighted that the government should employ other measures to support the MP effort in controlling the ODCs' credit creation ability for an attractive and affordable loans and advances to firms (Afolabi et al., 2018).

Lartey (2018) determined the pass-through effect of the MP rate on ODCs lending rates to ascertain the short and long run relationship between the rates in Ghana. The study used the monthly data sourced from the World Development Indicators and Bank of Ghana for year 2002 to 2017 for money supply, inflation, MP, lending and treasury bill rates. Lartey found that a positive relationship exists between average lending rates and MP rate and was significant on the short and long run with a large marginal effect on lending rates than other variables (2018). The money supply was negatively related to average lending rates, while treasury bill rate was negatively insignificant in the short run. The MP rate, that serves as a referencing and signally rate, an indicator for macroeconomic stability and regulates liquidity, controls and stabilizes the economy (Lartey, 2018). Also, the money supply indicated a positive relationship between average lending rates while treasury bill rate was responsible for the second largest fraction of

lending rates elasticity. The study findings indicated a positive strong relationship between average lending rates and MP rate; and a long run positive response between inflation, treasury bill and average lending rates (Lartey, 2018).

Silva et al. (2018) developed a novel approach to understand how central bank policy rates affect individual firms and banks; and how aspects of interconnectedness accentuate these effects in nontrivial ways. The authors evaluated the relationship of central bank policy rates to individual companies and banks, and how features of interconnectedness emphasize these effects in nontrivial ways. The changes in policy rate impact - direct or indirect, depended ODCs' network relationships and balance-sheet composition (Silva et al., 2018). The model found that interest rate shocks change bank capital on spot, and in turn effects on how banks issue credit to businesses. Companies experience increasing financial costs that relapse to banks in the form of credit defaults, worsening the consequences of the MP change. Furthermore, the special effects of interest rate changes remain divergent in environments of expansion and recession (Silva et al., 2018). Also, fluctuations in the interest rate could cause undesirable nonlinear consequences to the financial stability. An asymmetry in the systemic risk estimates in view of similar negative and positive interest rate changes was found. To conclude, the study established MP have linear and nonlinear effects for financial steadiness, depending on the extent of the interest rate shock and system affiliation configurations. Positive MP shocks could impact firms through increased cost of funding and also by a decrease in their profit levels. The model indirectly captures the first component through successive credit crunches as a function of the firm creditworthiness. However, MP shocks have a

strong effect in mark-to-market assets and liabilities due in the short term, particularly when deals are short-termed consequences in the economy (Silva et al., 2018).

Credit Channel of Monetary Policy Transmission Mechanism

Another major issue that was of concern to researchers and policy makers was the credit channel of MP transmission mechanism. This strand of the literature focuses on how MP actions affect the macro economy through changes in the amount of credit advanced by the ODCs. It has also been argued that, whereas the credit channel does exist and remain quite strong in certain countries, on the other hand either absent or very weak in other countries (Dajcman, 2016; Ibarra, 2016; Mwabutwa et al., 2016). For instance, Dajcman (2016) showed that the credit channel of MP transmission exists in selected euro area countries, including Austria, France Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Slovenia, and Spain. The credit channel of MP indicates that changes in MP causes changes in the ability of ODCs to advance credit to the private sector, which ultimately leads to changes in economic activities. Thus, results from Dajcman (2016) showed that a contractionary MP occasioned by an increase in the MP rate leads to a tightening of credit standards, which in turn impacts the growth of business loans negatively.

Dajcman (2016) provided evidence on whether the bank lending channel in the selected euro area countries was operational and whether it works more through loans to large enterprises or loans to the SMEs. The study used ODCs lending survey responses to investigate whether the functioning of the lending channel was more operational for the large enterprises than for the SMEs. The loan supply shocks attributable to balance sheet

constraints in a typical MP via VAR model was used to provide evidence of the existence of the bank lending channel and how the credit cycle affects the output and inflation in the euro area. Also, evidence on how the shocks in loan activity affect output and inflation were presented and the impulse analysis revealed that an increase in the policy rate (negative shock) leads to a significant increase in credit standards for both large enterprises and the SMEs. The finding implies that the restrictive MP shock increases banks' balance sheet constraints and that the banks in the short run respond by tightening credit standards for enterprises. The results thus provided evidence that the bank lending channel was operational and tightening credit standards shock in turn negatively impacts the growth of business loans. This negative shock to the credit standards tends to reduce output in the short run with no significant impact on inflation. The real GDP growth rate, the Harmonized Consumer Price Index (HICP), and the MP rate data for first quarter 2008 to third quarter 2014 for Austria, France Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Slovenia, and Spain were used. The authors found that in response to a negative MP shock banks tighten credit standards more for the large as for the SMEs, it was more operational for the large enterprises than SMEs (Dajcman, 2016).

Ippolito et al. explored how bank dependence and the bank lending channel might influence the sensitivity of stock prices to MP (2013). The study combined existing balance sheet and stock market data with datasets from survey to investigate how much and why bank lending to businesses matters for the MP transmission. The survey data enables the authors to precisely quantify the bank dependency of firms as the ratio of bank debt to total assets. The authors also explored the channels and discovered that the

stock prices of bank-dependent companies that borrowed from financially weaker banks exhibited a sturdier sensitivity to MP shocks (Ippolito et al., 2013). The discovery was consistent with the bank lending channel theory that postulates the strength of bank balance sheets matters for MP transmission. Also, the database of hedging activities showed that the stock prices of bank-dependent businesses that hedge against interest rate risk display a lower sensitivity to MP shocks. These discoveries conform with existing interest rate pass-through channel via the direct transmission of policy rates to lending rates associated with the pervasive use of floating rates in bank loans and credit line agreements (Ippolito et al., 2013). The direct measure of bank dependence was computed as the ratio of a firm's bank debt to its total assets, for publicly listed U.S. firms between 2003 and 2008. The measure combined data on bank financial health, bank-firm linkages, firm financial constraints, and a novel database on interest-rate hedging activities, to provide evidence on the channels through which a bank-centered transmission mechanism might operate. The study concluded that bank lending plays an important role in the transmission of MP. The traditional bank lending channel argues that financial constraints of banks amplify the impact of MP because MP affects the strength of banks' balance sheets. Also, the interest rate pass-through channel based on the direct pass-through of policy rates to lending rates (Ippolito et al., 2013).

Ibarra (2016) explores the relative importance of the credit channel of MP by estimating a Threshold Vector Auto Regression (TVAR) model in which the dynamics depend on the stance of MP. The importance of the credit channel of MP in Mexico for the period 2004–2013 was used to estimate a VAR model to analyze the effects of a MP

shock on real output, and also a threshold VAR model to investigate asymmetric effects of contractionary and expansionary policies. The monthly frequency observed data for January 2004 to October 2013 were used to present seasonal components to test for the significance of the seasonal components for all series and pass them through a seasonal adjustment procedure if necessary. Bank credit expressed in real terms using the Consumer Price Index and indicated that efforts to promote the development of financial markets seem to be an important component to improve the effectiveness of MP. The results suggest that a contractionary MP results in a fall in the supply of loans together with an increase in the spread between the lending and deposit rate. Also, the reduced supply of loans amplifies the effects of MP on output associated with the traditional interest rate channel affects some borrowers are dependent on bank loans for credit. The study concluded that the importance of the credit channel was larger for contractionary shocks than for expansionary shocks (Ibarra, 2016).

Mwabutwa et al. (2016) investigated the evolution of monetary transmission mechanism in Malawi between 1981 and 2010 using a Bayesian time varying parameter vector autoregressive (TVP-VAR) model with stochastic volatility. The study estimated an empirical macroeconomic model for Malawi to generate changes in output and price level in response to private credit, exchange and bank rates shocks. The study also evaluated how the reactions of general price level and real output to credit, bank and exchange rates shocks have changed over time since the adoption of Malawi financial reforms in 1980s. The study found that MP shock on general price conform to the traditional Keynesian theory that an interest rate increase will upsurge the cost of

borrowing for investors and consumers leading to the reduction in both investment and consumption (Mwabutwa et al., 2016). This result in turn lowers the aggregate demand leading to lower output and prices. The authors underscored that financial reforms could change the monetary transmission by changing the overall impact of the policy or by altering the transmission channels overtime (Mwabutwa et al., 2016). Consequently, the impact of MP on price steadiness and output growth can diverge and reveal deferred effects overtime. The outcomes showed that inflation and real output reactions to MP shocks and transmission performed unswervingly with expectations of economic theory partially due to unchanging macroeconomic circumstances and optimistic structural changes in the economy (Mwabutwa et al., 2016). Nonetheless, the statistical significance of the private credit supply remains weak, thus the call for more financial reforms aiming the credit market that contribute to monetary transmission and promote further economic growth. To conclude the study, the authors stated that the transmission mechanism through the credit channel remains weak and calls for more financial innovation, especially in improving the credit market system viable for economic growth (Mwabutwa et al., 2016).

Schmidt and Zwick (2017) investigated the impact of foreign bank entry on lending behavior to small and medium enterprises with focus on acquired banks against previous studies that examined impact by comparing domestic and foreign - acquired and greenfield, banks in Indonesia. The study used panel regression model for individual bank data from 2000 to 2009 for ninety ODCs and created a dummy variable to capture acquired banks' management change to observe the impact on lending behavior. The

study also investigated the possibility of firms' financing being affected by the foreign banks' acquisition of domestic (Schmidt & Zwick, 2017). The result showed that the acquired banks reduced credit to SMEs after acquisition, however, the effects on the credit behavior was not ascertained (Schmidt & Zwick, 2017). Subsequently, the study concluded that foreign bank entry into the Indonesian banking sector has no clear impact on the ODCs' return on assets and efficiency, but net interest margin for tracking ODCs' credit creation behavior (Schmidt & Zwick, 2017).

Chen and Kieschnick (2017) investigated how changes in the availability of bank credit influence public firms' manage working capital, which was essential to their operations, in doing so, they provided an enhanced understanding of what significantly influence a number of aspects of a firms working capital policies, and these effects often differ across firms that are more or less dependent on bank financing, interestingly, the evidence points to the importance of the changing mix of U.S companies for working capital practices. Two empirical issues that the study dealt with were working capital components do not directly observe the supply of bank credit; and the availability of credit affect the way ODCs manage working capital dependent on their access to bank financing. Subsequently highlighting banks' financing has historically been a major source of financing of a firm's working capital (Chen & Kieschnick, 2017).

Chen and Kieschnick found that the working capital policies of bank-dependent and non-bank dependent firms are significantly different as bank dependent firms tend to hold more in current assets and depend more in current liability in managing their working capital than do less bank-dependent firms (2017). In conclusion, this research

produced conflicting results for some aspects of a firm's working capital policies as against existing prior research on the effects of changes in the availability of banks' credit as working capital conflicting evidences (Chen & Kieschnick, 2017).

Belinga et al. (2016) examined the causal relationship between bank credit and economic growth in Cameroon in relative to the ODCs private sector domestic credit and deposit. The study applied vector error correction model (VECM) on 1969 to 2013 data series and found that there was a unidirectional causal relationship flowing from domestic credit to private sector and bank deposit. The result was consistent with a number of previous scholarly literature reviewed that affirmed causality running from bank leading to gross domestic product, to implying that MPs in favor of banking leading activities would boost economic growth. The banking credit and economic growth nexus follows the supply lending hypothesis in the long run and implementing policies that will boost the development of credit would be a substantial contribution on economic growth development. Some of the policies recommended are bank should provide, at affordable interest rate, credit big, small and medium firms and individuals. Also, banks should consider giving more to companies and individuals after implementing tax incentives and thereby reducing the high tax on ODCs net income (Belinga et al., 2016).

Mrsik and Vasilev (2018) assessed the banks' credit policies in Macedonia in comparison to the developed countries before and after the 2008 crisis. In particular, it assesses the credit policies and whether and how the policies were amended following the global recession. The research was based on a quantitative approach using interviews with senior and middle credit managers from twenty banks in Macedonia, SEE and USA

to analyze the changes in their credit policies. The results shown that credit policies of the Macedonian banks are more conservative than those of foreign banks and the financial crisis impacted the credit policies of all observed banks. However, the crisis impact was stronger within the SEE and the USA banks. The obtained results are essential for continuous improvement of ODCs' credit and risk management, as well as policy makers for preventing future financial crises. The paper concluded that Macedonian banks had more restrictive credit policies compared to foreign banks and liberal "approach" of credit policies of the foreign banks has worsen their credit portfolios to improve prudence and restrictiveness in credit policies. Also, Macedonian banks are healthy, safe and have moderate restrictive credit policies before the crisis that enabled them to continue without additional restrictive measures to liberalize some segments of its lending. Lastly, the study demonstrated that the more aggressive credit policies of SEE and USA banks before the 2008 crisis were transforming into more prudent policies after the crisis (Mrsik and Vasilev, 2018).

Ongena et al. (2017) explored the impact of MP on ODCs' credit provisioning alongside the foreign currencies lending that denominated Nemzeti Hungary banking system. The study made use of micro data sourced from the nation's comprehensive supervisory dataset to analyze the differential impact of domestic and foreign MP on the domestic and foreign currencies local credit. The analysis shown that a lower domestic interest rate expands domestic, not foreign currency, credit supply to the domestic economy. Also, foreign currency credit was less sensitive to changes in domestic monetary conditions than domestic currency credit. Foreign monetary conditions were

found to be directly impacting foreign denominated ODCs' lending than domestic currency credit. Subsequently, Ongena et al. concluded that the multiple currencies lending strengths international bank lending channels at the expense of the domestic lending channel (2017). Lastly, Ongena et al. (2017) highlighted that local ODCs lending in foreign currencies limits the flow of the transmission of domestic MP as a direct but significant implication.

Banking is an essential sector of economy that provide credits to positively impact economic growth, consequently, Awad and Al Karaki (2019) examined the impact of bank lending on economic growth in Palestine. However, the link between bank lending and economic growth has important policy implications for development strategies. Using quarterly data on ODCs lending for 1996 to 2015, Awad and Al Karaki investigated whether it was possible to use bank lending as the means of long-term economic growth; the relationship between bank lending and economic growth; and causality relationships among variables (2019). The statistical analysis revealed that ODCs lending doesn't drive Palestine's economic growth, hence concluded that the sustainable development goal could linger in Palestine. Also, it was found that economic growth causes bank lending - this empirical result was likely contradicting with economic theory and other previous research reviewed. Consequently, policymakers should pay serious attention to ODCs' lending activities to restructure and redirect to productive sectors that could impact sustainable economic development (Awad & Al Karaki, 2019).

Determinants of Banks' Credit Behavior

A useful strand of literature relates to the determinants of banks' credit behavior, with focus on factors such as general macroeconomic conditions as well as the idiosyncratic attributes of the recipient sectors of the economy, including their inherent credit risks (Santos & Silva, 2019; Jimenez & Moral-Benito, 2018; Maloba &Alhassan, 2019). Some of the identified macroeconomic factors include the gross domestic product, inflation, fiscal operations of the government, and the availability of productivity-enhancing infrastructural facilities. For instance, Dimitras et al. (2017) examined the financial and non-financial factors determining credit decision in Greece. Amongst others, factors such as borrowers' credit risk and the quality of financial statements information provided were identified. In other words, policy actions aimed at reducing the credit risk of borrowers would lead to an increase in the amount of credit advanced by the ODCs to the private sector. On the other hand, unfavorable macroeconomic conditions as well as borrower-specific attributes that increase credit risks discourage ODCs from giving out loans to the private sector.

Dimitras et al. (2017) investigated the determinants of a variety of financial and non-financial factors contributing in almost any credit decision in Greece. Then, evaluated empirical attributes for credit risk forecasting from numerical data and proposed a new method to evaluate borrowers' credit risk and quality of financial statements information provided. Both quantitative and qualitative criteria were used to measure the reliability and the quality credit customers leading to a thirty-five features for forecasting Greek's ODCs borrowers' credit behavior. Dimitras et al. pointed out that

understanding of banking activity hazards and evaluating the hazards was crucial for ODCs' managers and the entire economy security (2017). The ODCs have the tendency advancing credit to high credit quality companies than loan low credit quality businesses, which would lead to credit risk as the imperative figure deciding loaning practices (Dimitras et al., 2017). ODCs' clients are subjected to credit risk examination to settle on a choice regardless of whether to allow the credit and the amount to give depending on the past loaning choice experience. Consequently, candidates' quantity and the customary strategy of ODCs rivalry cannot produce both monetary and productivity policies for economic development (Dimitras et al., 2017). In conclusion, attributes to enrich the decision on future borrowers' behavior were based on other representative attributes, and robust banking and market-oriented features.

Harangus (2018) investigated the evolution of the bank credit structure by activity of borrower and risk categories proposed a comparative analysis by sectors of economic by risk categories and by maturity terms, during the years 2015-2018 in Romanian banking sector. The bank loans evolution of risk was categorized into treasury, inventory, equipment, foreign trade and commercial loans to show the priorities of ODCs to finance to the economic activities. ODCs' credit represents a growth engine for a national economy as ODCs responsibility was to redistribute temporary financial resources as financial intermediation activity. However, this behavior accelerates debt growth of developing nations and made the world financial system vulnerable during financial crisis (Harangus, 2018). Harangus started with investigating the role and importance of banks'

credit structure on the indebtedness growth as excessive level of indebtedness could be a triggering factor for global financial crisis (2018).

The research result inferred that there was a vulnerability that lead an increase in loan volume in individuals sector that ODCs identified as a high vulnerability and held a significant weight. The long- and medium-term loans were a very large part of total loans and advances and present a greater risk for ODCs. Harangus (2018) highlighted that industry and agriculture as vital sectors of economic activity hold small shares of the total ODCS' credits. Harangus concluded that a prudent lending policy could bring a larger share of short-term credits into the bank's loan portfolio and reduce risk exposure (2018).

Sackey (2018) scrutinized if credit controlling perseveres even in the era of financial liberalization patterned to relief if loan, business, and individual characteristics sway the ODCs' allocating performance, and examined, if a refinement in contradiction exists for the agricultural sector in Ghanaians' credit market. The research used one thousand, two hundred and thirty-nine businesses from eight ODCs' credit records about individual, firm and loan characteristics. The result pointed out that credit rationing persists with a long payment period, providing illiterate and relatively old collateral and guarantor in the agricultural sector and thereby increases the likelihood of credit rationed. On the other hand, the likelihood of credit rationing reduces if there exist some relationship with the provider, non-mandatory savings and applying from a relatively high interest rates bank. The study outcome exposed that the significance of individualities in influencing credit allotment suggested that policies could improve educational status and later human capital to aid in lessening the credit curbing problem.

Similarly, policies and programs that could ensure stress-free access to women and old tycoons would meaningfully surge agricultural produce, and correspondingly alleviate poverty (Sackey, 2018). Sackey (2018) highlighted the importance of loan characteristics as influential element needed by banks to employ inventive means in place of the traditional approaches of loan assessments over the demand for guarantors, seizure of collateral, preference for short-range loan and high interest rate. Furthermore, Sackey recommended policies that could boost human capital; grant credit access to women and old people; improve agricultural-oriented financial services and advocate reduction of credit rationing particularly to the agricultural sector (2018). Also, creation of credit bureaus where individual and corporate information could easily be accessible as well as improving on their monitoring could help in minimizing risk. To conclude, the author called for the discrimination of credit market against the agricultural sector demands for agricultural-oriented financial services and products (Sackey, 2018).

Cong and Phuong (2017) presented empirical evidence about the effects of the credit derivatives on ODCs' risk-taking behaviors in the United States. The research used one hundred and seventy-nine ODCs with more than three billion dollars' total assets as at end of year 2009. Credit derivatives are financial innovations that allow transferring credit risks separately from ownership. There was a common notion that credit derivatives are useful instruments in banks' credit risk management. However, the current credit crisis has raised a doubt towards the perception that credit derivatives make banks sounder. Credit derivatives, particularly CDSs, have been innovated for the purposes of banks' hedging for credit risks. However, it reveals that these instruments

have developed far beyond the initial expectations. The debate surrounding the costs and benefits of credit derivatives has been there long time ago but has emerged remarkably during the current financial crisis. While many commentators blame on credit derivatives to be one of the main contributors to the crisis, many other are insist that those innovative instruments will contribute to build a far more flexible and efficient financial markets. The research summarized existing arguments for and against credit derivatives by discussing the bank-wide as well as system-wide costs and benefits of credit derivatives. On one hand, credit derivatives are believed to help construct a far more efficient financial market in long term, by shedding risks widely throughout the financial system creating liquidity and transparency. On the other hand, credit derivative is blamed to spur the rapid growth of the subprime mortgages, which is the center of the crisis. Besides, the negative incentives of investors, the concentration of transactions, the systematic risk and the uncertainty of the OTC markets are those to blame (Cong & Phuong, 2017). Finally, in consistent with existing literature, the results strengthen the statement that the use of credit derivatives does increase banks' risk-taking. Particularly, the volume of net credit derivatives bought was the dominant contributor (Cong & Phuong, 2017).

Lokesha and Hawaldar (2019) investigated the impact of factors on the purpose of utilization of agricultural credit funds from borrowers' perspective in Dakshin Kannada district, India. Agricultural credit was required for the development of agriculture scenario in any economy; and ODCs' had extended agricultural credit to the farmers in as well. The effectiveness of agricultural credit system depends on the utilization of credit funds by the borrowers. The study considered the borrowers of all types of banks and

analyzes the factors influencing the utilization of agricultural credit. The study used primary data gathered from the borrowers, as well as secondary data from banks statutory submissions. The study found that there was an impact of demographic, agriculture and agricultural credit factors on the purpose of utilization of agricultural credit. The success of agricultural credit system was determined by several factors and out of which the purpose of utilization of borrowed funds. The study results show that demographic, agriculture and agriculture related factors influence the purpose of utilization of agricultural credit borrowed from banks by the farmers. Finally, policy makers can make note of the utilization pattern of agricultural credit and can give directions on the lending terms and conditions (Lokesha & Hawaldar, 2019).

Zhang et al. (2018) constructed a theoretical model to analyze the effect of macro-prudential policies on ODCs' risk-taking in China. Data were collected from two hundred and thirty-one ODCs to empirically test whether macro-prudential tools - countercyclical capital buffers, reserve requirements, and caps on loan-to-value, can affect bank risk-taking behaviors. The results provide further evidence on the important role of macro prudential policies in maintaining financial stability, which helps mitigate financial system vulnerabilities. Bank risk-taking will be decreased with the strengthening of macro-prudential supervision, which greatly benefits the resilience and the sustainability of bank sector. Moreover, the credit cycle has a magnifying role on macro prudential policies effect on bank risk-taking. Reducing risks in bank loans requires a further slowing of credit growth, which was necessary to ensure sustainable growth in a bank system, or more ambitiously, to smooth financial booms and busts. The results survive

robustness checks under alternative estimation methods and alternative proxies of bank risk-taking and macro prudential policies (Zhang et al., 2018). The results show that bank risk-taking behaviors reduced with the strengthening of macro-prudential supervision according to the estimation of the individual macro-prudential tools. Lastly, the research concluded that central bank should further strengthen the assessment and surveillance of macro-prudential tools and implement proper tools for distinct goals to promote the sustainability of the banking sector (Zhang et al., 2018).

Istrate and Ionescu (2018) evaluated the impact of macroeconomic variables on the evolution of the credit risk rate. The investigation accentuated real economy dynamics as a foremost development teamster for smoothing the loans advanced to non-financial enterprises due to the monetary encumbrance stimulated by the financial conditions. The study establish that lending provided resources for companies that need financing for investment projects, and in turn supports the deposit holders to place funds for gaining earnings. Additionally, the study underscored advancing policy's essential role in ODCs' activities to motivate loans price and credit collection worth on the long run (Istrate & Ionescu, 2018). Furthermore, the study found the macroeconomic variables that meaningfully impacted credits' hazard and developed an appropriate statistical estimation model for non-performing and doubtful loan rate forecasting. Therefore, the policy mechanisms dynamics projected money market and real economy situations as stimulus for credit risk advancement in business sectors (Istrate & Ionescu, 2018).

Santos and Silva (2019) evaluated whether the Basel capital requirements was sufficiently conservative or not and proposed a credit risk model for Portuguese ODCs'

aggregated loan and advances to non-financial corporations. The study highlighted that credit risk was largely depended on the factor loading assumption, whose estimation was particularly challenging, significantly affects the value of this type of exercise (Santos & Silva, 2019). Consequently, the credit risk evolution was traced and the risk determinants analyzed. Using ODCS' data from 2006 to 2017, the result showed that the reduction in expected value-at-risk and shortfall were considerably more pronounced than the reduction in the expected loss. Also, the ratio between the unexpected loss and the expected loss from sectors' concentration and inter-sector relations exposure progression gradually decreased. Lastly, the determinants of credit risk were the discrepancy between the marginal contribution of each loan to the expected loss and to the expected shortfall, and the borrowers' sector activity ratio. These two factors' contributions were significantly higher for construction and real estate sectors than manufacturing sector. Subsequently, existence of potential diversification gains was pinpointed. Santos and Silva concluded that diversification gains were not due to an allocation into sectors with lower interdependency (2019).

Jiménez and Moral-Benito (2018) evaluated the ODCs' lending standards, the roles, productivity and credit risk for Spain. The work used monthly data from the Banco de España Central Credit Register, which allow us to monitor all loan applications made by non-financial firms to non-current banks from 2002 to 2015 to showed that ODCs' lending standards are influenced by macroeconomic conditions. To test the banks' appetite for risk, the research investigated how two firm characteristics - ex-ante credit risk and productivity, interacted with two macroeconomic indicators - business cycle and

the MP stance, affect the probability of granting a loan. Also, to enhance identification, the authors accounted for unobserved heterogeneity by means of firm and bank time fixed effects. The findings indicated that ODCs soften credit standards during booms or when MP was loose to harden them during busts or when short-term interest rates increase. The pattern was especially relevant in the case of firms' productivity, which might partly explain the dismal evolution of aggregate productivity in Spain during the pre-crisis period. Lastly, these results are more pronounced among less capitalized, less liquid and more profitable banks.

Maloba and Alhassan (2019) examined the factors that influence ODCs' lending to the agricultural sector in Kenya using a 15 licensed other depository banks panel data from 2011 to 2016. The random effects and ordinary least squares panel corrected standard errors estimation techniques are employed to estimate the effect of liquidity, size, equity, lending rate, type of ODCs' and non-performing loans on agricultural lending. The analysis revealed that only 3.9 per cent of total loan and advances of the ODCs' were advanced to the agricultural sector and found that agricultural credit risk reduces lending to the agricultural sector, while size, LR and ODCs type significantly increase agricultural lending. These results highlighted that important indicators for enhancing lending to the agricultural sector in Kenya and other emerging economies.

Financial Sector and Economic Growth

In view of the roles of the financial sector in promoting economic growth and as a crucial infrastructure for MP transmission, a strand of the literature has focused on the quality of financial institutions in relation to their credit behavior (de Grooty, 2014; Poon

et al., 2017; Cheng et al., 2017; Minni, 2016; Akinsola & Ikhide, 2018). This aspect of the literature posits that a strong, healthy and robust financial sector is abler to mobilize savings and advance more credit to the private sector, thereby boosting aggregate credit supply for sustainable economic growth and development. It was also acknowledged that MP actions and central bank monetary do contribute in a non-trivial way to the state of the financial institutions. Other factors that have been identified as affecting the quality of financial institutions include the riskiness of the financial sector, international spillover on sovereign risks, credit losses, information asymmetry, bank ownership/privatization, bank capital, and business cycle fluctuations, among others.

De Grooty (2014) examined how MP affects the riskiness of the financial sectors aggregate balance sheet via a mechanism referred to as the risk channel of MP. The study assessed whether the MP environment can meaningfully affect financial intermediaries optimal mix of outside equity and debt finance, and as a consequence their balance sheets resilience to shocks. The study was particularly concerned with the role that the design of MP plays in the determinants of a bank's balance sheet size and composition. The risk channel of a DSGE model with nominal frictions and a banking sector that issues both outside equity and debt, making bank's exposure to risk an endogenous choice, and dependent on the MP environment were investigated. As macroeconomic outcomes became less uncertain, financial intermediaries built up leverage and took on more risk. The numerical experiments in this paper suggest that central banks and financial sector regulators should be vigilant of how periods of relative tranquility can generate a potential buildup of risks in the economy as financial institutions increase the size and

leverage of their balance sheets and rely more heavily on debt financing (de Grooty, 2014). In conclusion, a MP reaction function that responds to movements in bank leverage or credit spreads can incentivize banks to increase their use of debt finance and increase leverage, increasing the riskiness of the financial sector for the real economy. It was found that banks reduce their reliance on debt finance and decrease leverage when MP shocks are prevalent. Lastly, the global economy simply enjoyed a period in which the shocks hitting the economy were unusually modest and central banks had a better design of MP (de Grooty, 2014).

Poon et al. (2017) examined the impact of the international spillover of sovereign risk to bank credit risk through ratings channel and asset holdings channel to better understand the relationship between sovereign rating changes and their ensuing effect on bank credit ratings. In the first case, the downgrade of sovereign ratings in GIIPS (Greece, Italy, Ireland, Portugal, and Spain) countries lead to rating downgrades of banks in the peripheral countries. The second channel indicates that larger asset holdings of GIIPS debt increases the credit risk of cross-border banks, and hence, the probabilities of downgrade (Poon et al., 2017). Subsequently, the cross-border relationship between sovereign ratings and bank credit ratings were examined to determine whether sovereign rating changes in the so called GIIPS countries can trigger bank rating changes in other European Union countries. Then whether cross-border spillover effects are related to banks' asset holdings of GIIPS debt. What makes this issue so important was the possibility for sovereign tensions in one country to have direct or indirect negative repercussions on banks in other countries. Unfortunately, when the global financial crisis

hit, many EU countries were weakened by burdensome debt loads, and watched credit rating agencies downgraded the sovereign ratings and debt issues (Poon et al., 2017).

The analysis shown that the spillover of sovereign risk affects both domestic and cross-border ODCs' credit risk, and this spillover risks should be recognized in ODCs' asset management policies as the spillover could create systemic risk and worsened financial crisis. However, the diversification benefits considering the potential spillover risk limits not investigated (Poon et al., 2017). Lastly, the study confirmed that sovereign rating downgrades could naturally lead to own-country bank credit rating downgrades, and sovereign rating changes mighty have spilling effect on the banking sector across the EU countries (Poon et al., 2017). Therefore, financial integration can be expected to deepen further by continued cross-border asset holdings (Poon et al., 2017).

Harris et al. (2018) appraised the expected credit losses on banks' portfolios and developed a measure of the one-year-ahead expected rate of credit losses (eRCL) to combine various measures of credit risk. ODCs' credit loss issue had led to several new regulations for loan impairment. The expected credit losses rate outperformed the net charge-offs in predicting one-year-ahead realized credit losses and reflects nearly all the credit loss-related information in the charge-offs. Also, the expected rate also contains incremental information about one-year-ahead realized credit losses relative to the allowance and provision for loan losses and the fair value of loans. Therefore, a better predictor of the provision for loan losses was better than analyst provision forecasts and was incrementally useful beyond other credit risk metrics in predicting bank failure up to one year ahead. Thus, Harris et al. concluded that eRCL can be useful in capital and loss

assessment under stress scenarios models to improve projections of the expected credit losses (2018).

Agarwal et al. (2018) projected a new tactic to learning the pass-through of credit development policies that centers on frictions, such as asymmetric information, that arise in the interface between borrowers and banks. A new empirical approach to studying the bank lending channel that focuses on frictions, such as asymmetric information, that arise in bank-borrower interactions. The effect of changes in banks 'cost of funds on aggregate borrowing was decomposed into marginal propensity to lend and marginal propensity to borrow for borrowers in the United States economy. A panel data on 8.5 million credit cards all credit cards issued by the eight largest ODCs and 743 credit limit regression discontinuities were used to estimate marginal propensity lend or borrow for households. The research found that marginal propensity to borrow declined in credit score, and marginal propensity to lend depends on a small number of parameters that can be estimated using the credit limit discontinuities. Thus, higher credit limits sharply reduce profits from lending to consumers as a negative correlation exist between marginal propensity to lend and marginal propensity to borrow (Agarwal et al., 2018). In conclusion, estimating both marginal propensities to lend and borrow together was important because it allows for an evaluation of credit expansion policies that are intermediated by ODCs. Thus, the interaction between marginal propensity to lend and marginal propensity to borrow across different types of consumers was key to understanding the aggregate impact of these policies (Agarwal et al., 2018).

Cheng et al., evaluated the impact of privatization on bank performance, privatization strategies effect on ODCs prudential behavior, and ownership moderation of privatization in China (2017). The study provided evidences in support of bank privatization viewed as a critical step in modernize the banking system and focused on the effect of bank privatization on performance with mixed findings as bank performance measures are notoriously noisy (Cheng et al., 2017). The study used data from 2000 to 2013 on eighty-two ODCs to employ a difference-in-differences approach to investigate the relationship. The analysis highlighted that ODCs' operating efficiency, credit risk, and prudential behavior improved after introducing foreign strategic investors, however, the effect diminished with time. Also, privatization increased profitability, operating efficiency, and prudential behavior, but reduced credit risk, this claim also reversed with time. However, the effects of privatization on credit risk and prudential behavior are weaker for state-owned deposit taking institutions, so going public on credit risk and prudential behavior are stronger for state-owned banks (Cheng et al., 2017).

Minni (2016) assessed the extent to which changes in bank capital aggravate the recurring behavior of credit in the ODCs' lending channel of MP. The study was to unbundle whether higher bank capital, instead of triggering greater bank lending, dampens loan growth in Europe. The study focused on the capital of ODCs in Europe. The lending channel assumes that expansionary MP directly affects bank loan supply, hence stimulating economic growth through greater investment. However, series of financial crisis has highlighted several weaknesses in the banking sector that could prevent the channel from functioning properly. The financial crisis and its aftermath have

shown that changes in bank capital may have pro-cyclical effects amplified by the Basel II risk-sensitive capital rules (Minni, 2016). More specifically, bank capital requirements are likely to rise with increasing risk in economic downturns, at a time when capital was more difficult to raise, which may result in credit contraction and hence a deepening of recessions. If so, higher capital would not dampen losses during economic stagnation periods and rather would amplify the credit restrictions risk, thus contributing to worsening output fluctuations. This potential scenario was of vital concern for scholars and policymakers as it can seriously hamper prospects of faster economic recovery in Europe. Bank capital and bank lending are endogenous to each other as they are both affected by the financial and economic shocks that are in the error term. The study concluded from policy perspective that the empirical examination feeds into the current debate on new guidelines for capital and banking regulations drawn up by Basel III and concur with the proposed creation of a counter-cyclical capital buffer (Minni, 2016).

Akinsola and Ikhide examined the extent of linkages between business cycle and credit growth in South Africa, to understand the extent to which business cycle fluctuation can affect credit crisis in the financial system (2018). The study used 1990 – 2015 ODCs' data from the nations' reserve bank statutory submission database. The vector error correction model Johansen co-integration approach to understand the extent to which business cycle fluctuation can affect credit in the financial system. The study focused on ODCs' lending and credit pro-cyclicality. Financial systems are implicitly pro-cyclical - any change in credit growth, asset prices or leveraging can amplify financial roughness and delay business cycle (Akinsola and Ikhide, 2018). The study

found that a significant relationship exists among credit to gross domestic product and business cycle to further confirm the claim in theory that credit follows business cycle and can amplify credit crux. Also, in the long run, fluctuations in the business cycle can influence the credit growth and shocks to the business cycle result had persistent and long-lasting impact on credit. The study discovered that ODCs' lending is pro-cyclical in the in South Africa economy and suggested forward-looking policies to mitigate the flow of credit to the real sector and as well ensure financial stability (Akinsola & Ikhide, 2018).

Tran et al. (2017) examined the impact of ODCs' behavior lending decisions on loans to corporations and households in Australia as well as how credit quality across the banks influenced by macroeconomic conditions prior to, during and after the global financial crisis. The bank characteristics such as bank size, bank efficiency and capital adequacy are related to bank herding behavior (Tran et al., 2017). Monthly loan data from Australian Prudential Regulation Authority banking statistics publications for March 2002 to December 2011 were used in the study. Tran et al. highlighted that the banking industry was prone to herding behavior due to its inherent characteristics, and asymmetric information among ODCs and borrowers tends to be high and might influence less-informed banks to follow the behavior of more informed banks in an effort to reduce information costs (2017). The research analysis showed that herding varies with loan types and tend to be more prevalent in owner-occupied housing loans and credit cards than other types of loans (Tran et al., 2017). The study concluded that OSCs' herding behavior was countercyclical, as it was negatively related to real GDP growth

and the cost of funding, but positively related to market risk and related to higher impaired assets thereby lowering loan quality (Tran et al., 2017).

Schmidt and Zwick (2018) investigated whether the reduction in loan volume was supply-side driven during the financial crisis in Germany. The foreign ODCs in German depreciated huge amounts of assets during the financial crisis and led to decline in loan volume to the private sector (Schmidt & ZwIck, 2018). Subsequently, examining if loan volume reduction had effects on the whole banking sector credit behavior. Analyzing the research data, the study estimated a dynamic disequilibrium model of the loan market and ODCs categories to analyze loan demand and supply behavior during the financial crisis. The analysis of the data showed that credit crunch did not occur in German credit market during the crisis, as against other European countries and suggested factors that probably contributed to the stabilization of the loan market (Schmidt & ZwIck, 2018). Schmidt and ZwIck highlighted two main substantial policy interventions as excess demand for loans dropped, as firms reverted to other external financing instruments; and only the regional level ODCs were not affected by the crisis (2018). Consequently, the three-pillar structure of the German banking system contributed to stable credit financing, as banks differ in their operating behaviors and in their customers during the crisis (Schmidt & ZwIck, 2018).

Boadi (2016) examined the determinants of ODCs credit to small and medium scale enterprises (SMEs) in Ghana. The SMEs' sector demand for credit had been over flogged, however, its determinants from the supply side remains untouched (Boadi, 2016). The work used ten ODCs' financial statements to generated about 180

observations to scrutinize credit to SMEs dynamics. The results revealed huge board size and foreign ODCs incline to offering credit to small and medium enterprises. The study exposed the exception of top management size and GDP growth to affirms all other selected variables inclined ODCs' credit behavior to SMEs (Boadi, 2016). Precisely, the bank size, profitability and inflation were negatively impacting credit to SMEs, that is reducing credit creation. On the other hand, board size and bank origin positively affect credit behavior – ODCs with enormous board size and foreign origin make more credit available for SMEs. To conclude, Boadi (2016) research suggested source of inspiration and function as guide for policy makers not to relent in the struggles of aiding the small firms to impact eloquent growth.

Firm and Households Access to Credit

According to Li et al. (2020), factors such as the size of a firm, age of firm, past credit experience of the firm do matter for whether a firm accesses credit or not. Also, periods of economic booms are associated with increased desire of the private sector to demand for loans. A number of studies have also examined the political aspect of households having access to credit. For instance, Li et al. (2020) showed that Chinese households with political connections are likely to be more successful in obtaining credit. In terms of the impact of credit on economic performance, the literature provides evidence for the fact that increased market capitalization and other forms of financing boost real sector performance.

Developing countries are in ominous need of manufacturing firms' development through the establishment of small, medium and large-scale manufacturing firm to attain

economic self-sufficiency (Akinleye et al., 2019). Akinleye et al. highlighted that the manufacturing firms' development was a prerequisite for the economic take-off or development of any country, at such, manufacturing firms can only succeed if enough credits are available for their take-off and expansion (2019). Manufacturing firm development was a sure way through which the vicious cycle of poverty and underdevelopment can be broken (Akinleye et al., 2019). Subsequently, Akinleye et al. (2019) studied the relationship between the capital market and banks' credit to manufacturing firms' output in Nigeria. That is, output in relation to ODCs' credit and market capitalization was through an enhanced mobilization and wise use of economic resources concerning firms' development (Akinleye, et.al, 2019). The study used vector error correction and co-integration for analyzing data for 1986 to 2016 and found that both short and long run equilibrium relationship exists between market capitalization, ODCs' credit to manufacturing sector, and the sector' output. The implication was that the economy would improve and translate to an enhanced manufacturing firms' output, provided the exchange and interest rate on bank credit available for the manufacturing firms are reduced by correctly channeling credit at affordable rates (Akinleye et al., 2019).

Mardika et al. (2018) analyzed factors affecting the intention of SME owners to obtain bank credit by integrating the interpersonal behavior and the technology acceptance model theories in Indonesia. The purposive sampling method was used to generate a sample of one hundred and fifty 150 SME owners and the SEM PLS statistical package applied for data analysis. It was found that business owners' intention to have

bank credit was affected by social and emotional factors, perception on the usefulness and attitude toward bank credit. Furthermore, the results also suggest that the attitude toward bank credit was affected by perceived usefulness of and perceived ease of use of bank credit. Subsequently, interest of owners in ODCs' credit was influenced by cognitive, social and affective factors. In the interim, cognitive factors are determined by the understanding of owners about the credit for business development, and the ease of applying the credit (Mardika et al., 2018). These results provided insight that small and medium businesses ownership of ODCs' credit might increase if the owners seek to improve their understanding of the credit use, positive attitudes, environmental concerns and express satisfaction about the credit. The use of bank credit perceived to have the greatest influence on the intention to have banking credit, to encourage the intention of owners to apply for bank credit; it was necessary to intensively socialize the benefits of bank credit among the SME owners (Mardika et al., 2018). The study concluded with the recommendation that governments and ODCs seeking to promote SMEs to compete in both domestic and global markets should socialize with the owners on the critical role of access to finance and explain the specific benefits of the credit (Mardika et al., 2018).

Drakosa and Giannakopoulos (2018) modelled the European credit market experiences from the small and medium scale enterprises by the use of a tri-variate Probit double selection model – credit need and application, on the survey data. The study modelled the survey data for European SMEs from 'Access to Finance of Enterprises' and found a complete description of the underlying processes. The analysis showed that the likelihoods of discouraging SMEs and ODCs rationing credit increased as the size of

the company decreases, thereby indicating a substantial firm's size effect. Also, firm age showed an equally strong effect as the probabilities of discouragement increases and rationing decreased for older enterprises. Firm willingness to take credit also discouraged by firm's perception of ODCs' past and future willingness to provide the loan, thereby making rationing to be higher for firms with deteriorated credit history (Drakosa & Giannakopoulos, 2018). The analysis could be enhanced by the availability of longitudinal firm data that would allow the investigation of causal effects and the consideration of dynamics, and firm-level financial accounting data would enrich analysis. Drakosa and Giannakopoulos concluded that credit rationing was an extremely important banking market outcome that constrain rationed firms' investment and employment choices, thereby adversely affecting their performance, and could give rise the phenomena of adverse selection and moral hazard (2018).

Based on the year 2011 Chinese household survey of 8,438 households' cross-sectional dataset of the China central bank, Li et al. (2020) investigated the role that household political connections play in determining household access to bank loans. The connections that influence the decision of households to apply for a bank loan - demand side, and the decision of the bank to approve the loan - supply side were also examined. More specifically, the role of political connections at different stages of the ODCs' loan allocation process was investigated. The analysis revealed that political connections are positively associated with both the households' willingness to apply for a loan, as well as with the probability that they get a loan from the bank. However, the impact of changes in the variable of interest - the impact of the acquisition or loss of political connections

investigation was not possible due to the cross-sectional nature of the dataset. Consequently, Li et al. were unable to observe the decision-making process of the bank loan allocation procedure over time (2020). Thus, focusing on creating a panel database that could allow for a robust future household's research on the phenomenon was recommended for the central bank (Li et al., 2020).

Deleidi (2018) investigated the relationship between interest rates and loan amounts provided ODCs the theoretical as well as the empirical perspectives. The study shed light on the alleged negative relationship between the interest rates and the volume of loans provided by ODCs to the economic system. To achieve the study objective, Deleidi (2018) conducted an econometric analysis of Europe based on aggregated monthly time series data provided by the European Central Bank and Organization for Economic Co-operation and Development for January 2003 to May 2016. Based households' and firms' credit demand data, the interpretation and justification for a downward credit demand schedule was provided by the post Keynesian endogenous money theory. Also, a theoretical interpretation of the reasons according to which the credit demand schedule was represented as a downward-sloping curve with regard to the rate of interest provided. Theoretically, some scholars belonging to the post Keynesian endogenous money tradition advocate that an increase in interest rates leads to a negative effect, while decreased interest rate will have positive effect on the amount of loans demanded by households and firms. On the contrary, some heterodox economists maintain that interest rates do not stimulate firms' credit demand but that a certain degree of influence was allowed for loans provided to households. However, the study found a

negative relationship between the interest rates and the credit provided to households for mortgage, but no relationship for loans granted to firms, households consumption loans and the interest rates.

Zandi et al. (2019) examined ODCs' lending behavior in ASEAN economies. The study identified macroeconomic and ODCs' related factors defining the lending behavior from existing literature and collected data official sources - company's annual report and online databases as well as relevant web pages. A sample of five banks from four ASEAN economies were used and data compiled from year 2011 to year 2017. The analysis indicates the fact that both macroeconomic factors - GDP growth and inflation, were playing significant role in defining the lending behavior of ODCs as measured through net loans and unused commitments. Also, the ODCs related variables - liquidity ratio, risk, return on assets and equity, were found to be significant determinant for bank lending. Based on these results, Zandi et. al (2019) suggested that credit managers in banks and should use these findings as documentary evidence for the future decision making. Additionally, these findings are also useful facts for country administration, dealing with the macroeconomic factors and their direct influence on bank lending.

Hacievliyagil and Eksi explored the manufacturing industry sector efficiency to understand how the sector enterprises are interrelated to the Turkey' ODCs' credit behavior (2019). The ODCs' Industrial Production Index, total ODCs' loans and interest rates data for year 2010 to year 2017 were used to make inference. The research outcomes shown different degrees of interconnections in industrial production means and ODCs' credit. Furthermore, causality relationships recorded at different levels for loan

interest rates and industrial production for all except machinery and chemical sub-sectors (Hacievliyagil & Eksi, 2019). Moreover, the result also shown that a rise in ODCs' credit allocation would cause an increase in the industrial production index, and the existence of a positive association of ODCs' credit with industrial production index for all but mining and quarrying sub-sectors. Additionally, the industrial production index would be negatively impacted by the lagged values of credit on foods and beverages, and current credit to mining and quarrying. To sum up, the study reinforced ODCs' credits efficiency in the long-run is more importance than loan rates for industrial production index sub-sectors. Subsequently, the conclusion that evidence of supply leading hypothesis via the financial sector leads could cause economic growth (Hacievliyagil & Eksi, 2019).

With the mind that credit was a crucial instrument for rural development, Kumar et al., (2020) investigated the factors affecting rural households' access to credit and the impact of credit on recipients' incomes in India. The identified factors influencing rural households' decisions to acquire credit and assess the impact of credit on rural families' economic well-being. Primary data collected from a sample of two thousand, six hundred and forty-three households from three eastern states of India in 2018 was analyzed to achieve the research objectives. The results shown that access to credit was strongly associated with rural households' socioeconomic and demographic characteristics (Kumar et al., 2020). Also, access to credit increases rural households' economic well-being with heterogeneously effects on recipients. The work concluded that households with access to credit have systematically different attributes than the group that do not have access. Also, access to credit have some attributes that allow for more productive

and general well-being (Kumar et al., 2020).

Amurtiya et al. evaluated the level of access to formal agricultural lending - production credit, to rural farming households in a local government area of Adamawa state in Nigeria (2018). Also, the research provided information for rural development actors on appropriate measures that could be adopted to improve households farming credit. Thus, the study described the socio-economic characteristics of the rural farmers, examined the factors affecting access to credit by the rural farmers and identified constraints faced by rural farmers in credit acquisition. One hundred and forty registered farmers were selected via a multi-stage sampling technique from twelve rural communities and primary data collected from the selected households using a structured questionnaire. The analysis shown that the household's income and level of education positively influenced access to ODCs' credit but, distance to access point and age negatively influenced farmers' access to a formal credit. Also, low financial literacy, high interest rates, complex ODCs' procedures and lack of acceptable collateral were highlighted factors that limits the credit access. Subsequently, Amurtiya et al. (2018) recommended rural development actors should allow resources pulling to resolve collateral issue, create awareness programs and considerately reduce the applicable interest rates.

Monetary Policy and Credit Behavior

Addressing the impact of MP on ODCs' behavior, many scholars have used a good range of variables to explore the research. Common variables across recent studies are total credit granted to private sector, gross domestic product, consumer price index

and real exchange rate (Vadeboncoeur & Jennifer, 2018; Loredana, & Daniela, 2018; Obadeyi et al., 2016; Cong & Phuong, 2017; Alstadheim et al., 2017). In some cases, variables like ODCs' size, liquidity and equity were added (Rodnyansky & Darmouni, 2017; Amidu, 2014); while Ouchchikh (2018) included industrial production index, money supply and treasury bills rate to complement the modelling. For the study to check the impact of Islamic banking, Islamic financing and money market rate were involved (Akhatova et al., 2016). However, most of the studies measure ODCs' reaction to MP shocks in credit supply using balance sheet variables that were measured a long time after the MP shock had occurred (Dajcman, 2016; Ibarra, 2016). Finally, none of these researches used disaggregated credit data based on major sector of the economy.

Following relevant recent literature that investigate credit in relative to household, MP or ODCs' credit behavior (Li et al., 2020; Awad & Al Karaki, 2019; Istrate, & Ionescu, 2018; Jiménez & Moral-Benito, 2018; Akhatova et al., 2016), five major variables were selected to investigate whether MP impacts ODCs' credit creation behavior in Nigeria. The variables are MP rate (MPR), Real Gross Domestic Product (rGDP), exchange rate (EXR), inflation (INF), and ODCs' total credit allocation (CRD). other sector-specific factors. Keeping in mind that the study also intends to check the ODCs' credit actions across different sectors of the economy (Kumar et al., 2020; Santos & Silva, 2019; Maloba & Alhassan, 2019; Zandi et al., 2019; Deleidi, 2018; Amurtiya et al., 2018), specific sector credit variables were added for proper evaluation. The sector data included are credit to the manufacturing, agriculture, solid minerals, real estate and construction, finance and insurance sectors.

The research focuses on the impact of MP shocks on the credit behavior of ODCs in Nigeria. Thus, credit to the private sector represents the dependent variable of the study. The aggregate credit to the private sector consists of the total amount of loans granted by the ODCs to firms and households. This variable has been used by past studies such as Afolabi et al. (2018); Lartey (2018); Loredana & Daniela (2018); Alstadheim et al. (2017); Rodnyansky & Darmouni (2017); Luan & Kingsbury (2019); and Akhatova et al. (2016) to investigate how central bank actions affect the ability of the ODCs to create credit. As argued by these studies, a positive MP shock generates contractionary effect on the economy as it constrains the ability of ODCs to advance credit to the private sector. Thus, a central bank willing to boost credit to the private sector would embark on an expansionary MP stance. For instance, Akhatova et al. (2016) evaluated the credit channel of monetary transmission process by focusing on the lending and financing behavior of Islamic banks in response to MP shocks in Malaysia. In order to understand the credit behavior of the banks, the aggregate credit advanced by the Islamic banks to the Malaysian private sector was used as the dependent variable. Also, as earlier explained, the central bank sets the interest rate in order to achieve certain macroeconomic objectives, including ensuring that financial resources are available for enhancing economic growth in the country. Thus, the key independent variable of the study was central bank's MP rate, used by studies such as Lartey (2018). However, depending on the monetary regime being practiced in an economy, some other studies have also used the money market rate (Akhatova et al., 2016).

The debate on the relationship between MP actions and ODCs' credit creation has remained active in literature. It was believed that the central bank's MP decisions affect macroeconomic activities through different channels, including the credit and interest rate channels. Thus, interest rate hikes by the central bank contracts ODCs' ability to create credit while interest rate cuts serve to boost credit to the private sector (Lartey, 2018; Loredana & Daniela, 2018; Afolabi et al., 2018; Alstadheim et al., 2017; Rodnyansky & Darmouni, 2017; Luan & Kingsbury, 2019). Also important to researchers and policy makers was the credit channel of MP transmission mechanism. This related to how MP actions affect the macro economy through changes in the credit creation activities of the ODCs. This channel has been found to be strong in some countries and quite weak in others (Dajcman, 2016; Ibarra, 2016; Mwabutwa et al., 2016). Third, a strand of the literature focused on the factors determining the credit behavior of ODCs. These factors include idiosyncratic attributes of the recipient sectors of the economy, including their inherent credit risks as well as macroeconomic factors such as the gross domestic product, inflation, fiscal operations of the government, and the availability of productivity-enhancing infrastructural facilities (Dimitras et al., 2017; Santos and Silva, 2019; Jiménez and Moral-Benito, 2018; Maloba and Alhassan, 2019). The fourth identified theme in literature focuses on the quality of financial institutions as a crucial infrastructure for MP transmission, especially in developing and emerging economies (de Grooty, 2014; Poon et al., 2017; Cheng et al., 2017; Minni, 2016; Akinsola & Ikhide, 2018). The consensus in this regard was that a strong financial institution is in a better position to perform their financial intermediation roles by mobilizing savings and

advancing credit to the private sector. Lastly, the credit behavior of ODCs have also been viewed from the perspective of the private sector's demand for credit. Thus, studies such as Mardika et al. (2018) and Akinleye et al. (2019) have examined the phenomenon from the demand side; and factors such as the size of a firm, age of firm, past credit experience of the firm, overall macroeconomic environment have been identified as key factors.

Research Design

Regression analysis, be it ordinary least squares (OLS) or logistics, linear or non-linear, present researchers the opportunity to inquiry into the relationship among variables (Hutcheson, 1999). The regression is a statistical method of analysis that estimates the relationship between one or more independent variables and a dependent variable; the method estimates the relationship by minimizing the sum of the squares in the difference between the observed and predicted values of the dependent variable configured as a straight line. Regression model could be bivariate (one dependent versus one independent) or multivariate (two or more independent variables predicting a dependent variable (Hutcheson, 1999). Also, the logistic regression is only applicable when the dependent variable is dichotomy – binary numbers. This method applied for recent studies like Cuccinelli (2016), Rodnyansky and Darmouni (2017), Amurtiya et al. (2018), Zandi et, al (2019), Kumar et al. (2020); and Li et al. (2020). The regression method is applicable in simple sample because is easy with fast computations but becomes meaningless for complex mixture sample like the one for this study.

Vector auto-regression (VAR) is a stochastic process model that is used to capture the linear interdependencies among multiple time series variables (Geraci & Gnabo,

2018). The models generalize the univariate autoregressive model by allowing for more than one evolving variable. Also, the variables entry into the model is same as each has an equation explaining its evolution based on its own lagged values, other model variables lag, and an error term (Geraci & Gnabo, 2018). VAR model is useful when one is interested in predicting multiple time series variables using a single model by extending the univariate autoregressive model (Hutcheson, 1999). The prior knowledge required for VAR is a list of variables hypothesized for intertemporal effect, and the modeling does not require as much knowledge about the forces influencing a variable (Hutcheson, 1999). The vector auto-regression is an easy to use model, flexible and the most successful method for multivariate time series data analysis (Geraci & Gnabo, 2018). Lastly, VAR models had proven to be specifically useful for describing the dynamic behavior of economic and financial time series variables but become burdensome only where the parameters are overstated (Hacievliyagil & Eksi, 2019). Scholars like, Dajcman (2016); Ibarra (2016); Mwabutwa et al. (2016) and Hacievliyagil and Eksi, (2019) applied VAR in recent researches.

Hua and Simovici (2016) highlighted structural vector auto-regression (SVAR) as a multivariate and linear presentation of a vector of variable observations on its own lags' values and possibly other variables as a constant or trend. SVAR make explicit identifying assumptions to isolate estimates of policy behavior and its effects on the economy while keeping the model free of the many additional restrictive needed to give every parameter a behavioral interpretation. Researchers use SVAR to recover economic shocks from observations by imposing a minimum of assumptions compatible with a

large class of models since its introduction by Sims in year 1980 (Hua & Simovici, 2016). In Aruna and Acharya's view, SVAR is the analysis of causal effects between continuous variables and its instantaneous effects (2020). Simply put, SVAR is a vector auto-regression model with theory implied parameters restrictions (Aruna & Acharya, 2020). Recent work that applied SVAR include the study of MP transmission mechanism in Morocco small open (Ouchchikh, 2018); and financial imbalances, crisis probability and MP in Norway (Alstadheim et al., 2017).

The vector error correction model (VECM) is a type of auto-regression that is restricted to use nonstationary series referred as co-integrated (Pujeda & Ceballos, 2019). Furthermore, VECM belongs to a category of multiple time series models most commonly used for data where the underlying variables have a long-run stochastic trend, also known as co-integration (Chaudhry, & Pokhrel, 2019). VECM is a nonstationary series VAR design that exhibits co-integration relationships (Chaudhry, & Pokhrel, 2019). Pujeda and Ceballos stated that VECM is a theoretically driven approach for estimating both short-term and long-term effects of a time series variable on another time series variable (2019). The co-integration is the 'error correction' term in the model and its deviation is from the gradually corrected long-run equilibrium is through a partial adjustments short-run series (Faisal et al., 2018). This error-correction is translated to the fact that the last observation period's will deviate from a long-run equilibrium and influences its short-run dynamics. Consequently, VECM directly estimates the speed at which a dependent variable returns to equilibrium after a change in other variables. In recent research works, Deleidi (2018) and Awadi and Al-Karaki (2019) combine the

VAR with VECM to explore households demand for credit and the impact of bank lending on economic growth, respectively.

Dynamic stochastic general equilibrium (DSGE) modeling is a method in macroeconomics that attempts to explain economic phenomena, such as economic growth and business cycles, and the effects of economic policy, through econometric models based on applied general equilibrium theory and microeconomic principles (Costa Junior & Garcia-Cintado, 2018). Sbordone et al. (2010) pinpointed that the DSGE models are playing important role in MP formulation and communication and emphasize the dependence of choices on expected future outcomes for policymakers. DSGE prominent role of forward-looking behavior and its simplicity make models very suitable for policy analysis (Lindé, 2018). However, Lindé (2018) stated that few contenders are currently replacing the DSGE core models in the policy process. The model is viewed as a fairly good representation of how a market economy works and is accordingly used by scholars but is a complex branch of macroeconomics and generally considered to be time and effort consuming (Sbordone et al. (2010).

The choice of VAR for this study analysis was based on easy implementation, classical inference, proper granger causality testing, impulse-response function and variance decomposition advantages it exhibits (Hadi et al., 2016). VAR often provides superior forecasts to the time series models and elaborate theory-based simultaneous equations models as well. Lastly, the VAR models' forecasts are quite flexible because they can be made conditional on the potential future paths of specified variables (Hacievliyagil & Eksi, 2019).

Conclusion and Transition

The empirical literature review established a strong and statistically significant relationship between MP and credit creation. A contractionary MP (represented by an increase in the MP rate) is found to be associated with a reduction in aggregate credit to the private sector. On the relationship between MP and macroeconomic activities, Luan & Kingsbury (2019) said MP shocks affect the economy through its effects on short- and long-term retail rates. In terms of the channels of MP transmission mechanism, the literature review found support for the existence of the credit channel (Dajcman, 2016; Ibarra, 2016; Mwabutwa et al., 2016). However, it is argued that the credit channel of MP is stronger in developed economies, compared to the developing and emerging ones. Dajcman (2016) used a VAR model and confirmed the existence of the credit channel of MP transmission in selected euro area countries. He further argued that the channel was more operational through the large enterprises than the SMEs and showed that an increase in the MP rate leads to a significant increase in credit standards for both large enterprises and the SMEs.

The literature reviews also showed that the quality of financial institutions determines the extent to which they are able to perform their financial intermediation. Some of the identified factors determining the quality of financial institutions include international spillover risks, business cycle fluctuations, and credit losses, among others. In another strand of the literature, studies such as Mardika et al. (2018) investigated the factors affecting the intention of SME owners to obtain bank credit, including the state of

the economy, borrowers past credit experiences, borrowers' political connections, required loan application documentation, among others.

There is consensus in literature that MP shocks affect aggregate credit behavior in an economy through the impact of MP rate on short- and long-term retail interest rates. Thus, a reduction in the MP rate by the central bank has been found to be associated with an expansion in aggregate credit to the private sector. More so, an increase in the amount of credit to the private sector boosts economic performance as firms and households have access to more financial resources to fund their economic activities. However, while the relationship between the central bank's MP rate and aggregate credit is known, the impact of MP shocks on ODCs' credit behavior to the different sectors of the Nigerian economy remains unknown.

In addition, knowledge about the extent to which the availability of credit boosts the economic performance of firms and households in Nigeria is still relatively scanty. Also, the factors driving the demand for credit by the Nigerian private sector have not been empirically investigated. One of the reasons for this is that studies aimed at understanding such a phenomenon requires the conduct of surveys. Thus, to my knowledge, no study has been conducted to investigate the credit relationship between ODCs and the private sector in Nigeria. This study argues that an empirical investigation into the relationship between ODCs' credit behavior in Nigeria (supply side analysis) and the credit demand behavior of the private sector (demand side analysis) is of great importance to policy.

In this study, data on ODCs' credit to the different sectors of the Nigerian economy is used to analyze the impacts of MP actions on ODCs' credit behavior. In other words, this study extends the current state of knowledge regarding the relationship between MP shocks and ODCs' credit behavior by identifying sector-specific factors affecting such a relationship. The findings will help policy makers design more thorough, bespoke, and evidence-based MPs for boosting the availability of credit to the different sectors of the Nigerian economy; thereby generating better more vibrant economic activities in the private sector. In addition, this study conducts a survey of firms and households in order to identify the factors driving their decision to apply for credit facility for the purpose of improving their economic performance. Furthermore, the survey will elicit useful information regarding the impact of credit on the economic activities of the private sector in Nigeria. To my knowledge, this study represents the first attempt at investigating the impact of MP on ODCs' credit behavior to the different sectors of the Nigerian economy. It is also the first to investigate the relationship between credit and economic performance from the perspective of the borrowers (i.e. firms and households).

The existing empirical literature had focused on the relationship between MP shocks and aggregate credit to the private sector. I argued that a proper assessment requires that the analysis of the impact of MP is done on sector by sector basis, since each of the sectors are idiosyncratic. Therefore, the main objective of this study is to investigate the impacts of MP shocks on credit behavior of ODCs to the different sectors of the Nigerian economy. Thus, the analytical approach described in Chapter 3 relates to

the application of VAR models to investigate the sector-specific impacts of MP actions on the ODCs credit behavior. The analyses will identify the idiosyncratic factors determining amount of credit to the different sectors of the economy, including the MP rate. This will lead to the design and implementation of better MP actions aimed at boosting credit to the private sector in Nigeria; thereby improving domestic production, reducing unemployment, increasing income generation, reducing poverty, and effecting positive social change.

Chapter 3: Research Method

Introduction

The purpose of this study was to investigate the empirical relationship between MP actions and the ODCs' lending activities to various economic sectors of the Nigerian economy. Additionally, the extent to which bank lending contributes to the economic performance of the private sector was examined based on primary data collected from selected firms and households. In this chapter, the research design as well as the methodology for achieving objectives of the study were described. Specifically, issues relating to the role of the researcher, research population, setting, data collection procedures, data analysis, trustworthiness, and participant rights were discussed. This chapter also includes an explanation of instrumentation, operational descriptions of variables, and ethical issues related to this study.

The performance of Nigerian household and firms, has been poor over two decades leading to high unemployment and poverty rates, and these social problems were link to lack of access to credit required to drive inclusive economic growth (Okpara et al., 2018). The CBN has the responsibility for MP, which aim at regulating the economy's price and quantity of money. Therefore, understanding the impacts of MP in terms of lending activities of ODCs was central to inclusive growth in the country I studied the impacts of MP actions on ODCs' lending and examined the relationship between bank lending and economic performance of firms and households. I used quantitative time-series quasi-experimental longitudinal and cross-sectional designs as they helped to

describe variables chosen for the research. I chose the quantitative method in order to quantify relevant variables and measure their effects with precision.

The quantitative approach for the study was effective in providing valuable information through the use of tables and charts. The VAR model was used to quantify the impact of MP on the size of credit advanced to households and firms and different sectors of the Nigerian economy. Also, SPSS was applied to analyze data from a survey of selected firms and households to determine whether ODCs' credit creation activities help enhance private sector economic performance.

The quantitative analysis of the impacts of MP on banks' lending activities focused on all ODCs in Nigeria with sample period's choice based on data availability. To determine the impact of bank lending on the economic performance of the private sector, the study surveyed banks credit officers, households, and firms. Due to time and resource constraints, the survey covered respondents within the Ibadan metropolis of Oyo State, Nigeria. the study deployed the non-probability sampling technique - convenience sampling method (CSM) for sample selection.

First, secondary data regarding the size of bank credit to different activity sectors was collected to evaluate the relationship between MPs decisions and those sectoral credits.

Relevant variables for empirical analysis included MPR and ODCs' CPS. The CBN uses the MPR to signal the MP direction of the CBN and influence the money supply in the economy. Thus, an expansionary MP is tantamount to a reduction in the MPR, while a contractionary MP leads to an increase in the MPR. ODCs licensed and

supervised by the CBN are responsible for providing retail credit to the private sector. Thus, an increase in credit to the private sector will increase economic activities and vice-versa. The CPS is the dependent variable, while the MPR is one of the independent variable. A decrease in the MPR would increase money supply and lead to an increase in the CPS and its expected to exhibit a positive relationship with the CPS.

During research, it is expected of the researcher to be honest and ethically inclined, as the researcher's role is important and be examine carefully to avoid potential bias. I was responsible for the research design and relevant analyses aimed at achieving study objectives. Also, I administrated the survey to participants and disseminated study results.

The study presented the results in two major parts. Summary statistics relating to the model variables presented by trends, means, and standard deviations from data over time to derive useful insights. Also, time series characteristics of data were presented, including normality tests. Results of the survey of credit officers, households, and firms presented by respondents' demographics characteristics and impacts analysis of lending on economic activities of households and firms.

Protection of research participants' rights was guaranteed and there were minimal risks to the participant. The Internal Review Board (IRB) reviewed potential risks and made sure that they were reasonable concerning potential benefits before the research. The participation was voluntary, and the study provied participants with an informed consent form and confidentiality was maintained.

Research Design and Rationale

The study investigated whether MP impacts ODCs' credit creation behavior in Nigeria using sector level credit data. Consequently, the RQs of the study were:

RQ1: is there a statistically significant relationship between MP shocks and ODCs' credit behavior?

$H_0 1$: There is no statistically significant relationship between MP shocks and ODCs' credit behavior.

$H_a 1$: There is a statistically significant relationship between MP shocks and ODCs' credit behavior.

RQ2: Have commercial banking licensing regulations implemented by the CBN in 2010 improved ODCs' credit in the private sector?

$H_0 2$: Commercial banking licensing regulations implemented by the CBN in 2010 have not improved ODCs' credit in the private sector.

$H_a 2$: Commercial banking licensing regulations implemented by the CBN in 2010 have improved ODCs' credit in the private sector.

RQ3: Do ODCs' credit creation activities enhance the economic performance of households and small businesses?

$H_0 3$: ODCS' credit creation activities do not enhance the economic performance of households and small businesses.

$H_a 3$: ODCs' credit creation activities do enhance the economic performance of households and small businesses.

The dependent variable is the ODCs credit to the private sector, as the study focused on the sectoral allocations. Consequently, five dependent variables namely: ODCs credit to the manufacturing sector, ODCs credit to the agriculture sector, ODCs credit to the solid minerals sector, ODCs credit to the real estate and construction sector, and ODCs credit to the finance and insurance considered. The major independent variable is the MP action represented by the MP rate. Other independent variables include the Real Gross Domestic Product, exchange rate, inflation, and other sector-specific factors. the study drawn useful inferences on the estimated models for each of the five dependent variables regarding the impact of MP on lending to the different sectors of the economy. The study corroborated the modelling findings by the survey results conducted to analyze the perspectives of ODCs and private sector agents regarding lending activities in Nigeria.

The method for the study was the quantitative approach that is efficient and effective for providing valuable information quickly by tables and charts. This choice of qualitative informed by its ability to quantifies variable and precise effect measurement (Laureate Education, 2014). The study on the MP shocks and credit behavior employed the quantitative time-series quasi-experimental longitudinal design using policy rate, total credit granted, and other reserves variables to determine credit creation reaction - sectoral loan and advances, of the other depository corporations (ODCs) to shock in the three operation border categories - international, national and regional. The overall purpose was to scrutinize the impact of MP shocks on ODCs' activities regarding credit extended

to various sectors of the economy, sectoral loan and advances, over the period January 2007 to June 2020.

The design choice was based on the ability of the method to describe variables occurrence and relate them in a meaningful manner. This choice of quantitative was informed by its ability to quantify variable and precision effect measurement (Laureate Education, 2014). The approach falls under the longitudinal time-series design (LTSD), which is relevant for tracking changes in a variable over time and the cross-sectional design (CSD) that entails the finding out of variable relationship at a point in time (O'Sullivan et al., 2017). For this study, the approaches were efficient and effective for providing valuable information quickly through the use of tables, charts, and model estimates. The LSTD was applicable to solving researcher question one, while the CSD helped in answering part of the second and third research questions.

According to O'Sullivan et al. (2017), research design is the plan that guides decisions about data to gather, from whom to get the data, when and how to collect the data and analyze required. Research design is defined as the glue that grips all the sections of a research process together in addressing the principal research question (Burkholder et al., 2016), informs instrument and subject selection as well as the data collection and analysis. The design was the particular strategic choice for answering research questions, and its alignment starts with the method for analysis. It could be descriptive or explanatory and based on a research method that involves structured steps and procedures for study completion (O'Sullivan et al., 2017, p. 28). The descriptive design could be cross-sectional – survey, forms, database; or longitudinal – time-series,

panel. Also, the explanatory could take the non-experimental, quasi-experimental or randomized experimental. The designs guide the research by describing the variable occurrence or variables associations and help in deciding the number and time of data collection (O'Sullivan et al., 2017). However, appropriate research design selection depends on dataset nature or the problem-solving skill of the researcher (O'Sullivan et al., 2017, p. 49).

The choice of an appropriate research approach and design was based on the research questions, data type, and the framework. The literature review was the primary source of information guiding the choice of design. The sherd of literature informed the patterns and method previously used in addressing the problem. However, the design aligned the research questions, problem and purpose statements, Consequently, the combination of the longitudinal time-series design (LTSD) and cross-sectional design (CSR) are appropriate for this study. The LSTD is applicable when the variable trends, fluctuations, as well as reactions to the shocks over time are of interest. This design requires data to collect and regular time intervals over a period of time to allow for the variable description over time and make future reaction forecast possible. The power of the LTSD lies in the fact that it assists in making operational decisions, measures within and between groups changes (O'Sullivan et al., 2017). Nonetheless, the LTSD is time-consuming and expensive.

The cross-sectional design (CSD) is applicable when the study entails finding out about variables relationship at a point in time, and many pieces of information required. This design depicts what exists at a point in time. It allows for numerous investigators

access to the data, its manipulation, and analysis for another study apart from the original one the data collected (O'Sullivan et al., 2017). Its strength stands in its ability to provide valuable information required effectively. However, it could result in a mess, if not well structured, designed and implemented. Also, CSD is not appropriate for studying why an event or events occur. Thus, the LTSD and the CSD were combined to complement one another and achieve the study objectives.

The design is a plan that guides decisions of data gathering, participant or subject selection, when and how to collect the data and the required analysis; while the method is the appropriate technique - quantitative, qualitative or the combination of the two referred to as mixed, essential for the design (O'Sullivan et al., 2017; Laureate Education, 2010). A method follows logically from the problem statement, and the design glues the grips of all the research process sections in addressing the principal research question (Burkholder et al., 2016). With the problem, purpose, and research questions in mind, the quasi-experimental longitudinal design, is appropriate for the MP shocks and ODCs' credit behavior research. The plan included the comparison of the operation license grouping – regional, national and international. The choice was based on the fact that the study intends to establish baseline data, track the trend, describe changes over time and evaluate the MP impact (O'Sullivan et al., 2017, p. 35).

The LTSD was relevant for tracking variable changes over time, the changes fluctuation as well as the trends pattern; and establish the baseline measurement (O'Sullivan et al., 2017). The LSTD requires data collection on regular time intervals over a relatively long period to allow for the variable description over time and make

future reaction forecast possible. The LTSD supports the quantitative research method that assists in operational decisions making, and within and between groups changes measurements (O'Sullivan et al., 2017). The choice of the design based on its ability to describe variables occurrence.

The quantitative cross-sectional survey design allowed for the economical collection of data from a large research population and the design of a study must take into account the research goals, operational definitions, variables, assumptions, limitation, and data collection procedures in determining the research plan (Kraska, 2010). Survey and experimental strategies were the primary research strategies in quantitative research (Creswell, 2013; Harwell, 2011; O'Sullivan et al., 2017). Kraska (2010) highlighted that survey research collects a representative sample from the research population. Creswell (2013) stated that there are two types of survey designs, longitudinal and cross-sectional. Longitudinal research designs were effective in studying changes that take place over an extended period. Longitudinal studies take time to evolve and are not as economical to conduct as cross-sectional surveys. Time constraints involved in this dissertation study precluded the use of a longitudinal design in this study. The cross-sectional survey allowed for the collection of data at a point in time, subgroup comparisons, and data that could not be observed (Liu, 2008). Cross-sectional survey takes less time to conduct and are more economical than longitudinal survey. Cross-sectional data limits the ability to test causal relationships between variables. The use of a cross-sectional survey design allows for the measurement of data that is not observable

(Frankfort-Nachmias et al., 2015). Subsequently, the selection of both the LTSD and the CSD complemented one another in this study.

The problem statement for the study related to the determination of the impacts of CBN's MP actions of the credit behavior of ODCs in Nigeria during the period 2007 – 2020. Since the study is focused on how policies can lead to positive social change in the country, an investigation of what variables causes the other was of significant interest. A range of quantitative methods were available for deriving useful insights from data on economic variables. This includes, for instance, correlation analysis, singe equation regression models and the Vector Autoregressive (VAR) models. These methods are useful for determining the degree of association or relationship between economic variables of interest. For example, a correlation analysis of the CBN's MP rate and the ODC's total credit to the credit sector provides a statistical measure of the strength of the relationship between the two variables, with a value of '1' implying a very strong and positive association. However, this tells us nothing about whether the CBN's MP rate causes ODC's credit or not; thus, it fails to address the intention of the study. The single equation regression model addresses the problem of causation as it can be specified in a manner that expressed the ODC's credit as a function of the MP rate. However, this study employs the VAR approach as it allows me to model the dynamic relationship among the endogenous variables of my model simultaneously. It also allowed us to generate the impulse response analysis, which provides a useful summary of the response of the ODC's credit behavior to MP shocks over time. These advantages of the VAR model

over the correlation analysis and single equation regression model approaches represent the basis for its preference by this study.

The overall purpose of this quantitative research was to scrutinize the impact of MP shocks on ODCs' activities regarding credit extended to various sectors of the economy over the period 2007-2020. To achieve this objective, a range of analytical options are available, including correlation analysis, single equation regression models, and the Vector Autoregressive (VAR) model. The correlation analysis provides a statistical measure of the strength of relationship between two variables; where, for instance, a correlation coefficient of unity between the MP rate and the total ODC's credit to the private sector indicates that there is a strong positive relationship between the two variables. The single equation regression models express a dependent variable as a function of a number of independent variables. For instance, in order to measure the impact of MP on the credit behavior of commercial banks, it is possible to develop a single equation model that specifies ODCs credit as the dependent variable and the MP rate as the independent variable. Also, in a multivariate setting, the single equation model can also include control variables such as a measure of prices (inflation), economic size (GDP), fiscal policy (government spending) and so on. However, while the correlation coefficient is useful for determining the degree of association between the variables, it does not imply causation. In other words, the correlation analysis does not allow us to make conclusions regarding whether MP affects ODC's credit behavior or not. The single equation regression model addresses this limitation since it is based on a structure that allows the ODC's credit behavior to depend on the CBN's MP rate. Therefore, the single

equation model allows us to infer causation. However, the single equation regression approach is based on a strong assumption about the exogeneity of the MP rate. In reality, the CBN has been known to alter the MP rate in response to credit conditions in the economy. Therefore, while ODC's credit may depend on the CBN's MP rate, the MP rate could also depend on the ODC's credit behavior. Thus, the single equation regression is not suitable for the kind of analysis being contemplated by the study. Consequently, the study employed the VAR model, which is useful for modeling dynamic interactions among various economic variables simultaneously. The VAR model provides a framework for modeling an endogenous variable as a function of its past values as well as the current and past values of the other endogenous variables of the model. This feature of the VAR model is considered attractive to the study.

Role of the Researcher

Researchers have a responsibility to generate the study design, conduct the research, communicate their research findings, collaborate with others where appropriate and exchange knowledge for the benefit of the society. Researchers have a responsibility to behave honestly and ethically in the course of their research. Also, the researcher's role is an important consideration that needs to be carefully examined to avoid the potential pitfall of researcher bias. Researcher bias reduces the validity of any research work. In conducting this study, the researcher has the responsibility of ensuring that the secondary data used are cleaned and consistent with the research methodology. Therefore, careful attention paid to address the issue of outliers. Also, I ensured that the data collected from

survey respondents are checked for errors and inconsistencies. Where there are inconsistencies, contacts made with the data supplier for resolution.

The researcher role begins with decision making on data collection – what, where and how collected, as well as the grouping required to best tackle the research question. The provision of survey instrument – the structured questionnaire, field work and collection of meaningful data in relationship to the variables under study responsibility also lies on the researcher. Enough data to ensure the detection of even the least meaningful relationship between variables and precaution against numerical typos or transposition that could void the study result ensured. Also, secondary data earlier submitted to the Central Bank of Nigeria (CBN) accessed to track the relationship over time and reduce the effects of any personal or professional relationships. Data on the model variables for the sample period downloaded from the Statistics Database of the CBN. Once downloaded, I ensured that there were no outliers and missing values.

In the researcher works at the statistics department, economic policy directorate of the CBN with the responsibility of compiling financial, money and banking statistics from 2005 to 2017. This implies that I had direct responsibility for analyzing the monthly submission of ODCs statutory statistical reports. However, I had since 2017 moved to the survey management division that basically collects and collates real and government sectors data. This implies that I had no direct personal or professional relationship with the participants during the data collection period. Also, there were no hidden or direct relationship with the participants.

To manage potential researcher bias or power relationship, valid statistical procedures followed for the collection and analysis of data. The research biases in this study involved having inclined assumptions, decision in participant selection, and data analysis. The potential researcher bias in this study was limited to the areas of data collection, analysis, and results reporting. Consequently, controlling potential bias based on collecting, analyzing, and reporting the findings in agreement with valid statistical and analytical techniques. However, the research design choice also managed all intending and unindenting bias associated with the study.

There were no ethical issues involving my work environment, conflict of interest, power differentials, or incentive justification involved in this study. Survey participation was voluntary and anonymous. Thus, participants' confidentiality not a major concern of this study. Protected or vulnerable populations were not targets or participants in the research. To address the possible ethical concerns, the respect of persons, beneficence and justice principles adhered to, Institutional Review Board approval sorted, informed consent received, while data collection and participants' identities were anonymous.

Methodology

The methodology section of this study provides the population of interest, instrument of data collection, data collection, threats and ethical issues relation to the study.

Population

There are two target populations involved in the study. The first is the total number of commercial, merchant, specialized and micro-finance ODCs in operation with

the international, national or regional banking licenses in the Nigerian economy since the creation of the country in 1960. The second target population comprises households and micro, small and medium enterprises that operate in the Ibadan metropolis of Oyo state, Nigeria that have accessed or not accessed credit facilities from the first target population. The both of the population involved are finite and are appropriate for the surveys.

There are 22 commercials, four merchants, one specialized, and nine hundred and two micro finance banks that operates in Nigeria. However not all were present in the target population. The ones that are available at the Ibadan metropolis are twenty commercials, one specialized, and about fifteen micro finance banks. The size of the households, micro, small and medium scale businesses in the target population was unknown, therefore appropriate sampling procedure used to select the sample to cover.

Sampling and Setting Procedures

The non-probability sampling technique was used as there was no frame list for the second population for the study. The unavailability of the frame made the probability sample impossible for the study. Thus, the convenience sampling method (CSM) was appropriate for the study. The convenience sampling was perhaps the easiest method of sampling, because participants were selected based on availability and willingness to take part in the survey. Also, the CSM makes useful results obtainable, but could be prone to significant volunteer bias – a non-probability sampling method risk, and the sample might not be representative of age or sex characteristics distribution, thereby limiting the extent to which the results can be generalized.

The procedure involved in the convenience sample method was to simply include respondents who are most accessible to me. Therefore, household, micro, and small businesses owners that were easily accessible and willing to participate formed the sample for the survey. Though the CSM is an easy and inexpensive way to gather data, there was no way to tell if the sample was representative of the population. However, the method assumed to produce a sample that would be reflective of the population for this study. In accessing potential respondents, I made efforts to ensure the spread of responded across the Ibadan metropolis.

There was no readily available sample frame; thus, the use of probability sampling is not applicable to the study. The frame for this study were the individuals without age or sex restrictions that are identified as household, micro and small businesses owners in Ibadan metropolis of Oyo state in Nigeria. In order not to bias the survey returns, individuals and firms who do not have banking relationships with the other depository corporations are excluded from the sample.

Sample Size Determination

The three statistical parameters described in the literature to ensure adequate sample size are given critical alpha, power, and effect size (McDavid et al., 2013). Power is defined as the probability of finding a statistical difference between groups, if one exists in the population. Power is usually set at 80% and above, which means that there is an at least 80% chance, given the sample size, that a significant difference found, therefore the power for this calculation was 95%. The effect size is the amount of construct overlap expected between the variables being measured (Cohen, 1988). The

magnitude of effect size is defined in terms of Cohen's d as .10 represents a "small effect," .30 signifies a "medium effect," and .50 signifies a "large effect" (Cohen, 1988). For this study, a medium expected effect size of 0.3 was adopted. The Critical alpha determines likelihood that a significant finding occurred by chance. In the social sciences, critical alpha is generally set at .05, which means that "there is a 5% chance that the null hypothesis will be rejected when in fact it is true" (Tabachnick & Fidell, 2007, p. 78). Therefore, using G*Power 3.1.9.4 (a power analysis program used to produce sample size), with power, effect size and alpha 0.95, 0.30 and 0.05 respectively, 220 participants were needed to produce an 95% probability of rejecting the null hypothesis when it is actually wrong (Faul et al., 2007), (see Appendix D for details).

Procedures for Recruitment, Participation, and Data Collection

Recruitment

Using the convenience sampling method - CSM for the study, participants recruited from major places where households, micro, and small businesses are located. Such places include Dugbe, Ogupa, Agbeni, and so on in Ibadan as well as poultry, piggery, fish and crop farmers. There are no concentration areas for farming, therefore such household, micro and small farms are located in different locations across the Ibadan metropolis. An individual that has been involved in banking relationship over the last two years were identified as potential survey respondent for the study. The demographic information collected are gender, age range, marital status, and employment size.

Participation.

The informed consent form was provided to all participants and consent was received before administering the questionnaire. For respondents who are not able to read, I read the consent form audibly and secured respondents' consent before proceeding with the survey.

According to O'Sullivan et al. (2017), research design is the plan that guides decisions about data to gather, from whom to get the data, when and how to collect the data and the form of analysis required. The secondary data for the study downloaded from the Statistics Database of the Central Bank of Nigeria. In the case of missing values and outliers, relevant departments of the CBN were contacted in order to seek further information and clarifications. Thus, the required data cleaning conducted on the downloaded spreadsheet prior to transferring to the EViews software for analysis. On the other hand, data relating to the impacts of bank lending on economic performance collected through relevant questionnaires administered on households and firms in a cross-sectional survey. The survey was wholly conducted by me and data from the completed questionnaires extracted and entered into the SPSS for analysis.

Data Collection

The data collection via the CSM for this study was a one-off exercise conducted over a particular time period. Therefore, the participants exit the survey at the point the questionnaire was completed with a token to appreciate participation. For interested survey participants, I explained the expected study outcomes and reiterate the usefulness of the research for policy formulation and the achievement of positive social change.

The pilot study was a crucial part of successful quantitative research. It entailed the use of smaller sample of the targeted participants to test every aspect of the study including the questionnaire, timing, ease of reaching participants, data compilation procedures, and analysis (O'Sullivan et al., 2017). For the pilot study to improve the outcome of the pretest exercise, the questionnaire was administered to a smaller group of participants. The purpose of this pilot study was to enhance the main study outcome by providing a useful guide in carry out the final study. The pilot study assisted me to minimized technical challenges arising from the questionnaire development and administration as well as data analysis procedures. Consequently, results from the pilot study formed critical inputs into the design of the final survey instruments as well as the conduct of the survey and the analysis of the data.

The procedures for recruitment included using public records access of the archival data submitted by the ODCs to the Central Bank (CBN) of Nigeria that is readily available at the statistics database of the CBN. The aggregated data for all loan and advances to all sectors – sectoral utilization of credit, collated for all categories of banking licenses. The monthly statutory submission of all the ODCs are processed by the statistics department and published on monthly basis on the CBN website, statistical bulletin as well as the statistical database for public use. However, any additional data requirement sourced by sending email to the data management office of the CBN statistics department as stated on the website, bulletin and database.

The procedure for gaining access was directly through the internet as the data sets were published on the CBN website for public consumption. The sample period being

considered for the analysis is 2007 – 2020. The statistical bulletins are arranged into different chapters based on the four macroeconomic sectors of the Nigerian economy – real, external sector, public finance, and the financial sector. The relevant data sets for the study were contained in the financial statistics chapter. The two relevant sections from which data on the key variables used for the study are downloaded are (a) sectoral distribution of commercial bank's loans and advances and (b) money market interest rates. The data sets, which were downloadable in spreadsheet format, were then merged and processed for analysis. After clicking on the data browser button, the 'financial statistics' option is selected in order to have access to the financial and monetary statistics as well as the money market rates.

No necessary permissions are required to gain access to the data sets as they are available in the public domain. The data sets published by the CBN are reliable as the data submissions are based on supervisory requirement for all ODCs in the country. The ODCs are required within the first five working days of the following month to make their respective data submission to the CBN. These data are already real time verified by the Banking Supervision Department of the CBN before being published. Therefore, it was the best data source for this study as the data were reliable and authentic as they were directly submitted by each ODC data team for regulatory and performance evaluation purposes. However, an email sent to the Data Management Office of the CBN Statistics Department to provide clarifications on outliers supply of missing data that were not available on the database.

Instrumentation and Operationalization

Instrumentation

Instrumentation is a crucial element in evaluation studies. Subsequently, the desired construct to delineate what variable to collect, measure or collate is of high importance. The process of designing survey instruments to connect constructs with variables are fundamental component in the measurement of construct. McDavid et al. (2013) highlighted that instrumentation threat could occur during program implementation, while studies that involve before and after measurements are susceptible and do not associate internal validity issues with a post-test comparison group testing. Since this was not a study involving pre-test and post-test, it had a lesser concern about the internal validity problem with the measurement of the variables. Nonetheless, the instruments I developed utilized indicators applied in some study that had been empirically validated to be reliable on credit availability and utilization.

I developed the survey instrument ~~used were developed by me so as~~ to achieve the specific objectives of the study. In order to investigate the relationship between bank lending and economic performance from both the supplier and user perspectives, two instruments developed. The first instrument, which was administered to business owners captured questions relating to the economic activity sector of the respondent, the business ownership type, the economic condition of the respondent before and after accessing credit facility, and constraints to business activities among others. On the other hand, the credit creation questionnaire was targeted at banks and collected information on their credit behavior. The key questions in this regard related to the number of credit

applications received and granted as well as the factors affecting banks' credit activities. The responses from the survey analyzed to test the study hypotheses regarding the impacts of bank lending on the economic performance of the private sector. It also helped to identify the factors that either encourage or discourage the banks from lending to business owners and households. It is expected that the findings from the study will lead to useful recommendations for enhancing the contribution of the financial sector to the Nigerian economy. The instrument used were developed by me so as to achieve the specific objectives of the study.

The questionnaire designed to evaluate the credit behavior of the ODCs was developed with insights from the European Central Bank's bank lending survey for the Euro area. The instrument was developed basically to enhance knowledge of the role of credit in the monetary transmission mechanism as well as for adequate MP assessment and analysis. This instrument was useful as it being used for assessing banks behavior on credit creation as well as factors affecting credit demand. The access to credit questionnaire was developed based on the objectives of this research. The instrument was exposed to a pilot study. The pilot study improved the instrument construct for optimization.

Reliability is the ability of a measurement to yield consistent results over time with appropriate stability test for reliability confirmation. Subsequently, the test-retest assessment becomes essential for interval and ratio measurements; and inter-observer for the evaluation of a variable measured on the nominal or ordinal scales (Warner, 2013). Reliability is generally viewed as the extent to which research results are steady over time

and also a truthful representation of the total population under study. At such, an instrument is considered to be reliable, if its outcomes could be reproduced under a similar methodology for another sample (Joppe, 2000). Reliability simple put is the idea of repeatability or replicability of the outcomes under same methodology. Successively, the notch to which a dimension is repeatedly given remains the same; the stability of a measurement over time; and crucial for reliability is the correspondence of measurements within a given time period. Therefore, the test-retest method at two different times adhered to for ensuring the consistency of the responses provided by the respondents. However, extraneous influences such as an attitude change could occur and influence the given responses thereby reducing the accuracy and consistency of the instrument and the test scores. Crocker and Algina stated that test developers have the responsibility of demonstrating the reliability of scores from tests and retest (1986). Hence, it is my responsibility to ensure high consistency and accuracy of the tests and scores.

Validity is the ability of a measurement method to be able to measure the exact thing it supposed to measure accurately - whether the means of measurement are accurate and whether actually measuring what is intended to measure. So, validity is concerned with the meaningfulness of research components. This validity could be content – test item representing the theoretical dimensions or the area of concentration; or face – weighing what is claiming to be measuring (Warner, 2013). Consequently, validity is the customary conditions for defining either a study accurately measures that which it was envisioned or in what way are the study outcomes genuine. In other words, does the research instrument allows the achievement of the study objectives. Warner pointed out

that researcher could determines validity by asking a series of questions and also looking for the answers in other research works (2013). According to Wainer and Braun, construct validity is the key of describing the validity of a quantitative research (1998). In this study, the construct validity provided based on the outcomes of the pilot study. The extent to which the questions in the questionnaire are successful at eliciting the required responses from the respondents evaluated. This will help to further refine the final instruments. Also, study outcomes were benchmarked against results published in other related studies.

The measurement quality assessment is essential to any study that is willing to yield meaningful results (Warner, 2013). Thus, scale analysis, reliability, and validity were the necessary and vital considerations for quality quantitative research works. A well-established method of measurements should be reliable, valid, sensitive, and unbiased. Also, according to Warner (2013), the measurement method should not be costly, invasive and non-reactive. Appropriate stability test for reliability confirmation - the test-retest assessment, becomes essential for interval and ratio measurements; and inter-observer for the evaluation of a variable measured on the nominal or ordinal scales – categorical (Warner, 2013). Subsequently, sufficiency of the instrumentation could be assessed as, concurrent, discriminant, convergent, or predictive. A suitable number of options makes a categorical variable more sensitive than fewer non-appropriate options. However, sensitivity is a lesser concern when measurements are no ratio or interval scale. Also, the attribute of the instrument is actually referred to as stability. If we are dealing with a stable measure, then the results should be similar. A high degree of stability

indicates a high degree of reliability and validity. In the process of developing the instruments for the study, I focused keenly on the research questions and the study objectives. Therefore, the instrumentation is done in a manner that questions that elicit the best fit answers for addressing the research questions are generated. This is important for achieving the study objectives. The pilot study will provide the opportunity to assess the sufficiency of the instrumentation prior to the deployment of the survey.

Operationalization

The process of operationalization is to determine the procedures for measuring the variables of interest. The result was an operational definition that describes variables based on the specific procedures for measuring or manipulating it, and in doing so, bridging the conceptual-theoretical and empirical-observational levels (Frankfort-Nachmias et al., 2015). Operationalization is a step beyond conceptualization and the process of developing operational definitions, or specifying the exact operations involved in measuring a variable. O'Sullivan et al. (2017) highlighted that study variables emanate from conceptual definitions that further reduces to operational definitions. In this study, MP decisions are represented by changes in the MP rate set by the Central Bank of Nigeria in its bi-monthly meetings. An increase in the MP rate represents contractionary MP decision while a reduction in the MP rate implies an expansionary MP. The credit behavior of ODC's was defined by the amount of loans and advances granted by the banks to households and firms. Such loans and advances are further broken down into different activity sectors of the Nigerian economy. Thus, for instance, ODC's credit behavior with regards to the agricultural sector was captured by the evolution of the

amount of loans and advances granted by ODCs to households and firms operating within the country's agricultural sector, such as farming, fishing, poultry, piggery, forestry to mention few. The control variables include the gross domestic product, which is a measure of the size of the economy; inflation, which is a measure of the changes in the general price level in the country; and government spending, which captures fiscal policy.

Variables Description

Owing to the subjective nature of concepts person to person different meanings, it is necessary, therefore, to translate concepts into variables. A variable is a measurable attribute or characteristic that varies in value. Whereas a concept may hold many different meanings from person to person, a variable is a concept translated into a measurable attribute that holds different values (Burkholder et al., 2016). The process of translating a concept into variables that can be empirically tested is called operationalization; the result of this translation is an operational definition (Loseke, 2013). For the secondary data sourced from the Central Bank of Nigeria, the variables involved are MP rate, total credit granted by the ODCs as well as the sectoral loan and advances. The other control variables are gross domestic product deflated by prices, the inflation rate, and government spending. These variables are quantitative and continuous on the interval measuring scale. The time is denoted by the point intervals at which the data sets are recorded. Subject to data availability, this study employed monthly, quarterly and yearly time series. On the other hand, there are variables for which data were sought using structured questionnaires to address the research question relating to the impacts of bank lending on economic performance of households and firms in

Nigeria. The detailed description of these variables classified by type and method of measurement for the business owner and credit creation questionnaires are contained in Tables 1 and 2 respectively.

Table 1

Business Owner Variable Description

S/N	Variable name	Type and method of measurement
1	Gender	Nominal
		Female
		Male
2	Age bracket	Ordinal
		18 -20
		21-30
		31-40
		41-50
		51-60
		61 and Above
3	Highest level of Education attained	Ordinal
		No formal Schooling
		Primary
		Junior Secondary
		Senior Secondary
		NCE/OND/Nursing School
		First Degree / HND
		Master's Degree & above
4	Marital status	Nominal
		Never Married
		Married
		Divorced/Separated
		Widow/Widower
5	Language proficiency	Nominal
		Fluent in local language only
		Fluent in English only
		Fluent in English and local languages
6	Economic activities sector	Nominal

			Agriculture
			Education
			Health
			Information & Communication
			Manufacturing
			Transportation
			Trading
7	Business location	Nominal	
			Urban
			Semi Urban
			Rural
8	Business ownership type	Nominal	
			Household
			sole proprietor
			Partnership agreement
			limited liability company
9	Business age group	Ordinal	
			New start up to 5years
			5 to 10 years
			11 to 15 years
			16 to 20 years
			21 years and above
10	Employment size	Ordinal	
			Micro (1 to 9)
			Small (10 - 49)
			Medium (50 - 199)
			Large (200 & more)
11	Credit facility application	Nominal	
			No
			Yes
12	Access to credit facility	Nominal	
			No
			Yes
13	Source the loan	Nominal	
			Regional Commercial bank
			National Commercial bank
			International Commercial bank
			Regional Merchant bank
			National Merchant bank

			Non-Interest bank
			State Micro-finance bank
			Regional Micro-finance bank
			National Micro-finance bank
14	Reason for not applying for loan	Nominal	
			Do not required one
			Required but do not apply
			Required applied but denied
			Required applied and in progress
15	Do you wish to apply for loan/additional now	Nominal	
			No
			Yes
16	Economic condition after accessing the credit facility	Ordinal	
			Improved
			The same as before
			Deteriorated
17	Current economic activities	Ordinal	
			Better than before
			The same as before
			Worse than before
18	Revenue condition after accessing the credit facility	Ordinal	
			Improved
			The same as before
			Deteriorated
19	Current business profit	Ordinal	
			Better than before
			The same as before
			Worse than before
20	Constrains to business activities	Nominal	
			Agree
			Neither Agree/Disagree
			Disagree

Table 2

Credit Creation Variable Description

S/N	Variable name	Type and method of measurement
1	The banking branch belong to which banking license type	Nominal Regional Commercial bank National Commercial bank International Commercial bank Regional Merchant bank National Merchant bank Non-Interest bank State Micro-finance bank Regional Micro-finance bank National Micro-finance bank
2	Number of credit application received/treated/denied/granted in year 2019	Nominal Agriculture Education Health Information & Communication Manufacturing Transportation Trading Others
3	Number of credit application received/treated/denied/granted in 2019 by age of business?	Ordinal New start up to 5years 5 to 10 years 11 to 15 years 16 to 20 years 21 years and above
4	Number of credit application received/treated/denied/granted in 2019 by business ownership type	Nominal Household Sole proprietor Partnership agreement Limited liability company
5	Number of credit application received/treated/denied/granted in 2019 by business employment size?	Ordinal Micro (1 to 9) Small (10 - 49)

		Medium (50 - 199)
		Large (200 & more)
6	Number of credit application received/treated/denied/granted in 2019 by business location	Nominal
		Urban
		Semi Urban
		Rural
7	What is your view on the credit creation activities of this bank branch in 2019 in relative to 2018?	Ordinal
		Improved
		The same
		Deteriorated
8	What is your view about the current credit behavior of this bank branch?	Ordinal
		Better
		The same
		Worse
9	What is your view about the effect of the MP Committee decision on credit creation?	Ordinal
		Tightened
		Unchanged
		Eased
10	Volume of loan application in relative to year 2018	Ordinal
		Decreased
		Remain Same
		Increased
11	Which of the following do you agreed that had affected your credit creation activities?	Nominal
		Agree
		Neither Agree/Disagree
		Disagree

The nominal variables assigned scores from 1 to the highest possible value but do not indicate any form of improvement as the value increases or decreases. On the other hand, the ordinal variable scale score will also be from 1 to highest possible but the increment indicates a better or worse situation. The fifteen identified constraints affecting business activities from the perspectives of the business owners and the twenty-five factors affecting credit creation by the ODCs were on three Likert-type scales that range from 1(disagreed) to 3 (agreed). The responses proportions were in percentages for the

three scale scores for the agreed, neutral, and disagreed options. Thereafter, the Chi-Square Test - introduced by Karl Pearson in 1900, that basically used for categorical data distribution and analysis was used for comparing the options data sets. The Pearson chi-square test is a non-parametric test of independence to test association between categorical variables. This test is mostly used for statistical independence, but not appropriate the variable are the pre-test and post-test observations. The statistic is calculated with the as

$$\chi 2 = \sum \frac{(\mathrm{Oi} - \mathrm{Ei})2}{\mathrm{Ei}}$$

where 'Oi' is the observed value and 'Ei' the expected value. Subsequently, decision on significance based on the generated p-value. When the $p<0.05$, there is a statistical difference between the observed and expected values, otherwise, no statistical difference between the values.

Data Analysis Plan

The purpose of this quantitative study was twofold: the first is to evaluate the impact of MP on credit behavior of other depository corporations in Nigeria using time series data sourced from the CBN while the second was to determine the impacts of bank lending on the economic performance of households and firms based on survey results. In line with these two key objectives, two analytical methods are employed: (a) the regression model and (b) the analysis of survey data using proportions, averages, totals, chi-square and correlations. Therefore, two software packages are employed to analyze the data sets. These are EViews initially developed by Quantitative Micro Software (QMS) but now part of HIS Markit and SPSS by IBM.

The EViews software is popular among econometricians and used in most central banks, including the Central bank of Nigeria (CBN). The EViews package is useful for conducting time series analysis such as the regression model estimated in the study. I have developed competence in using the software in my professional positions in the Central Bank of Nigeria.

Also, I have learnt the operations of the SPSS commands in some courses during my PhD studies and the experience had prepared me for data entry, collation, consolidation, calculation, analysis and interpretations. The software is also user friendly for correlation analysis as well as various possible regression analysis.

The SPSS software allows the coding of survey responses appropriately for ease of analysis and provides the facility for handling data quality issues. The software is also good for data cleaning and screening, and this cleaning and screening process was recognized by Frankfort-Nachmias et al. as an important step before the final data analysis (2015). The data cleaning entails using the software to cross-check the data coding for logical consistency and ensure that the coding of related questions is internally consistent. The data screening involves checking for errors and omissions to ensure that the participants completed all relevant sections of the questionnaire.

The study investigated whether MP impacts ODCs' credit creation behavior in Nigeria using sector-level data. Consequently, the specific research questions along with the corresponding hypotheses of the study are as follows:

RQ1: is there a statistically significant relationship between MP shocks and ODCs' credit behavior?

H_01: There is no statistically significant relationship between MP shocks and ODCs' credit behavior.

H_a1: there is a statistically significant relationship between MP shocks and ODCs' credit behavior.

RQ2: Have commercial banking licensing regulations implemented by the CBN in 2010 improved ODCs' credit to the private sector?

H_02: Commercial banking licensing regulations implemented by the CBN in 2010 have not improved ODCs' credit in the private sector.

H_a2: Commercial banking licensing regulations implemented by the CBN in 2010 have improved ODCs' credit in the private sector.

RQ3: Do ODCs' credit creation activities enhance the economic performance of households and small businesses?

H_03: ODCS' credit creation activities do not enhance the economic performance of households and small businesses.

H_a3: ODCs' credit creation activities do enhance the economic performance of households and small businesses.

To answer the research question relating to the impact of MP shocks on credit behavior of ODCs towards the five different sectors earlier identified – finance and insurance, manufacturing, real estate and construction, agriculture and solid minerals sectors, the EViews package used for the analysis of the archival time series data. The analysis of the archival time series sectoral credit granted by ODCs based on regression via VAR model uncovered the impulse responses of sectoral credits to MP shocks. If the

MP rate coefficient in the total ODC's credit equation is negative and significant, this implies that an increase in the MP rate leads to a reduction in aggregate credit to the private sector. In such a circumstance, the impulse response of aggregate ODC's credit to a positive MP shock will be negative. The same analysis and interpretation apply to the loans and advances granted by the ODCs to the different sectors of the economy. However, the study expected the magnitude of the response to differ across the different sectors.

On the other hand, the SPSS software program used for the survey data analysis answered the third research question. The third research question focuses on obtaining the perspectives of the households and small business owners regarding the usefulness of ODCs' lending for their economic activities. The SPSS package provided a variety of charts for visual representation, validation and consolidation tools. The study obtained all the descriptive statistics and the cross tabulations of related variables using the SPSS. The correlation analysis easily demonstrated either a positive or negative direction between the variables as the correlation coefficient ranges from -1 to +1.

Threats to Validity

Impact study requires the researcher to consider relevant external and internal issues associated with the study design and data collection process, so the impact should be externally and internally validly justified (O'Sullivan et al., 2017). O'Sullivan et al. (2017) highlighted that a researcher attempted to generate research questions around the available data when archival information is in use, thereby making the technique to precede question instead of the method to follow the question, thereby posting validity

threats. Also, the database could be having incomplete, compromised or missing component making its control compromised. The two issues that might arise are validity and sensitivity. Also, confidentiality is an ethical issue about the data collection and the purposive sampling method as unprotected information could lead to integrity and liquidity predicament.

Threats to external validity included the interaction of selection and treatment, setting and treatment, and history and treatment. The interaction of selection and treatment threatens external validity by having a narrowly defined research population. The inability to generalize findings to other organizational settings because the characteristics of participants are different. Interaction of history and treatment internal validity threats could arise from an inability to generalize the results to the past or future events (Creswell, 2013; Kalaian & Kasim, 2008). The basis of external validity maintains that inferred statistical results can be generalized to the research population (Creswell 2013). Subsequently, the threats to external validity partly eased by the alignment of the research population with the targeted sample. Also, threats to external validity like experimenter effects meant that the researcher can unintentionally influence participants' responses minimized by the survey questions selection and the employment of neutral people other than myself for the questionnaire administration and retrieval. The threats to validity that involved the specificity of variables and operationalization of definitions minimized by using the same variables as used in other similar studies and using widely accepted and agreed upon definitions of those meaningful variables (Creswell, 2013).

The major internal threats to validity as history, maturation, regression, selection, mortality, diffusion of treatment, compensatory or resentful demoralization, compensatory rivalry, testing, and instrumentation, according to McDavid et al. (2013), and Creswell (2013). Most of these threats arise due to non-randomization of study groups like experimental design (O'Sullivan et al., 2017). Also, these identified internal threats were not threats to this research as they are related to experimental studies that occur over an extended period (Creswell, 2013; Kalaian & Kasim, 2008). Subsequently, this study's main internal validity threats were the participants' selection, and the convenient participant selection method deployed to manage this threat. However, the study treats any participant that opted out or failed to complete the instrument as nonresponses. The construction of the design was required to minimize possible internal and external validity threats.

The construct validity involves ensuring that the instrument used to measure a concept or construct measures what it intended to measure (Frankfort-Nachmias et al., 2015; Creswell, 2013). The threat to construct occurs when investigators use inadequate definitions and measures of variables (Creswell, 2013). According to Frankfort-Nachmias et al. (2015), the instrument used in the study must show validity by relating the instrument to the theoretical framework and providing evidence that it is empirically and logically correlated. Statistical conclusion validity results from investigators using inadequate statistical power or violation of statistical assumptions in their studies. In minimizing this threat, the study based the research questions on the theoretical framework. The validity issue could be minimized by properly using purpose and

conceptual definitions to lay out the consequence of using the measure and adequately monitoring. Likewise, the degree of variation appropriated to the study purpose. A plan to keep the identities of the participating ODC was in place to evade inadvertent irrational behaviors from the public.

Threats to statistical conclusion validity involves concluding that there is a relationship when there is not one or vice versa. This threat is usually the issue in most research, and could be due to setting the alpha too low, referred to as 'low statistical power,' and the types of participants involved in the study referred to as random heterogeneity of respondents (Trochim, 2006). According to Trochim (2006), a researcher can reach this conclusion if they do not pay very close attention to the assumptions in their analysis which can lead the researcher to believe that their research is true or normal when it is the opposite. To minimize these threats, I used a statistical power of .80 and a reliable, validated instrument and asked valid questions related to the study (Trochim, 2006).

Ethical Procedures

The ethical issues, including the protection of human research subjects, lead to the federal policy on human subject protection and Institutional Review Boards (IRBs) in 1991 (O'Sullivan et al., 2017). Consequently, it became necessary for any institution involving human subject research to have an internal IRB. The board's primary role is to uphold or reject the conduction of a human subject-based study based on specified criteria. The IRB considers the research against minimized subject risks; reasonability of the danger's vis-a-vis anticipated benefits; and equitability of subject selection. Other

requirements are informed consent, subject safety ensured via data monitoring, adequate data confidentiality, and subject privacy provisions. In a whole, according to O'Sullivan et al. (2017), IRB reviews the proposal sensitivity to ethical issues and the vulnerable population, if involved. The five ethical principles were minimizing harm risk (care), obtaining informed consent, protecting anonymity and confidentiality; avoiding deceptive practices (coercion), and providing the right to withdraw (Rudestam & Newton, 2015). In impact analysis, the essence of evaluation guidelines, standards and principle was to maintain a high sense of ethical practice by professionals (McDavid et al., 2013).

The policy research field may not pose any physical harm or life-threating situation to participants, according to O'Sullivan et al. (2017). However, we cannot overlook the potential risk factors like angry feelings, humiliation, or anxiety, so ethical research minimizes such negative effects on the participants. In compliance with this requirement, I undertook a training on protecting human research participants (certificate attached). Since this study involved gaining access to participants and archival data, the ethical principles were all applicable. Therefore, confidentiality, consent, coercion, privacy, and respect for participants should be held in high regard by the researcher to uphold these ethical values to help conduct valid research.

Walden University has set strict guidelines for research conducted under its purview. The research must also follow the federal regulations involving human participants, and the researcher must complete ethics training. Researchers must complete the Protecting Human Research Participants ethics training course, provided by the National Institute of Health. I completed the required ethics training and provided a copy

of the certificate of completion. Walden University requires that researchers complete the course within the previous 5 years of the research. The next step was to gain approval from the Walden University Institutional Review Board (IRB). No research activity occurred past the proposal stage, without IRB approval. Consequently, the IRB approval sorted for this study. An essential element of the study was to safeguard the rights of the research participants during data collection and throughout this study. To that end, I will comply with all principles and guidelines required by the Walden University Institutional Review Board.

The protection of human participants during the recruitment of prospective participants is an important consideration in the research process. The major concern in the recruitment of participants involves physical contact at business locations and was strictly voluntary. The study did not involve at risk or vulnerable populations. No recruitment of participants occurred until approval to conduct the research was received from Walden University's Institutional Review Board. The study did not force any participants as participation was voluntary, and provied the potential participants with a consent form that informed them fully about the procedures and risks involved in the study. During the data collection phase and before statistical analyses were performed, each participant's responses coded to ensure anonymity of the participant. All data securely stored in the cloud for five years and later permanently deleted to protect the participants' privacy. Also, the study did not expose the participants to any physical or psychological harm.

The risk level to participants involved in the study was also minimal. Participants were assured anonymity as no identifying information was collected or made available to anyone; the study only collect demographic information. Confidentiality protected through anonymity as ethical considerations include the participant's right to anonymity. Lastly, the study presented a token to each participants to compensation for the research data collection. The study provides informed consent to all the partcipants to introduce and explain the study purpose, benefits, and risks. The consent form indicated participation was voluntary and explained the degree of anonymity. Also, the study informed participants that they were not required to participate if they feel uncomfortable about it.

Access was not required for the secondary data excration as the domain was a public one. A plan to keep identities of the participating other depository corporations to avoid unintended public irrational behaviors. The impact of not protecting the ODC's integrity could lead to a severe liquidity crisis, as depositors mighty all want to quickly withdrawal their funds if any contrary indicator linked to a particular bank. Like the primary data collected, the archival data will also be securely stored in the cloud for five years and permanently deleted.

The study used codes for each participating ODC in no particular order as all the head offices are located in the same state, making location not an identity problem. Also, the code will not reveal the type of institution being analyzed - international, national or regional, in any way. The study used coded abbreviation to preserve the anonymity of the data suppliers and respondents.

There are no other applicable ethical issues as the secondary data used for the analysis are sourced from data sets publicly made available by the Central Bank of Nigeria (CBN). The data sets were aggregated numbers that no one could identifies the ODCs identity. The study provided the households and firms with incentives such as souvenirs to appreciate the households and small firms for completing the questionnaire.

Summary and Transition

The study partitioned the methodology into two based because of the data and the objectives. In the first part, the study uses a Vector Autoregressive (VAR) model to analyze time series credit data sourced from the CBN's statistical bulletin and database. The variables in the VAR model include ODC's loans and advances to the different activity sectors of the economy, the MP rate, inflation, gross domestic product, and government spending. The VAR method allows the study to model each variable as a function of its and other variables past and current values. Therefore, the estimated VAR model captures the dynamic interactions between the endogenous variables and allows for the computation of impulse responses to shocks. This study focused on the responses of sectoral credits to MP shocks. The second part of the methodology focuses on collecting and analyzing survey data aimed at analyzing the effects of bank lending on the economic performance of households and firms in Ibadan metropolis of Oyo State, Nigeria. Structured questionnaires administered on banks, firms and households to elicit relevant information for addressing the research questions articulated by the study. Survey responses analyzed in line with standard statistical procedures, making use of proportions, averages and totals.

Chapter 3 presented the research methodology used to collect, analyze, and present the findings. The methodology falls into two main parts: the secondary data sourced from the CBN and the primary data collected from the survey. Chapter 4 reported the data analysis, findings of the study, and the acceptance or rejection of the null hypotheses. The study grouped the results into two parts: (a) results of the VAR model, based on the analysis of the secondary data, and (b) results of the survey data.

Chapter 4: Results

Introduction

The main purpose of this quantitative time-series quasi-experimental longitudinal study is to evaluate the effect of MP on ODCs' credit allocation performance to different sectors of the Nigerian economy. Investigating the relationship between MP and banks' credit behavior requires the consideration of the loan gestation period and associated risks. Aggregating ODCs' credit to all sectors of the economy in a single analysis may yield biased or even erroneous conclusions. Thus, the study used sector-level credit data to develop sector-specific regression models to address the relationship between the MPR and ODCs lending to different sectors. This study approached the research analysis from two angles. First, secondary data involving bank credit to different activity sectors to evaluate the relationship between MP decisions and those sectoral credits. Second, primary data from credit officers and business owners were collected to address whether bank lending has contributed positively to businesses' economic performance. The specified objectives of the study were as follows:

Estimate the association between MP and credit actions of ODCs to different sectors of the Nigerian economy.

Evaluate the impact of commercial banking licensing regulations implemented by the CBN in 2010 on ODCs' credit behavior.

Determine whether ODCs' credit creation activities enhance the economic performance of households and firms in Nigeria.

The specific RQs and hypotheses were as follows:

RQ1: is there a statistically significant relationship between MP shocks and ODCs' credit behavior?

H_01: There is no statistically significant relationship between MP shocks and ODCs' credit behavior.

H_a1: there is a statistically significant relationship between MP shocks and ODCs' credit behavior.

RQ2: Have commercial banking licensing regulations implemented by the CBN in 2010 improved ODCs' credit to the private sector?

H_02: Commercial banking licensing regulations implemented by the CBN in 2010 have not improved ODCs' credit in the private sector.

H_a2: Commercial banking licensing regulations implemented by the CBN in 2010 have improved ODCs' credit in the private sector.

RQ3: Do ODCs' credit creation activities enhance the economic performance of households and small businesses?

H_03: ODCS' credit creation activities do not enhance the economic performance of households and small businesses.

H_a3: ODCs' credit creation activities do enhance the economic performance of households and small businesses.

In order to establish the effect of the MPR on banks' credit creation ability, existing secondary sector-level credit data and primary data on credit creation and access from two surveys were collected to find empirical proof regarding RQs. The initial activity involved preparing survey instruments - questionnaires and consent letters and

addressed envelopes for returned and completed questionnaires. The secondary credit data were extracted from the Central Bank website, while the content letter, questionnaire, and pre-addressed envelopes were distributed to participants as initially planned. The study administered about 300 survey packages to survey participants, but only 244 usable records were available for analysis at the end of the survey. There was no means to follow up or check on the data as the survey was strictly anonymous, and participants' contact information was available. Data collection took about ten weeks, from mid-December 2020 to the end of February 2021. I carried out the data entry and analysis as I am a statistician.

As the pilot survey was applied to improve the survey instrument during the pre-survey stage, the study had no unexpected hurdles during the data collection stage. This quantitative time-series quasi-experimental longitudinal study did not involve any intervention or treatment, and the pilot study addressed the issue of validity. The pilot study was administered to friends and family to enhance the study outcomes by providing a helpful guide to carry out the final study. The pilot study assisted in minimizing technical challenges arising from questionnaire development and administration and data analysis methods.

The setting for the collection of primary data for the study was Ibadan, Oyo State, Nigeria. The credit officer and business owner questionnaires were administered to banks and small firms, respectively, to determine the impact of bank lending on the economic performance of the private sector. The study applied the CSM to select the survey participants.

Demographics pieces of information were gender, age, level of education, and marital status. The descriptive statistics of this demographics showed that 51.3% of participants were male, 80.0% were age 31 and above, 67.1% were married, and 73.0% were fluent in both English and local languages. The G*power determined a sample size of 220 participants for the business owner survey. The study administered 300 questionnaires to achieve this required sample size of 220 but received only 244 completed questionnaires back. The researcher dropped the consent letter, questionnaire, and pre-addressed envelopes at household businesses locations and firm offices. Call or text message was received from interested participants for questionnaire pick up, and only 244 were available during the 10-week session. The study also dropped survey packages for credit officers in 29 bank branches in the Ibadan metropolis, but only 28 complete questionnaires were available for pick up within the ten weeks of data collection. Souvenirs were dropped at pickup locations for all the participants, as stated in the consent letter. Lastly, the researcher extracted the secondary credit data from the CBN Statistics Database.

The researcher extracted the required secondary credit data to a spreadsheet prior to transferring it to the E-views software for its analysis. The study explored the relationship between the MP rate and banks' credit to various economic sectors by modeling them to indicate the relationship over time. The primary data collected in cross-sectional surveys to relate the impacts of bank lending on the economic performance of businesses was keyed in and cleaned on a Microsoft Excel spreadsheet and then transferred into the SPSS for analysis. The descriptive analysis – crosstabs and power

analysis – means methods used for the data analysis. Lastly, the study used the chi-squared test to identify significant factors affecting the firms' assess to credit or banks' credit behavior.

Another researcher could replicate this study using the same survey instruments and analysis method in another location within Nigeria. The repeating of the study in another setting will affirm its consistency and reliability. The study used a pilot survey to validate the instrument before the actual survey. Results from the estimated multivariate regressions show that MP has varied impacts on ODCs credit to the different sectors of the Nigerian economy. For instance, the study found that MP decisions affect ODCs credit to selected sectors of the economy, including agriculture, mining and quarrying, construction, communication, transportation, government, and education. A contractionary MP implemented via an increase in the MP rate leads to a decline in the number and amount of loans advanced by the ODCs to the sectors.

In contrast, the study failed to find empirical evidence of a statistically significant impact of MP on credit to manufacturing, public utilities, finance, insurance, and capital market. Furthermore, the results showed that the CBN's commercial banking licensing regulations in 2010 led to an increase in ODCs credit to agriculture, mining and quarrying, transportation, and government. However, the regulation did not lead to any significant impact on ODCs credit to the other sectors.

Pilot Study

The study conducted a pilot survey to improve the measurement instrument as the researcher newly developed it. The study used the pilot survey to test run the

questionnaires, administration, and data analysis method. In this study, the exercise guided the actual data collection and ensured participants' understanding of the survey instrument for two questionnaires—business owner and credit officer. The access to credit questionnaire was developed based on the objectives of this research, and the business owners within the identified setting completed it. Similarly, the credit creation questionnaire was developed based on the study goals and filled by a credit officer for each ODCs branch within the study setting. The instruments were exposed to a pilot study to improve the instrument construct optimization. This pilot also provided the opportunity for preliminary statistical analysis to ensure the ability of the instrument to answer the research questions.

A total of 40 participants were involved in the pilot survey, with 30 persons for the business owner's questionnaire and 10 participants for the credit officer's questionnaire. The participants for the pilots were family, friends, and coworkers. The G*power for sample size selected 220 for the business owner survey, and the pilot survey used 30, which is more than 10% of the sample size. The pilot chose more than 10% to cater for non-response so that no matter what, a least 10% were available for the preliminary analysis. The pilot and the preliminary analysis took about two weeks – November 2 to 13, 2020. The first two days were for distributing the printed copies of the instrument to be tested, and the participants filled and returned all by the ninth day – November 10, 2020. The last three days were for data entry cleaning and analysis for improving on the ambiguous questions.

The Pilot study led to the reconstruction of some questions that the participants did not understand and identified better analysis methods for some items. The pilot led to changing specifying age into age groups as participants were not willing to state their specific age. Also, the pilot survey found that crosstab analysis was not possible for the credit officer's question, and mean comparison will do a better analysis. This pilot survey highlighted the realization of the crucial role a pilot study paly in the success of quantitative research. This pilot study also assisted in minimizing technical challenges arising from the questionnaire development, administration, and data analysis procedures. This pilot study led to the change in the original proposed diffusion Index analysis method to chi-square test for identifying significant factors impending credit access or allocation. Lastly, the pilot experience provided a helpful guide in carrying out the final study and the construct validity placed on these pilot study outcomes. The improved questionnaires submit for IRB consideration and approval.

Data Collection

In order to address the first two research questions, the study used monthly secondary credit data extracted from both the statistics database and statistical bulletin of the CBN for 2007 to 2020. The primary data for this study was sourced via a survey for nine weeks, from December 21, 2020, to February 20, 2021. The data collection time frame was affected by the end-year festive holidays. The study deployed the non-probability convenience sampling method for selecting participants for the business owner's survey as there was no sampling frame available for the survey. The survey package – consent letter, questionnaire, and pre-addressed envelope, were dropped at

household, small and medium enterprises business locations. Considering that a sample size of 220 participants was required, the study prepared 300 business owners' packages. However, the number administered was only 289 because business owners rejected 11 packages or business was yet to commence operations. The surveys were sent to 300 business owners considering non-responses that could affect the required 220 participants. Only 244 returned questionnaires out of the 289 distributed, meaning only 244 participated in the business owner's survey, given an 84% response rate.

For the credit officer's survey, the survey package – consent letter, questionnaire, and pre-addressed envelope, were dropped at all the ODCs branches within the study setting. There were 30 branches located in the metropolis, and surveys were administered to 29 while one refused participation. Out of the 29 branches, only 28 of them called or texted for pick up. These 28 retrieved gave a 97% response rate for the credit officer survey. There were no discrepancies in the data collection plan initially planned to use and the method used, so the data collection followed the earlier stated plan.

Baseline Descriptive and Demographic Characteristics of the Sample

Data from the business owner's survey participants included baseline demographic gender, age, level of education, marital status, language proficiency, economic activity sector, business location, business ownership type, business age, and employment size. The participants consisted of 119 (48.8%) females and 125 (51.2%) males. The 244 participants age distribution were 2.5% (18-20years); 17.2% (21-30years); 29.1% (31to 40 years); 25.8% (41-50 years); 19.7% in 51 to 60 age group; and the remaining 5.7% were above 60 years of age. The distribution of the level of education

were respectively 32.8%, 23.8%, 20.9%, 9.8%, 4.9 %, 4.1%, and 3.7% for first degree or higher nation diploma, ordinary national diploma or its equivalent, senior school leaving certificate, masters' degree and above, primary, junior school leaving certificate and no formal education.

Figure 2

Gender Distribution of Business Owner Survey Participants

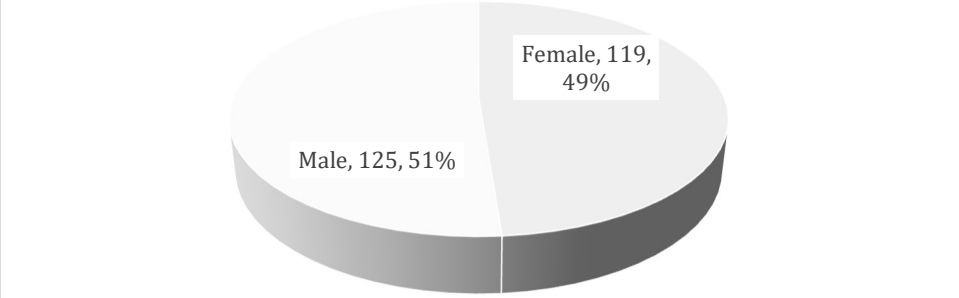


Figure 3

Age Distribution of Business Owner Survey Participants

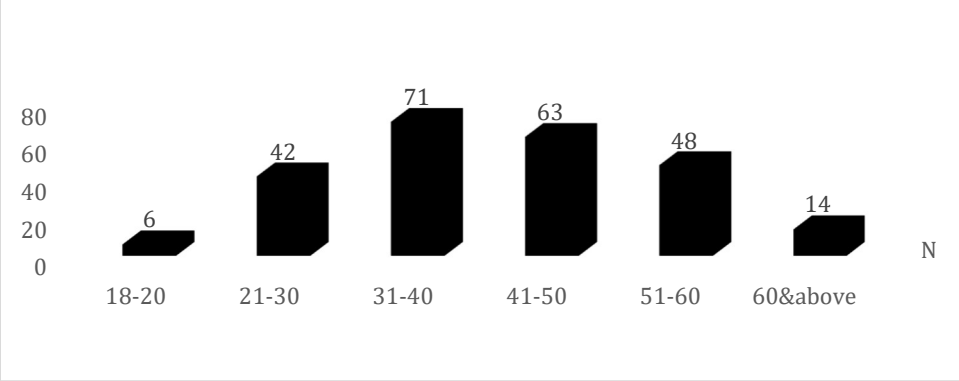
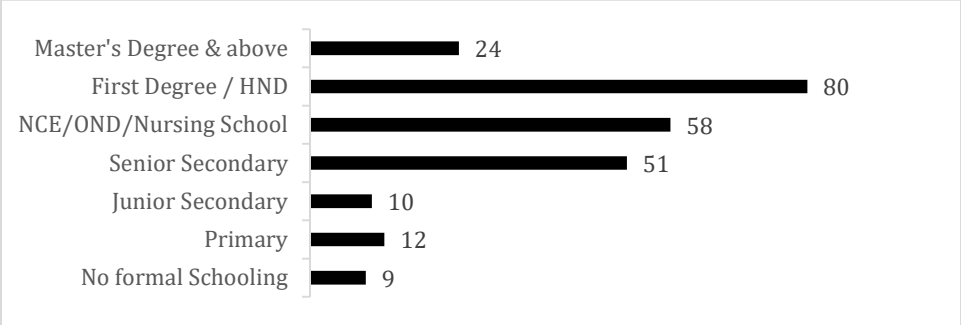


Figure 4

Education Qualification Distribution of Business Owner Survey Participants



More than half of the survey participants, 66.8%, were married, while 18.9% never married. Also, 46 participants (18.9) were either divorced or separated, and 12 (4.9%) were widows or widowers. About two-thirds (77.9%) of the participants were proficient in English and local language, 15.6% had proficiency in local language only, and 6.6% were proficient in only English language.

Figure 5

Marital Status Distribution of Business Owner Survey Participants

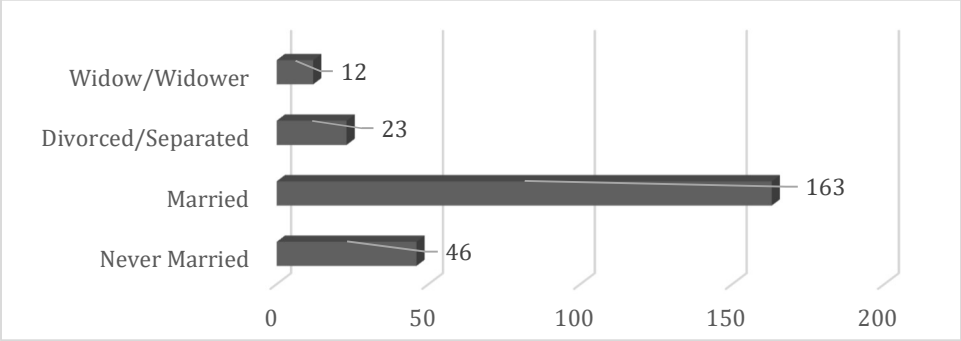
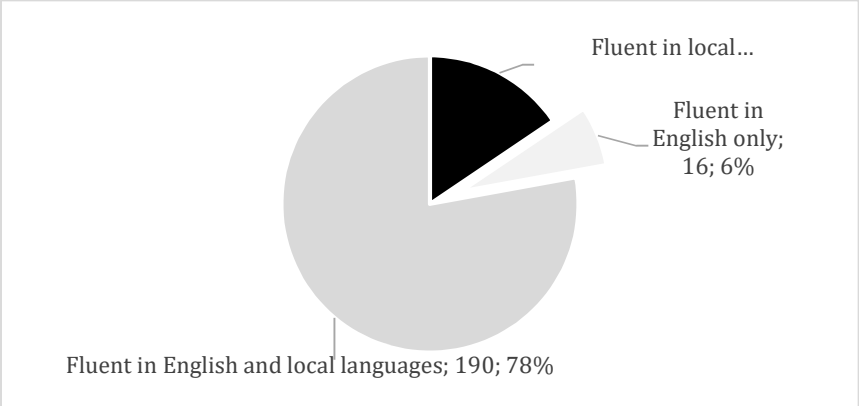


Figure 6

Language Proficiency Distribution of Business Owner Survey Participants



Business Status. The nature of the participant businesses was distributed as Trading (33.2%), Agriculture (20.5%), Health (11.5%), Information and Communication (10.7%), Manufacturing (9.0%), Education (7.8%) and 7.4% in transportation sector. On business location, 56.6% were located in the Urban area of the metropolis, while 27.0 % and 16.4% were in Semi-urban and rural areas, respectively. The sole proprietor dominated participants' ownership type as 52.5% fell in the group. Slightly about a quarter (27.9%) were household businesses, while 13.1% and 6.6% operated partnership and limited liability business types. On the business age, 32.4% were newly start-up to five years old in operations, while 26.6%, 21.3%, 10.7%, and 9.0% had respectively been in operation for 5 to 10 years, 11 to 15 years, 16 to 20 years and 21 or more years. Most of the businesses (72.1%) fell into the micro group of 1 to 9 employment size, while 19.7% were in the small (10 to 49 employees), 7.0% in the medium group with 50 to 199 employees, and 1.2% had 200 or more employees in the large group.

Table 3

Distribution of Participant Business Sector

	N	%
Agriculture	50	20.5
Education	19	7.8
Health	28	11.5
Information & Communication	26	10.7
Manufacturing	22	9.0
Transportation	18	7.4
Trading	81	33.2

Figure 7

Business Location Distribution of Business Owner Survey Participants

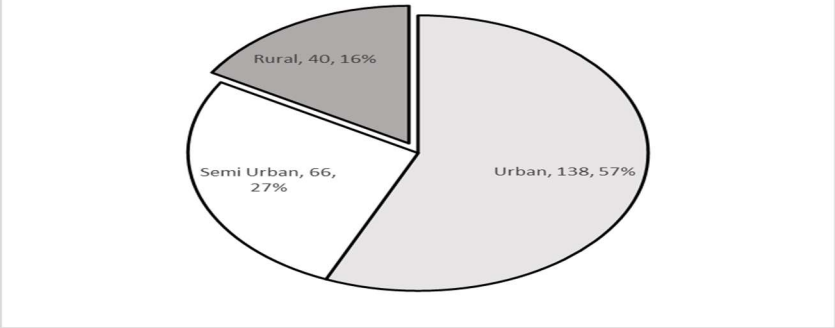


Figure 8

Ownership Structure Distribution of Business Owner Survey Participants

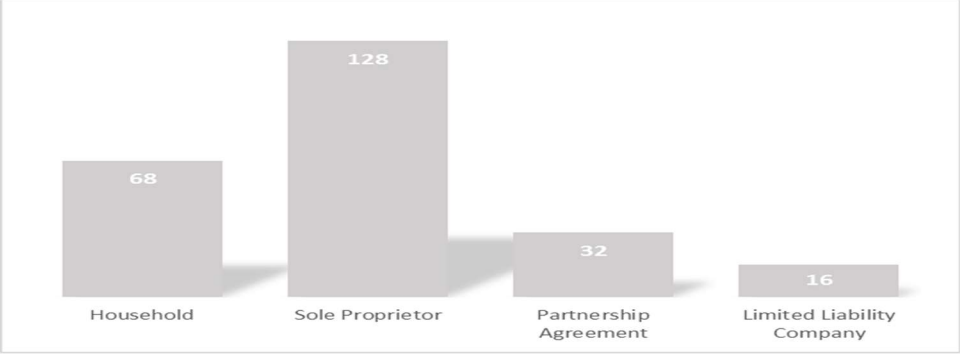


Figure 9

Business Age Distribution of Business Owner Survey Participants

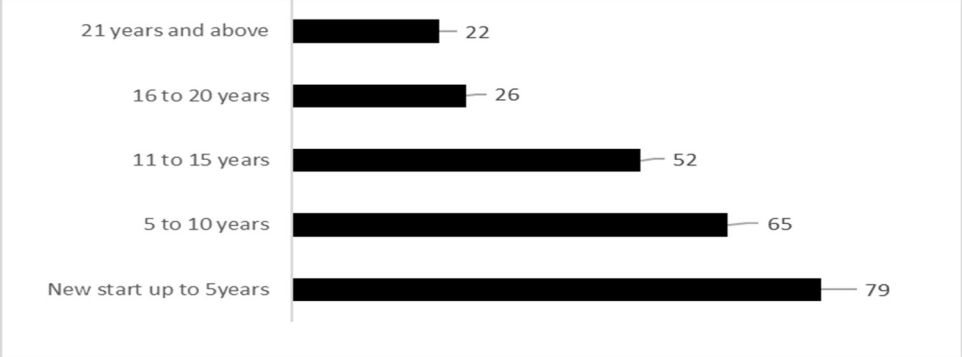
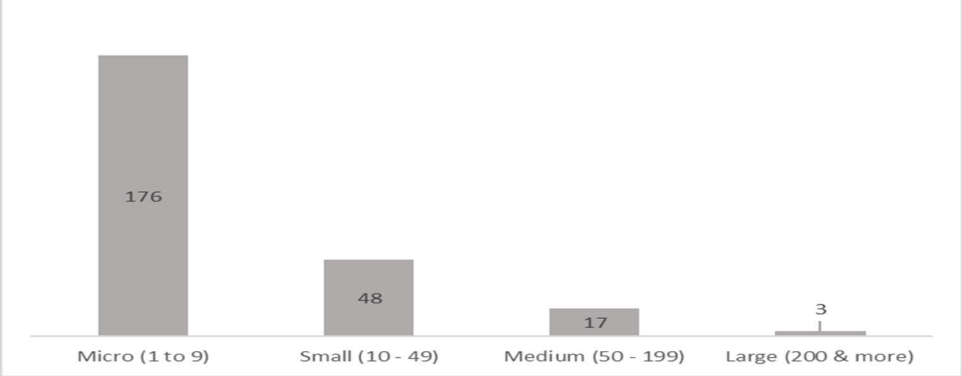


Figure 10

Employment Size Distribution of Business Owner Survey Participants



Sample Representativeness of the population. The first target population for the study was the ODCs in operation within the setting. The study covered all the twenty-eight ODCs in operations in the metropolis, thus indicating a total coverage of all the banks operating in the metropolis - a total banks' population coverage. The twenty-eight ODCs covered were twenty commercial banks, three merchant banks, one specialized bank, and four microfinance banks. The second population targeted was the household, micro, small, and medium firms within the setting. The size of the households, micro,

small, and medium scale businesses in the target population is unknown. Therefore, the study applied the non-probability convenience sampling method for the sample selection as there was no frame list for this population. The CSM was easy and inexpensive, but there is no way to tell if the sample represented the population. However, the method assumed to produce a sample that reflected the population, as the participants evenly spread across the Ibadan metropolis and different business sectors.

Treatment and/or Intervention Fidelity. The study was a cross-sectional quantitative survey design that did not involve treatment or intervention.

Analysis Results

Descriptive Statistics of the Business Owner Survey

On credit application, out of the total of 244 participants that participated in the survey, 95 participants (38.9%) had never applied for any credit facility, while the remaining 149 participants (61.1%) had applied for a credit facility. Slightly above half of the participants (55.3%) had accessed a facility for the business, while the remaining (44.7%) never had access to business financing. The percentage that had applied vis-à-vis access credit indicated that 5.8% applied but were not fortunate to access the facility. Out of the 135 participants who had access credit for business, 45 (33.3%) sourced from ODCs holding National commercial bank licenses, 25 (18.5%) for each State and Regional Microfinance ODCs (Table 4).

Table 4

Credit Provision Distribution of Participants

	Count	%
Regional Commercial bank	6	4.4

National Commercial bank	45	33.3
International Commercial bank	6	4.4
Regional Merchant bank	4	3.0
National Merchant bank	2	1.5
Non-Interest bank	8	5.9
State Micro-finance bank	25	18.5
Regional Micro-finance bank	25	18.5
National Micro-finance bank	10	7.4
Not Indicated	4	3.0
Total	135	100.0

In the total of 109 participants that indicated no access to credit facility for business (Table 5), 50 participants (45.9%) stated they did not require the facility, while 27 respondents (24.8%) indicated the need for credit but did not apply. The remaining 32 participants showed interest in credit facilities and applied; but, the ODCs denied 16(14.7%) participants credit while considering the other 16 applications as at the survey period.

Table 5

Reasons Why Credit Was Not Accessed

	Count	%
Did not require one	50	45.9
Required but did not apply	27	24.8
Required but application denied	16	14.7
Required but application under consideration	16	14.7
Total	109	100.0

Checking on the business economy and revenue of the 135 participants that had accessed credit (see Tables 6), 107 respondents (79.3%) and 109 participants (80.7%) respectively indicated improvement. Participants that claimed the business was the same

as before were 17 (12.5%) for economic condition and 15 (11.1%) for revenue, 2 participants (1.5%) each indicated deterioration for both economic condition and revenue while 9 participants preferred not to mention the economy and revenue conditions after accessing credit.

Table 6

Business, Economic, and Revenue Conditions after Credit Accessed

	Economic Condition		Revenue Condition	
	Count	%	Count	%
Improved	107	79.3	109	80.7
The same as before	17	12.5	15	11.1
Deteriorated	2	1.5	2	1.5
Non Response	9	6.7	9	6.7
Total	135	100.0	135	100.0

To check if the participants were willing to take a fresh or another credit facility for their businesses, 159 (65.2%) indicated a willingness, while the remaining 85 (34.8%) were not interested in a business capital facility.

Figure 11

Willingness for Credit Facility

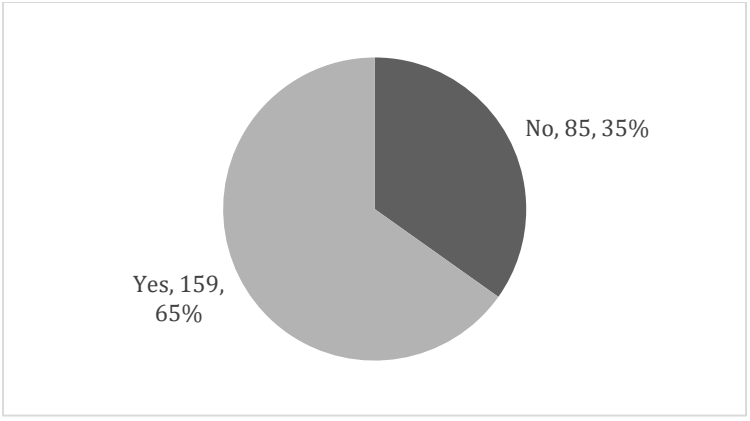


Table 7 shows that more than 85% indicate that the current business condition was better than before (63.9%) or the same as before (21.7%).

Table 7

Current Business Economic Activities and Profit

	Economic Activities		Current Profit	
	Count	%	Count	%
Better than before	156	63.9	161	66.0
The same as before	53	21.7	65	26.6
Worse than before	25	10.3	7	2.9
Non-Response	10	4.1	11	4.5
Total	244	100.0	244	100.0

Expressing individuals' views about the current business revenue, the majority of the 244 participants, 161 (66.0%) and 65 (26.6%), respectively indicated revenue was better than before and same as before (Table 7).

Statistical Assumptions: Linearity of the Secondary Data

This study assumes a linear relationship between MP decisions and ODCs credit to the different sectors of the economy, implying that the estimated model is linear in parameter. Also, since the MP Committee of the Central Bank of Nigeria undertakes MP decisions, we assume that such decisions are exogenous to the model. Additionally, the study assumed that the predictable multivariate regression models' residuals follow a Normal distribution pattern with a population mean of zero and a constant variance. These classical linear regression assumptions help ensure that the estimated model parameters are statistically valid for inference.

The tested null is of non-linearity; subsequently, a p-value of less than 0.005 indicates the rejection of the null and accepting the linearity hypothesis. Table 8

presented the results of the linearity tests conducted on the relationship between the MP rate and credit to the different sectors of the economy and the measures of the association presented. The linearity test results provide empirical in support of a linear relationship between MP and credit sectors except for commerce and finance. In terms of the measure of association - eta squared, credit to transport and communication sector recorded the highest correlation with MP rate, followed by a credit to government, credit to mining and quarry, and credit to the agricultural sector.

Table 8

Linearity Test for MPR with Credit

Sector	Eta squared	F-Statistic	Sig.
Agriculture	0.880	40.693	0.000
Commerce	0.439	0.019	0.891
Construction	0.738	19.636	0.000
Education	0.738	32.350	0.000
Finance	0.637	0.086	0.770
Government	0.873	57.236	0.000
Manufacturing	0.593	11.140	0.001
Mining and Quarry	0.870	41.990	0.000
Public Utility	0.778	6.846	0.012
Total Credit	0.779	24.235	0.000
Transportation & Communication	0.894	98.365	0.000

Statistical Analysis Findings

Results from the multiple regressions on the secondary time series data estimated reveal that the study could reject the null hypothesis at the 5 percent significance level for some sectors of the economy. These sectors include agriculture, mining, quarrying; real estate and construction; general commerce; transport and communication; government,

and education. An increase in the MP rate, which implies contractionary MP, leads to a decline in ODCs credit to agriculture, mining and quarrying, construction, transportation, and government. However, a contractionary MP generates an increase in credit to communication and education.

Conversely, the study could not reject the null hypothesis at the 5 percent significance level for a few sectors, including manufacturing, public utilities, finance, insurance, and capital market. This finding implies that MP does not impact on ODCs' credit to these sectors.

In terms of the aggregate credit to the economy, the results also confirmed that MP affects ODCs credit at the 5 percent significance level. This study documented a negative relationship between the MP rate and the aggregate credit to the economy, implying that a contractionary MP causes ODCs to cut down on credit to the economy.

Additionally, the VAR analysis of the secondary data indicated that a period lag is appropriate to linearly express credit to sectors by its past values and other variables' past values. Table 9 presented the Schwarz and Hannan-Quinn lag order selection criteria.

Table 9

VAR Lag Order Selection Criteria Results for the Secondary Data

	SC: Schwarz information criterion					HQ: Hannan-Quinn information criterion				
Lag	Manufactring	Agriculture	Solid	Construction	Finance & Insurance	Manufactring	Agriculture	Solid	Construction	Finance & Insurance
0	14.336	15.371	15.010	14.847	15.933	14.254	15.289	14.928	14.765	15.851
1	-1.271*	-0.269*	-1.199*	-1.229*	-0.937*	-1.926*	-0.925*	-1.854*	-1.882*	-1.593*
2	-0.34	0.701	-0.332	-0.271	-0.096	-1.569	-0.528	-1.562	-1.501	-1.326
3	0.601	1.624	0.607	0.618	0.893	-1.202	-0.180	-1.197	-1.186	-0.910
4	1.299	2.525	1.529	1.516	1.782	-1.078	0.147	-0.848	-0.861	-0.595
5	2.348	3.666	2.523	2.518	2.866	-0.603	0.715	-0.428	-0.433	-0.084
6	3.224	4.499	3.379	3.493	3.647	-0.3	0.974	-0.146	-0.032	0.122
7	4.384	5.607	4.534	4.534	4.825	0.286	1.509	0.436	0.435	0.727
8	5.450	6.644	5.517	5.477	5.690	0.778	1.971	0.845	0.805	1.017

Table 10 shows the VAR estimates result with the appropriate lagged value that linearly explains the current credit granted to economic sectors by ODCs with a serially uncorrelated error term by MP rate.

Table 10

VAR Estimates Results for Secondary Time Series Data

	Manufacturing	Agriculture	Solid Mineral	Construction	Finance
Sector (-1)	0.9585	0.9444	0.9618	0.9544	0.9534
Std. Error	-0.0158	-0.0246	-0.0114	-0.0125	-0.0161
t-Stat	60.6716	38.4700	84.3472	76.5384	59.1963
MP (-1)	0.0054	0.0091	0.0053	0.0034	0.0003
Std. Error	-0.0031	-0.0068	-0.0036	-0.0027	-0.0027
t-Stat	1.7230	1.3306	1.4838	1.2480	0.0928
Intercept	0.5363	0.6160	0.5136	0.5948	0.6419
Std. Error	-0.1999	-0.2497	-0.1389	-0.1550	-0.2231
t-Stat	2.6823	2.4667	3.6966	3.8379	2.8767
Adjusted R^2	0.9781	0.9677	0.9895	0.9811	0.9566

Table 11 displays the result of the residual autocorrelation test. The result showed that Agricultural and Manufacturing sectors lagged values were auto correlated at lag one, indicating that the appropriate lag for these two sectors should be lag two, which indicated that the error terms were not auto correlated.

Table 11

The result of the VAR Estimates Residual Autocorrelation

	Rao F-stat		LRE stat	
Sector	Lag 1	Lag 2	Lag 1	Lag 2
Agriculture	3.1805*	1.0120	12.5080*	4.0349
Construction	1.3929	1.6040	5.5398	6.3708

Finance	0.3122	1.5080	1.2505	5.9932
Manufacturing	5.0452*	0.7895	19.6142*	3.1521
Solid Mineral	1.5384	1.2543	6.1129	4.9933

* P<0.05

The impulse graphs that shown the stock effects were as appeared on Appendices E to G.

The study used the secondary credit data to address RQ2, and a dummy variable denoted the banking licensing regulations implemented by the CBN in 2010 in the regressions analysis. The study could not reject the null hypothesis as the multiple regressions estimates results were not significant at the 5 percent significance level for specific sectors of the economy, including agriculture, mining and quarrying, general commerce, transportation and communication, government, and finance, insurance, and capital market. Furthermore, the results show that the commercial banking licensing regulations increased ODCs credit to agriculture, mining and quarrying, transportation and communication, and government. However, the commercial banking licensing regulations decreased ODCs credit to general commerce and finance, capital market, and insurance.

Alternatively, the study could not reject the null hypothesis at the 5 percent significance level for manufacturing, real estate and construction, public utilities, and education. This result means that the CBN's commercial banking licensing regulations in 2010 did not impact ODCs credit to these sectors. Also, the result showed that the null hypothesis could not be rejected at the 5 percent significance level for the aggregate credit to the economy.

Table 12 shows the correlation of the demographic characteristics of the 135 participants that accessed credit to the ODCs' licensing type that granted the loan. The correlation test results showed that only participants' level of education, business age, and language proficiency influenced the type of ODC that could make credit available to business owners.

Table 12

Access to Credit in Relation to ODCs' License Type Correlation Results (N = 135)

	Pearson Correlation	Kendall's tau_b	Spearman's rho
Gender	-0.078	-0.060	-0.067
Age	0.003	0.006	0.003
Educational Level	-.358**	-.278**	-.357**
Marital status	0.069	0.033	0.037
Language proficiency	-.213*	-.168*	-.193*
Business Activities sector	0.112	0.069	0.085
Business Location	-0.013	-0.006	-0.007
Business ownership type	0.022	0.048	0.057
Business Age	.260**	.186**	.234**
Employment size	-0.063	-0.078	-0.090

** P < .01 * P < .05

Among the 234 participants that expressed their view about the current business economy outlook (see Table 13), 156 (66.7%) participants stated a better-than-before condition. In the group of 131 participants that accessed credit, the majority of the participants (74.8%) articulated a better-than-before business outlook, while the remaining participants stated either same-as-before (13.7%) or worse-than-before (11.5%) economic conditions. In the no credit facility group, only 56.3% of the 103 participants expressed better-than-before business performance. Consequently, the chi-

square test result for these hypotheses produced a value of 13.55 with a p-value of 0.001, indicating the rejection of the not a predictor hypothesis.

Table 13

Crosstab for Business Current Economic Activities and Access to Credit

		Business current economic activities			Total
		Better than before (%)	The same as before (%)	Worse than before (%)	
Credit Facility accessed for business?	No	58 (56.3)	35 (34.0)	10 (9.7)	103 (100.0)
	Yes	98 (74.8)	18 (13.7)	15 (11.5)	131 (100.0)
Total		156 (66.7)	53 (22.6)	25 (10.7)	234 (100.0)

χ^2 =13.535 and p = 0.001

Similarly, 233 participants responded to the question about the current profit position of the business (Table 14). Out of this, 233, 130 (55.8%) had accessed credit for their businesses. In the accessed credit group of the 130 participants, 76.9% pointed out better-than-before profit position, while 18.5% and 4.6% respectively indicated same-as-before and worse-than-before business profit conditions. Only 59.2% of the 103 participants in the no access to credit group indicated better-than-before profit conditions. The chi-square test produced a value of 14.53 with a p-value of 0.001 to reject the null hypotheses of non-prediction.

Table 14

Crosstab for Business Current Profit and Access to Credit

		Business current profit			Total
		Better than before (%)	The same as before (%)	Worse than before (%)	
Credit Facility accessed for business?	No	61 (59.2)	41 (39.8)	1 (1.0)	103 (100.0)
	Yes	100 (76.9)	24 (18.5)	6 (4.6)	130 (100.0)

Total	161 (69.1)	65 (27.9)	7 (3.0)	233 (100.0)

χ^2 =14.531 and p = 0.001

Post-hoc Analyses

The post-estimation results show that the assumption of normality of the model residuals is satisfied as indicated by the probability values of the Jarque-Bera statistic. The residuals from the estimated multiple regression relationship between MP and credit to the agriculture sector have a Jarque-Bera statistic of 3.3995 and an associated probability value of 0.1827. This result implies that the study could not reject the null hypothesis of residuals normality assumption at the 5 percent significance level. The same conclusion holds for the model estimated to understand the relationship between MP decisions and ODCs credit to the public utility sector, education, finance, insurance, and capital market. However, the normality assumption was not satisfied for the models estimated to determine the relationship between MP and credit to manufacturing, mining and quarrying, and real estate and construction sectors.

Figure 12

Normality Test for Agricultural Sector Regression

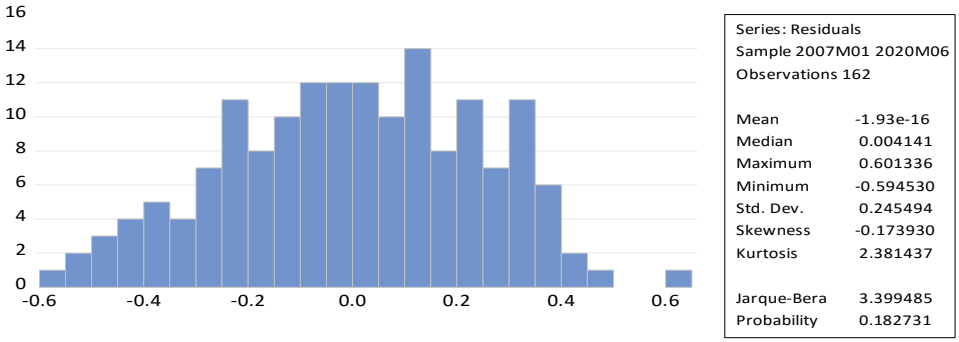


Figure 13

Normality Test for Solid Mineral Sector Regression

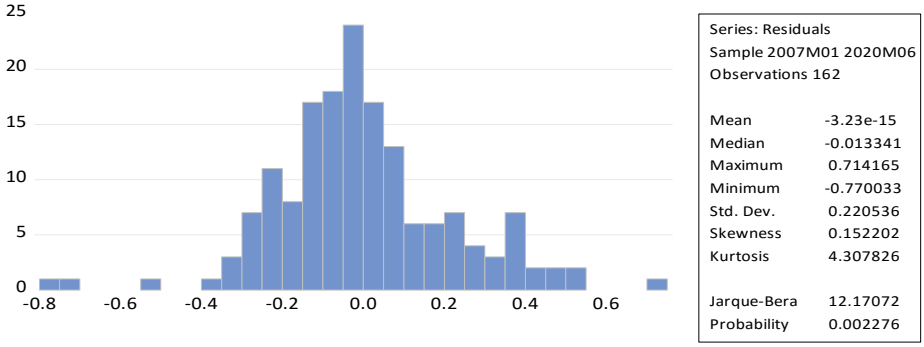


Figure 14

Normality Test for Manufacturing Sector Regression

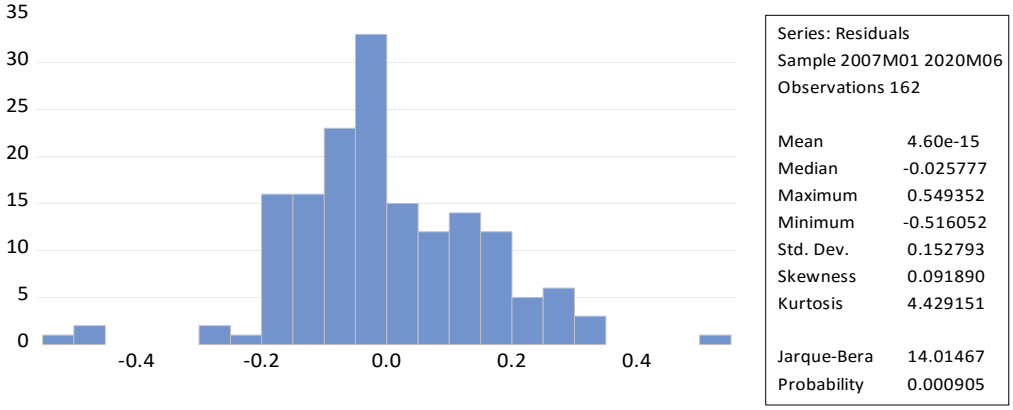


Figure 15

Normality Test for Education Sector Regression

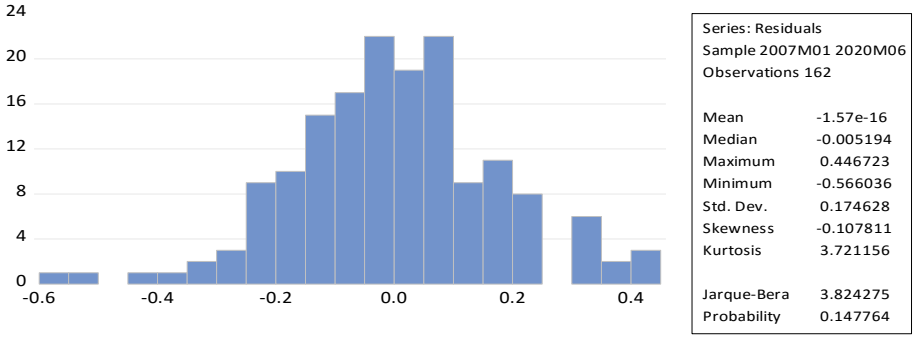


Figure 16

Normality Test for Finance, Insurance, and Capital Market Sector Regression

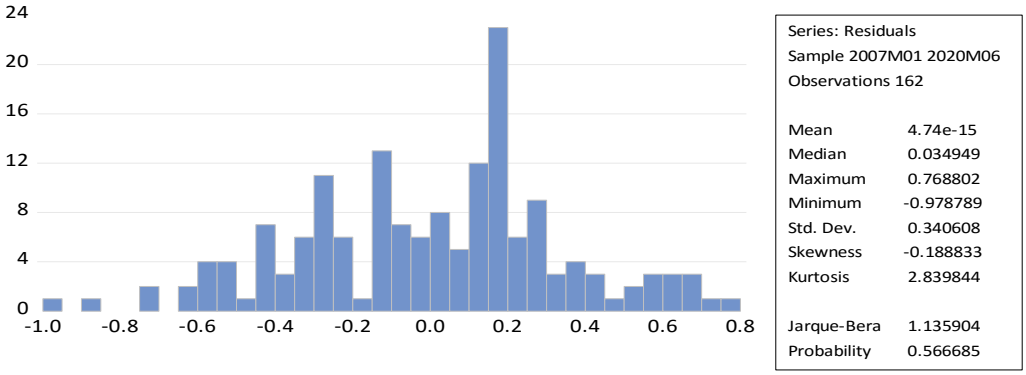
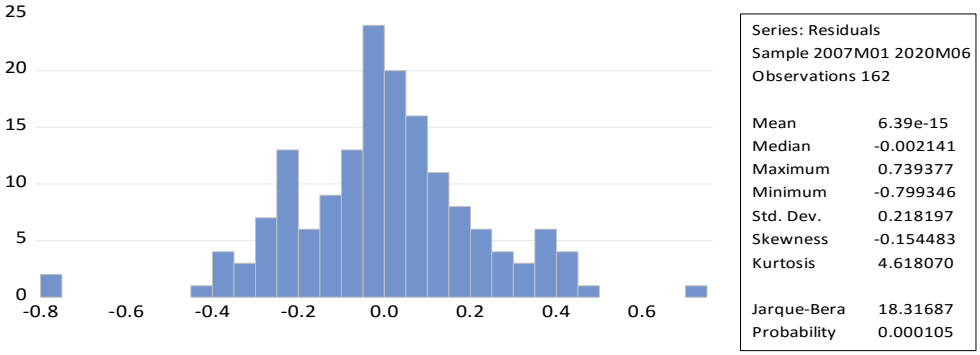


Figure 17

Normality Test for Construction Sector Regression



In addition to the observed relationship between MP actions and credit behavior of ODCs, the study found that some control variables also impact the dynamics of bank credit in different sectors of the economy. For instance, an increase in inflation and stock market capitalization leads to an increase in credit to the agricultural sector. Conversely, a depreciation of the exchange rate leads to a decrease in agricultural credit. In the case of the manufacturing sector, an increase in inflation causes credit to the sector to increase, while depreciation in the exchange rate leads to a decline in manufacturing credit. The

results also showed that credit to specific sectors of the economy does not respond to inflation. For instance, inflation is not statistically significant in the regression model for credit to public utilities. Furthermore, the study documented a statistically significant positive impact of stock market capitalization on credit to the following sectors: agriculture, mining and quarrying, real estate and construction, public utilities, transportation, communication, government, and education.

Conversely, developments in the stock market do not impact credit to the manufacturing, commerce, and finance sectors. Finally, the prime lending rate was negatively related to credit to agriculture, manufacturing, and commerce. However, the prime lending rate did not significantly impact credit to mining and quarrying, real estate and construction, public utilities, finance, transportation and communication, and government.

The effect size reported by the adjusted R2 in tables 15 to 25 shows that the combination of the six variables explained more than 90% variation in credit to government (93%), solid mineral (93%), and manufacturing (91%). The model specifications explain 88%, 85%, 84%, 82%, and 73% in credit to agriculture, construction, transport, public utility, and education sectors, respectively. However, the models could not explain up to 40% variation in credit to finance, 38% (Table 21), and commerce, 35% (Table 20).

Table 15

Regression Model for Credit to Agriculture

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0387	0.0100	-3.8572**
Max. lending rate	0.1742	0.0162	10.7765**
Prime lending rate	-0.0960	0.0253	-3.7908**
Inflation	0.0108	0.0081	1.3258
Exchange rate	-0.5785	0.1840	-3.1430**
Stock Market capitalisation	0.4377	0.1136	3.8543**
Intercept	6.0000	2.1330	2.8129**
Adjusted R^2 = 0.883			
F = 202.967**			

** P < .01

Table 16

Regression Model for Credit to Manufacturing

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0088	0.0062	-1.4165
Max. lending rate	0.1301	0.0101	12.9253**
Prime lending rate	-0.0723	0.0158	-4.5911**
Inflation	0.0306	0.0051	6.0280**
Exchange rate	-0.2470	0.1145	-2.1560*
Stock Market capitalisation	-0.0998	0.0707	-1.4115
Intercept	14.6236	1.3276	11.0153**
Adjusted R^2 = 0.912			
F = 278.874**			

** P < .01 * P < .05

Table 17

Regression Model for Credit to Mining and Quarrying

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0537	0.0090	-5.9591**
Max. lending rate	0.1935	0.0145	13.3215**

`Prime lending rate	-0.0153	0.0227	-0.6719
Inflation	0.0452	0.0073	6.1737**
Exchange rate	-0.5691	0.1653	-3.4419**
Stock Market capitalisation	0.4215	0.1020	4.1316**
Intercept	6.0267	1.9162	3.1452**
Adjusted R^2 = 0.927			
F = 339.870**			

** P < .01

Table 18

Regression Model for Credit to Real Estate and Construction

Variable	Coefficient	Std. Error	t-Statistic
MP+-	-0.0397	0.0089	-4.4578**
Max. lending rate	0.1285	0.0144	8.9445**
Prime lending rate	0.0211	0.0225	0.9386
Inflation	0.0575	0.0072	7.9378**
Exchange rate	-0.5106	0.1636	-3.1212**
Stock Market capitalisation	0.2592	0.1009	2.5680*
Intercept	8.1676	1.8959	4.3081**
Adjusted R^2 = 0.851			
F = 154.136**			

** P < .01 * P < .05

Table 19

Regression Model for Credit to Public Utilities

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0099	0.0231	-0.4276
Max. lending rate	0.1447	0.0372	3.8849**
Prime lending rate	0.0671	0.0583	1.1495
Inflation	0.0025	0.0188	0.1350
Exchange rate	1.2919	0.4240	3.0468**
Stock Market capitalisation	0.9971	0.2616	3.8109**
Intercept	-15.5377	4.9143	-3.1617**
Adjusted R^2 = 0.821			
F = 123.864**			

** P < .01

Table 20

Regression Model for Credit to Commerce

Variable	Coefficient	Std. Error	t-Statistic
MP	0.0154	0.0068	2.2772*
Max. lending rate	0.0376	0.0109	3.4435**
Prime lending rate	-0.0484	0.0171	-2.8359*
Inflation	0.0161	0.0055	2.9269*
Exchange rate	-0.1092	0.1242	-0.8799
Stock Market capitalisation	-0.1453	0.0766	-1.8970
Intercept	16.1724	1.4390	11.2387**
Adjusted R^2 = 0.353			
F = 15.616**			

** P < .01

Table 21

Regression Model for Credit to Finance

Variable	Coefficient	Std. Error	t-Statistic
MP	0.0165	0.0139	1.1900
Max. lending rate	0.0154	0.0224	0.6854
Prime lending rate	-0.0471	0.0351	-1.3411
Inflation	0.0723	0.0113	6.4001**
Exchange rate	0.0771	0.2554	0.3021
Stock Market capitalisation	-0.0197	0.1576	-0.1250
Intercept	12.9131	2.9595	4.3633**
Adjusted R^2 = 0.375			
F = 17.128**			

** P < .01

Table 22

Regression Model for Credit to Transport and Communication

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0773	0.0093	-8.2955**

Max. lending rate	0.1952	0.0150	12.9938**
Prime lending rate	0.0119	0.0235	0.5064
Inflation	0.0417	0.0076	5.5113**
Exchange rate	-1.4245	0.1710	-8.3287**
Stock Market capitalisation	0.2851	0.1055	2.7011**
Intercept	11.8053	1.9823	5.9553**
Adjusted R^2 = 0.841			
F = 143.254**			

** P < .01

Table 23

Regression Model for Credit to Government

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0840	0.0093	-9.0464**
Max. lending rate	0.2265	0.0150	15.1208**
Prime lending rate	0.0121	0.0235	0.5158
Inflation	0.0417	0.0075	5.5312**
Exchange rate	-0.8161	0.1705	-4.7865**
Stock Market capitalisation	0.3251	0.1052	3.0904**
Intercept	6.6382	1.9761	3.3593**
Adjusted R^2 = 0.931			
F = 363.271**			

** P < .01

Table 24

Regression Model for Credit to Education

Variable	Coefficient	Std. Error	t-Statistic
MP	0.0202	0.0071	2.8375**
Max. lending rate	0.0442	0.0115	3.8407**
Prime lending rate	0.0392	0.0180	2.1792*
Inflation	0.0579	0.0058	9.9974**
Exchange rate	-1.5354	0.1309	-11.7279**
Stock Market capitalisation	0.2906	0.0808	3.5974**
Intercept	12.2607	1.5173	8.0806**
Adjusted R^2 = 0.725			

F = 71.824**	

** P < .01

Table 25

Regression Model for Total Credit

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0233	0.0068	-3.4316**
Max. lending rate	0.1229	0.0110	11.1970**
Prime lending rate	-0.0252	0.0172	-1.4665
Inflation	0.0412	0.0055	7.4601**
Exchange rate	-0.3350	0.1249	-2.6822**
Stock Market capitalisation	0.2029	0.0771	2.6328**
Intercept	11.4845	1.4477	7.9331**
Adjusted R^2 = 0.903			
F = 250.669**			

** P < .01

The study examined the effect of the 2010 banking license on the banks' credit behavior with the secondary time series credit data by denoting the license policy implemented by the Central Bank of Nigeria in 2010 by a dummy variable labeled "policy" for the following regression analyses. The policy served as one of the independent variables to model the credit to various sectors, as shown in Tables 26 through 36. The models confirm significant effects of the policy on credit extended to the agriculture, mining and quarry, commerce, finance and insurance, transport and communication, and government sectors. However, the effects on manufacturing, real estate, public utilities, and education were not statistically significant. The policy variable in the model specifications has no additional value to explain variation (adjusted R2) without a policy for manufacturing, solid mineral, construction, public utility, and

education sectors. However, the policy as a variable slightly moved variation explained in agriculture 88% to 92%; 35% to 39% for commerce; 38% to 43% for finance; 84% to 86% for transport; and 93% to 94% for government sectors of the economy (see Tables 26 to 36).

Table 26

Regression Model for Credit to Agriculture with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	0.0289	0.0171	1.6915
Max. lending rate	0.1005	0.0217	4.6207**
Prime lending rate	-0.1084	0.0239	-4.5401**
Inflation	0.0010	0.0079	0.1219
Exchange rate	0.0248	0.2146	0.1154
Stock Market capitalisation	0.3557	0.1079	3.2980**
Policy	0.5789	0.1224	4.7279**
Intercept	5.2821	2.0055	2.6338**
Adjusted R^2 = 0.897			
F = 201.131**			

** P < .01

Table 27

Regression Model for Credit to Manufacturing with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0027	0.0114	-0.2399
Max. lending rate	0.1234	0.0145	8.5307**
Prime lending rate	-0.0735	0.0159	-4.6252**
Inflation	0.0297	0.0053	5.6363**
Exchange rate	-0.1925	0.1427	-1.3486
Stock Market capitalisation	-0.1072	0.0717	-1.4937
Policy	0.0523	0.0814	0.6420
Intercept	14.5588	1.3339	10.9142**
Adjusted R^2 = 0.912			
F = 238.187**			

** P < .01

Table 28

Regression Model for Credit to Mining and Quarrying with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	0.0014	0.0156	0.0915
Max. lending rate	0.1334	0.0198	6.7419**
Prime lending rate	-0.0254	0.0217	-1.1702
Inflation	0.0372	0.0072	5.1606**
Exchange rate	-0.0776	0.1952	-0.3974
Stock Market capitalisation	0.3547	0.0981	3.6144**
Policy	0.4716	0.1114	4.2338**
Intercept	5.4418	1.8247	2.9824**
Adjusted R^2 = 0.934			
F = 325.689**			

** P < .01

Table 29

Regression Model for Credit to Real Estate and Construction with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0346	0.0163	-2.1248*
Max. lending rate	0.1229	0.0207	5.9449**
Prime lending rate	0.0202	0.0227	0.8885
Inflation	0.0567	0.0075	7.5380**
Exchange rate	-0.4646	0.2040	-2.2774*
Stock Market capitalisation	0.2530	0.1025	2.4667*
Policy	0.0441	0.1164	0.3789
Intercept	8.1129	1.9066	4.2552**
Adjusted R^2 = 0.850			
F = 131.407**			

** P < .01 * P < .05

Table 30

Regression Model for Credit to Public Utilities with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0592	0.0419	-1.4124

Max. lending rate	0.1985	0.0533	3.7260**
Prime lending rate	0.0761	0.0585	1.3014
Inflation	0.0097	0.0194	0.5007
Exchange rate	0.8518	0.5257	1.6203
Stock Market capitalisation	1.0569	0.2642	3.9996**
Policy	-0.4224	0.2999	-1.4082
Intercept	-15.0139	4.9129	-3.0560**
Adjusted R^2 = 0.822			
F = 107.126**			

** P < .01

Table 31

Regression Model for Credit to Commerce with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0155	0.0120	-1.2900
Max. lending rate	0.0712	0.0152	4.6740**
Prime lending rate	-0.0428	0.0167	-2.5551*
Inflation	0.0206	0.0055	3.7100**
Exchange rate	-0.3846	0.1504	-2.5582*
Stock Market capitalisation	-0.1079	0.0756	-1.4279
Policy	-0.2643	0.0858	-3.0806**
Intercept	16.5002	1.4052	11.7425**
Adjusted R^2 = 0.386			
F = 15.474**			

** P < .01 * P < .05

Table 32

Regression Model for Credit to Finance with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0605	0.0243	-2.4910*
Max. lending rate	0.0994	0.0309	3.2201**
Prime lending rate	-0.0329	0.0339	-0.9708
Inflation	0.0835	0.0112	7.4343**
Exchange rate	-0.6105	0.3047	-2.0037*
Stock Market capitalisation	0.0737	0.1532	0.4814
Policy	-0.6599	0.1738	-3.7959**
Intercept	13.7314	2.8474	4.8225**

Adjusted R^2 = 0.425	
F = 18.010**	

** P < .01 * P < .05

Table 33

Regression Model for Credit to Transport and Communication with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0218	0.0162	-1.3516
Max. lending rate	0.1348	0.0205	6.5633**
Prime lending rate	0.0017	0.0225	0.0757
Inflation	0.0336	0.0075	4.5037**
Exchange rate	-0.9299	0.2026	-4.5896**
Stock Market capitalisation	0.2179	0.1018	2.1392*
Policy	0.4747	0.1156	4.1063**
Intercept	11.2166	1.8935	5.9237**
Adjusted R^2 = 0.856			
F = 137.766**			

** P < .01 * P < .05

Table 34

Regression Model for Credit to Government with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0296	0.0161	-1.8354
Max. lending rate	0.1671	0.0205	8.1521**
Prime lending rate	0.0021	0.0225	0.0925
Inflation	0.0338	0.0075	4.5331**
Exchange rate	-0.3308	0.2023	-1.6349
Stock Market capitalisation	0.2592	0.1017	2.5487*
Policy	0.4658	0.1154	4.0349**
Intercept	6.0606	1.8908	3.2054**
Adjusted R^2 = 0.937			
F = 344.398**			

** P < .01 * P < .05

Table 35

Regression Model for Credit to Education with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	0.0066	0.0130	0.5106
Max. lending rate	0.0590	0.0165	3.5834**
Prime lending rate	0.0418	0.0181	2.3086*
Inflation	0.0599	0.0060	9.9945**
Exchange rate	-1.6569	0.1625	-10.1951**
Stock Market capitalisation	0.3071	0.0817	3.7593**
Policy	-0.1166	0.0927	-1.2573
Intercept	12.4052	1.5188	8.1677**
Adjusted $R^2 = 0.726$			
$F = 62.020$**			

** P < .01 * P < .05

Table 36

Regression Model for Total Credit with Banking License Policy

Variable	Coefficient	Std. Error	t-Statistic
MP	-0.0149	0.0124	-1.2046
Max. lending rate	0.1137	0.0158	7.2133**
Prime lending rate	-0.0267	0.0173	-1.5454
Inflation	0.0400	0.0057	6.9767**
Exchange rate	-0.2600	0.1555	-1.6720
Stock Market capitalisation	0.1927	0.0782	2.4654*
Policy	0.0720	0.0887	0.8112
Intercept	11.3953	1.4535	7.8402**
Adjusted $R^2 = 0.903$			
$F = 214.479$**			

** P < .01 * P < .05

The analysis of the business owner's survey, as shown in Table 37, presented a clear and highly significant relationship of 0.77 between credit application and credit assessment. Both the credit application and accessed were significantly pairwise related

to business age 0.270 and 0.218, business location (-0.226 and -0.158); employment size (0.126 and 0.152); participant's marital status (0.188 and 0.190); and age (0.136 and 0.155) at 5% level of significance.

Table 37

Nonparametric Correlation Coefficients

	Credit Application	Accessed Credit
Gender	-0.039	0.014
Age	0.136*	0.155*
Educational Level	0.047	0.089
Marital status	0.188**	0.190**
Language proficiency	-0.021	-0.082
Business Activities sector	-0.122	-0.065
Business Location	-0.226**	-0.158*
Business ownership type	0.088	0.083
Business Age	0.270**	0.218**
Employment size	0.126*	0.152*
Credit Application	--	0.770**
Credit Accessed		--

* P< .05. ** p < .01.

The study teated the identified factors that constrain business activities about the activity's sector, and only eight out of the fifteen factors were found significant. The MP, exchange policy, labor problem, unfavorable political climate, and insufficient electrical power supply were highly significant at the 1% significance level. The unclear economic law or order, access to credit, and lack of input were significantly related to business activities in different sectors of the economy at a 5% significant level.

Table 38

Factors Constraining Business Activities in Economic Sectors

		chi square value	p-value
Factors that constrained your business activities	MP	26.9	0.008
	Fiscal Policy	10.3	0.593
	Exchange rate policy	28.8	0.004
	High Interest rate	13.8	0.315
	High fee /commission	16.7	0.161
	Unclear Economic law/Order	25.6	0.012
	Low product demand	18.0	0.114
	Access to credit	23.6	0.023
	Financial Problem	18.0	0.115
	Competition	14.1	0.292
	Labor Problems	27.1	0.008
	Lack of product input	21.2	0.047
	Unfavorable political climate	29.6	0.003
	Unfavorable economic climate	16.2	0.180
	Insufficient power supply	28.6	0.005

For the credit officers survey, 28 ODCs' submitted and the license type the branches hold are as shown in Table 39.

Table 39

ODC by License Type

	Count	%
Regional Commercial bank	2	7.1
National Commercial bank	10	35.7
International Commercial bank	8	28.6
Regional Merchant bank	2	7.1
National Merchant bank	1	3.6
Non-Interest bank	1	3.6
State Micro-finance bank	3	10.7
National Micro-finance bank	1	3.6
Total	28	100.0

Analyzing the credit behavior questionnaires, 22 banks (78.6%) stated that Credit creation activities relative to the previous year improved while the remaining banks felt it was the same as the previous year. All 28 banks felt that the current credit behavior was better than before. About half 15 (53.6%) of the banks stated that the MP Committee decision eased their credit creation activities, 10 (35.7%) felt the committee decisions tightened credit creation activities, and 3 (10.7%) felt no change in credit behavior. 22 (78.6%) noted that credit applications received relative to the previous year increased, while 4 (14.3%) showed a deceased and 2 (7.1%) stated that the same number of applications was received relative to the previous year. On credit, applications treated, denied, and approved, 19 (67.9%), 11 (39.3%), and 17 (60.7%) respectively indicated an increase over the previous year; 7 (25.0%), 8 (28.6%), and 8 (28.6%) indicated same for applications treated, denied and approved respectively. Lastly, 2 (7.1%), 9 (32.1%), and 3 (10.7%) showed that lesser applications were treated, denied, and approved, respectively. Furthermore, application received was significantly affected by borrower's creditworthiness (0.000); market share (0.001); unclear economic law or order (0.008); level of non-performing loan (0.015); exchange rate (0.017); general economic outlook (0.019); and MP rate (0.040). Similarly, application treated was affected by borrower's creditworthiness at 1% significant level, cost or availability of fund, market share, banking business outlook, bank's risk tolerance limit and MP rate at 5% significant level. The study found that borrowers' creditworthiness and business economic sector-specific risk influenced the number of approved applications by ODCs at a p-value less than 0.01. The ODC's risk tolerance, MP rate, Banking business outlook, and Cost/availability of

funds were significant at a p-value less than 0.05. However, overall, only general economic condition or outlook was the significant factor that hindered ODCs; credit behavior with a p-value of 0.037.

Table 40

Factors Constraining Banking Credit Behavior

	Statistics	df	P value
MP	6.866	7	0.443
Fiscal Policy	16.407	14	0.289
Exchange rate policy	17.439	14	0.234
MP rate	16.526	14	0.282
Unclear Economic law/Order	16.092	14	0.308
Lack of collateral	12.166	14	0.593
Banking business outlook	9.915	14	0.768
Market share objectives	6.097	14	0.964
Appetite / Perception for risk	16.498	14	0.284
Cost/availability of funds	8.794	14	0.844
Market pressure from capital market	13.339	14	0.500
Business economic sector specific risk	5.256	7	0.629
Business age	17.085	14	0.252
Business ownership type	22.813	14	0.063
Business employment size	20.770	14	0.108
Business location	17.919	14	0.211
Unfavorable political climate	11.247	14	0.667
Unfavorable economic climate	19.444	14	0.149
Level of non-performing loans	14.018	14	0.448
Lack of credit applications	14.327	14	0.426
Pressure from completion / completion from other banks	19.158	14	0.159
Pressure from completion / completion from non-bank institutions	15.705	14	0.332
Bank's risk tolerance	21.344	14	0.093
Borrower's credit worthiness	10.182	7	0.179
General economic condition / outlook	14.933	7	0.037

Lastly, investigating the mean difference in the number of applications received, treated, denied, and approved across the banking license type in the credit officers'

survey, only the denied category was significantly different with a p-value of 0.001 as in Table 41.

Table 41

Analysis of Mean Variance Across License Type

		F statistics	P-value
Number of applications	Received	3.439	0.087
	Treated	1.107	0.546
	Denied	10.785	0.001
	Approved	1.441	0.491

Summary

RQ1 relates to the relationship between MP decisions and ODCs sectoral credit behavior in Nigeria. The study used secondary data to consider ten sectors: agriculture, manufacturing, mining and quarrying; real estate and construction; public utilities; general commerce; finance, capital market, and insurance; transport and communication; government; and education. The results show a statistically significant relationship between MP decisions and ODCs credit to seven sectors of the economy. Agriculture, mining and quarrying; real estate and construction; general commerce; transport and communication; government; and education. Whereas a contractionary MP - increase in the MP rate, causes a decline in ODCs credit to agriculture; mining and quarrying; real estate and construction; transportation and communication; and government, a similar policy decision leads to an increase in ODCs credit to transport and communication, and education.

Conversely, the study could not reject the null hypothesis of the absence of any statistically significant relationship between MP and ODCs sectoral credit at the 5 percent

significance level for some sectors. These sectors are manufacturing; public utilities; and finance, insurance, and capital market. ODCs credit behavior to these sectors is not affected by MP decisions. Also, the model specifications recorded a sizeable effect size for the sectors except for the commerce and finance sectors. Overall, the model variables explained about 90% variance in total credit.

RQ2 involved whether the 2010 commercial license policy of the Central Bank of Nigeria has a statistically significant impact on ODCs sectoral credit behavior. In this regard, secondary time series data include a policy dummy in the regressions to capture the commercial banking licensing regulations. The estimated multiple regressions showed that the study could not reject the null hypothesis of no statistically significant impact of the commercial license policy on ODCs credit behavior at the 5 percent significance level for six sectors of the economy. The sectors are agriculture, mining, quarrying; general commerce; transportation and communication; government; finance; capital market and insurance. The commercial banking licensing regulations caused an increase in ODCs credit to agriculture, mining and quarrying, transportation and communication, and government. However, the policy led to a decrease in ODCs credit to two sectors of the economy: (a) general commerce and (b) finance, capital market, and insurance. Conversely, the study could not reject the null hypothesis that the 2010 commercial banking license policy had no statistically significant impact on ODCs credit to manufacturing, real estate, construction, public utilities, and education. These imply that the commercial banking license regulations implemented by the CBN in 2010 did not have significant impacts on ODCs credit to these sectors. The results further showed that

the 2010 commercial banking license policy did not significantly impact overall credit to the economy. The result show a sizeable effect sizes for all the sectors except Finance and commerce sectors.

RQ3 was about ODCs' credit creation activities to enhance households and small commerce economic performance in the usefulness of ODCs' lending to various economic activities sectors. The business owners' survey data indicated that the study could not reject the null hypotheses of the credit not relevant to households and firms' economic performances for the two indicators used. In the business outlook indicator, 74.8% of the group that accessed credit specified better-than-before against 11.5% worse-than-before. Similarly, 76.9% of the accessed credit group indicated better-than-before for the profit indicator, while only 4.6% stated worse-than-before. These results showed that accessing business financing from ODCs boosted both the current economic activities and the profit of the participants' businesses. Furthermore, the analysis shows that business owners' age, marital status, business location, and age could significantly influence firms' access to ODCs' financing at a 0.05 significant level. Lastly, access to ODCs' credit is highly associated with to business owner's credit application.

Conclusion

This study investigates the relationship between MP decisions of the Central bank of Nigeria and the credit behavior of the ODCs to the different sectors of the Nigerian economy. The ten sectors considered include agriculture; manufacturing; mining and quarrying; real estate and construction; public utilities; general commerce, finance, insurance, capital market; transport and communication, government; and education. The

study found a statistically significant relationship between MP and ODCs credit to agriculture; mining and quarrying; real estate and construction; general commerce; transport and communication; government; and education. In terms of the magnitude of impact, the estimated coefficients for the respective sectoral credits are as follows agriculture (-0.0387); mining and quarrying (-0.0537); real estate and construction (-0.0397); general commerce (0.0154); transport and communication (-0.0773); government (-0.0840); and education (0.0202). These imply that the highest impact is recorded by credit to government, followed by transport and communication, and mining and quarrying. At 0.0154, the study recorded a least impact by credit to general commerce in response to MP decisions. Regarding the sign of the impact, the result found that a contractionary MP causes a decline in ODCs credit to agriculture; mining and quarrying; real estate and construction; transport and communication; and government. Surprisingly, a contractionary MP causes an increase in ODCs credit to the education sector.

Furthermore, the study could not find evidence to reject the null hypothesis of the absence of any statistically significant relationship between MP and ODCs credit to manufacturing; public utilities; and finance, insurance, and capital market. Chapter 5 will further interpret the study findings, and discuss the implications for Nigeria economy. Furthermore, findings regarding the demand side of credit allocation would be analyzed using survey returns, and discussed how ODCs should better develop loan products for their customers. Thus, the study offers recommendations to both the CBN and ODCs

based on the findings. Finally, the implications for social change discussed, and limitations of the study highlighted.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The primary purpose of this quantitative time-series quasi-experimental study was to evaluate the effect of MP decisions on ODCs' credit behavior in different Nigerian economy sectors. The study provided evidence that policy rates impacted banks' credit creation performance and performances differ among banks per the banking license type each ODC holds. The extent to which government MPs have influenced the ability of ODCs to lend to the private sector prompted this study. This study applied both secondary and primary data related to credit creation and access to investigate ODCs' credit creation performance.

This study investigated whether MP impacts ODCs' credit creation behavior in Nigeria using sector-level secondary and primary data. The following research questions and hypotheses were addressed in this study:

RQ1: is there a statistically significant relationship between MP shocks and ODCs' credit behavior?

$H_0 1$: There is no statistically significant relationship between MP shocks and ODCs' credit behavior.

$H_a 1$: There is a statistically significant relationship between MP shocks and ODCs' credit behavior.

RQ2: Have commercial banking licensing regulations implemented by the CBN in 2010 improved ODCs' credit to the private sector?

H_02: Commercial banking licensing regulations implemented by the CBN in 2010 have not improved ODCs' credit in the private sector.

H_a2: Commercial banking licensing regulations implemented by the CBN in 2010 have improved ODCs' credit in the private sector.

RQ3: Do ODCs' credit creation activities enhance the economic performance of households and small businesses?

H_03: ODCS' credit creation activities do not enhance the economic performance of households and small businesses.

H_a3: ODCs' credit creation activities do enhance the economic performance of households and small businesses.

This study was carried out based on the hesitation of ODCs to adequately provide credit to boost the performance and productivity of the private sector. This ODCs' reluctance necessitated checking the extent to which MP has influenced banks' ability to advance to the private sector to improve the general well-being of the Nigerian citizenry.

Results from the study showed that MP has varied impacts on credit advanced by ODCs to different sectors of the Nigerian economy. A contractionary MP decision implemented via an increase in the MPR leads to a decline in the number of loans extended by ODCs to specific sectors of the economy, including agriculture, mining and quarrying, construction, communication, transportation, government, and education. However, there was no statistically significant impact of MP on credit to sectors such as manufacturing, public utilities, finance, insurance, and capital markets. In addition, commercial banking licensing regulations implemented by the CBN in 2010 caused an

increase in the amount of credit extended by ODCs to agriculture, mining and quarrying, transportation, and government. Nonetheless, remaining sectors of the economy did not record any statistically significant changes as a result of commercial banking licensing policies. Finally, results from primary data analysis showed that most respondents who accessed credit recorded improvements in terms of revenues and overall economic activities.

Interpretations of the Findings

The results extend current knowledge regarding the relationship between MP and the credit behavior of banks as it focused on responses of different sectors of the economy to MP shocks and ODCs' credit behavior. Also, this study aligned with Lartey (2018) on the signaling effect of MP rate on banks lending rates that a contractionary MP shock arising from an increase in the MP rate leads to a decline in the money supply. Thus, this study recorded that the contractionary MP reduces the availability of credit to some selected sectors of the Nigerian economy. The estimated regressions showed that contractionary MP causes a decline in credit to agriculture, mining and quarrying, construction, transportation, and government. Conversely, a contractionary MP increases the credit for the communication and education sectors of the Nigerian economy.

Furthermore, this study extends existing literature in several ways. First, the study showed that MP actions generate mixed effects on credit to different sectors of the Nigerian economy. Second, the study found that the commercial banking license policy of the CBN introduced in 2010 impacted the credit behavior of ODCs in Nigeria. Nevertheless, the size of the impact on different sectors of the economy varies. Lastly,

results showed that contractionary MP which leads to high-interest rates and economic uncertainties, discourages households and SMEs from obtaining business loans in Nigeria.

The study focused on the impact of MP actions on ODCs' lending activities concerning modern growth, policy feedback, and institutional theories. The results affirmed the role of ODCs in mobilizing saving and investment for economic growth in line with the contemporary growth theory (Acemoglu, 2012). The sector-specific analysis showed that a contractionary MP (often implemented during periods of high inflation and economic growth) leads to a decline in credit to most Nigerian economy sectors. Conversely, an expansionary MP, which implies a reduction in the MP rate, releases liquidity to the ODCs, causing them to increase their lending to both households and firms. Thus, the result of this study affirms the critical role of MP in driving the credit behavior of ODCs to different sectors of the Nigerian economy. An expansionary MP, for instance, entails a reduction in the MP rate, which in turn leads to an increase in credit to the private sector. An increase in ODCs credit to the private sector ultimately helps to boost output; thus, generating positive social outcomes such as reduction in poverty, unemployment, and inflation rates, and improvement in the standard of living.

The result confirms the InT (Meyer & Rowan, 1977; DiMaggio & Powell, 1983) in providing the exclusive perception for understanding critical characteristics of the institutional-organizational interplay of the central bank of Nigeria to credit occurrences and outcomes (Riaz, 2009). The study's result also indicated that the central bank's institutional environment strongly influences the development of formal banking

structure about their credit creation behavior. The systems, norms, rules, and routines that define the Nigerian banking industry activities based on the 2010 banking license policy of the CBN generated different credit behavior patterns among the banks (Montiel, 1995). The results showed that the licensing type of 2010 led to an increase in ODCs credit to agriculture, mining and quarrying, transportation and communication, and government, but decreased credit to general commerce, finance, insurance, and capital market. Thus, the InT framework applied in the study showed the extent to which the Nigerian financial institutions promote long-term economic growth and development.

This study aligns with other scholarly work to confirm that policy actions can influence future policies and growth. The results showed the significance of policy actions on ODCs' credit behavior and the implications of ODC credit creation on the business performances of household, micro, small and medium enterprises. This study affirms the position by Weible and Sabatier (2018) that changes in policy direction could affect operations and the general well-being of the public. Changes in MP affect the lending behavior of ODCs, which in turn impacts businesses performances and the welfare of citizens. This finding is consistent with Mettler and SoRelle (2018), who showed that public policy decisions influence the essential behavior of the actors and the people targeted by the policy.

Limitations of the Study

This study was limited to Ibadan metropolis of Oyo state, south-western part of Nigeria. Subsequently, the findings may have been affected by specific limitations associated with the quantitative time-series quasi-experimental longitudinal design. Such

as data collection technique, questionnaire sensitivity and sample size might have obstructed the data outcomes. However, the validity was enhanced by a control group of households and small firm businesses that did not have access or had not accessed bank credit within the sample size for comparison. The study achieved generalizability criterion by including all household, micro, small and medium firm that either have utilized credit or not via a Conveniences selection method. Another limitation was that the study focused only on small businesses that sourced fund from ODCs and does not cover other unstructured sources of fund to ensuring consistency with the study objectives. The generalizability of the study is limited the fact that the findings could only be generalized for other part of the country that share similar socio-cultural values with the sample setting used. Nevertheless, some level of caution is required in generalizing the study findings to regions with slightly different value systems, especially with regards to accessing commercial bank loans. Also, since the study period covered January 2007 to June 2020 as against the initial proposed January 2000 to December 2019 due to data availability issues, some level of caution is required in generalizing the findings of the study to the pre-study period.

This study examined the impact of MP actions on ODCs' credit behavior towards different sectors of the Nigerian economy, thus, a major limitation of the study relates to data. Despite the fact regulatory data on MP actions are reliable, there may be some inconsistencies in the categorization of loans to different sectors by the ODCs. However, there are guidelines on how to properly classify loans granted to the different sectors, some bias may be introduced if an ODCs misclassifies its lending, either erroneously or

deliberately. Also, there were limitations in terms of having access to some potential respondents, especially those whose loans had gone bad and the ODCs had realized their collateral. Furthermore, the anonymous participants' data obtained via self-report surveys, facilitated data collection, but had the potential to reduce data quality.

Recommendations

Recommendations for Action

The findings of the study suggest that the impact of MP response on ODCs' credit to the different sectors of the economy is varied. Also, the 2010 commercial banking license policy of the Central Bank of Nigeria has varied impacts on the credit behavior of ODCs to different sectors of the economy. Based on these broad findings, a number of recommendations made as follows:

The Central Bank of Nigeria is encouraged to pursue sector-specific policies towards encouraging lending by the ODCs to crucial sectors of the economy. The proposed sector-specific approach by this study has the benefit of ensuring that the growth pillars of the economy are given primary focus, especially during periods of economic recession.

The study failed to find any statistically significant relationship between MP actions and credit to specific sectors of the economy - manufacturing, public utilities, finance, capital market, and insurance. Therefore, I recommend that the Central Bank of Nigeria intensify efforts and sustain the developmental interventions targeting the manufacturing sectors - Small and Medium Enterprises Equity Investment Scheme (SMEEIS).

The commercial banking license policy implemented by the Central Bank of Nigeria in 2010 had unexpected negative impacts on ODCs' credit to sectors such as general commerce; and finance, capital market, and insurance. Also, the results failed to find any statistically significant relationship between the policy and ODCs' credit to manufacturing, real estate and construction, public utilities, and education. Therefore, the Central Bank of Nigeria should continue to monitor the effectiveness of the policy and its response to sector-specific issues that may arise from time to time.

Also, the government should continue to develop policies and programs capable of reducing the cost of doing business in Nigeria. This recommendation will ensure the reduction of the interest rate charges by ODCs on loans and advances to a bearable level. Such reduction of interest rate will encourage more households and firms to borrow for productive economic activities, which will, in turn, lead to improved standard of living and positive social change.

Lastly, since the results showed that economic uncertainties discourage the private sector from accessing bank loans, the government should continue to pursue policies to ensure financial stability.

Recommendations for Further Research

This study investigated the impact of MP actions on ODCs' credit to the different sectors of the economy. It also studies the impact of the 2010 commercial banking license policy of the Central Bank of Nigeria on ODCs' credit to the sectors. Here, we recommend areas of further research as follows:

The dataset used for the analysis covered a limited period of January 2007 to June 2020. Extending the data set beyond the sample period considered in this study is a valuable avenue for future research.

A more detailed study on why the commercial banking license policy of 2010 may not have yielded the expected outcomes for ODCs' credit to specific sectors of the economy will also be beneficial.

Since culture matters for the credit behavior of households and firms, a study that would involve other parts of the country could be a way to further this research. This recommended study will allow for the comparison of results across different parts of the country. In other words, future research could focus on an expanded sample of respondents for robustness.

Implications for Social Change

The Nigeria government, through one of its institutions – central bank remains committed to formulation of series of MPs channel towards credit availability to household, micro, small, and medium firms for economic growth and development. Still, there seems to be not much to outcome to display for the effort in view of household and MSME businesses performance to improve growth and economic development. The household and small firms had found access to credit difficult due to the rigidness of the ODCs credit behavior. Thus, the findings of the study could help in the designing of more effective MPs capable of boosting ODCs' lending to the private sector. Thus, an upsurge in credit to the private sector could lead to improved economic activities with its associated effects on employment generation, increased income, poverty alleviation, and

improved standard of living for the study to aligning with Okpara et al., (2018). Hence, the enabled policy recommendations the study suggested for the MP makers to further design policies, would help in promoting private sector access to business credit leading to improved financial funds access capable of improving residents' wellbeing and stimulating economic growth. Also, the findings of this study would benefit the ODCs in betterment package of advances and loans products to the private sector; thereby translating into firms and households increased availability of credit for economic businesses activities expansion. The improved business activities and its effects will afterward avail individual and businesses to witness a positive social change.

The performance of the Nigeria private sector – household and firms, has been appalling over the years leading to high unemployment and poverty rates, and these social problems are linked to lack of access to credit required to drive inclusive economic growth (Okpara et al., 2018). This study evaluated the influence of MP on ODCs' loan and advances to different sectors of the Nigerian economy. The results of this study enhanced the understanding of sectoral dynamics for the monetary authority to further improve MP formulation in addressing sector-specific challenges threatening economic activities in order to influence positive social change in the country. The social change comes about by the ultimate goal of improvement in economic development and growth that the study's recommendation would bring about in the form of lower unemployment, increased welfare, lower poverty, higher income, and increased standard of living. Thus, the study contributed to the debate on the impacts of MP decisions on ODCs' lending to different sectors of the Nigerian economy and achieving positive social change,

especially with regards to employment generation, improved business performance and general benefit of the nations. Lastly, the social change implication of this study is that the implementation of the action recommendation by the institution in charge would stimulate robust MPs towards enhancing household, micro, small and medium businesses performances by reducing the structural issues impeding credit creation and access in the nation.

Theoretical framework mechanisms as the backing, underpinning, and edifice of dissertation study (Walden University, 2014). So, the PFT applied for this study helped in the understanding of what the MP decision does to ODC credit creation activities after its adoption, which in turn affecting household, micro, small and medium businesses. The results of the study shown how the adoption of policy with the focus on how it affects the general public (Weible & Sabatier, 2018) was displayed in different sector of the economy. The implication of this theoretical framework allowed for policy change or adjustment or discard for betterment of the affected public and in turn improved economic activities performance that will influence general wellbeing for positive social change. In same manner, the InT assumed in this study described the historical structuring of other deposit corporations by the central bank and how it affects their credit creation behavior. Also, the analysis brought out how the individual's banks behavior was influenced by the institution, central bank, social and cultural behavior (Vadeboncoeur & Jennifer, 2018). The implication of this institution theory in this study was the highlight of sector that required banking institution credit behavioral adjustment for general welfare improvement. Lastly, the understanding of the results was based on economic

theories for interpretation of the estimated models and the impulse responses. This study contributed to the prevailing knowledge on the role of MP in enhancing the accessibility of finance to households, micro, small and medium businesses in Nigeria and provided suggestions for improving business performance for developmental growth and improved wellbeing of the citizen.

Recommendations for the practice of positive social change. An enhanced access to financial resources for businesses is capable of promoting economic growth and improving citizens' welfare which will in turn bring about positive social change to individual and businesses. The expectation of this study was that if the interest rate is considerately lowered, the ODCs would package credit, loan and advances to the private sector in an attractive and convenient way. The good packaged credit products by banks is expected to attract micro, small, medium and households' businesses, thereby increasing availability of credit for economic activities expansion. When economic activities are expanded, employment will occur and unemployment lowered. Employment will increase standard of living, reduced poverty and increase general wellbeing.

Conclusion

MP, often implemented by central banks, plays a significant role in driving economic activities through a number of transmission mechanisms. Changes in MP decisions affect liquidity and determines level of ODCs' credit to the economy. While most of the existing studies focused on the impact of MP on aggregate credit to the economy, this study examines the relationship between MP actions and credit to the

different sectors of the Nigerian economy. In addition, I investigated the impact of the 2010 commercial banking license on ODCs credit creation behavior. Lastly, the perspectives of the households and small businesses regarding the importance of ODCs' lending for their economic activities are explored. To answer these questions, we employed both secondary and primary data. Multiple linear regressions were estimated to determine the impacts of monetary as well as the commercial banking license policies on ODCs credit while a survey was conducted to gain insights into the relationship between the economic activities of small enterprises and ODCs' lending behavior.

The study reports a number of interesting results. First, MP has varied impacts on ODCs credit to the different sectors of the Nigerian economy. Based on the results from the estimated multiple regressions, we found that MP decisions affect ODCs' credit to agriculture; mining and quarrying; real estate and construction, general commerce; transport and communication; government; and education. In other words, whereas an increase in the MP rate causes a decline in ODCs' credit to agriculture, mining and quarrying, construction, transportation, and government, such a policy generates an increase in credit to communication and education. On the other hand, MP does not impact on ODCs credit to manufacturing; public utilities; and finance, capital market, and insurance. This implies heterogeneity in the nature of ODCs' credit response to MP shock. We therefore argue that such heterogeneity should be accommodated while designing MP in Nigeria.

Second, it was shown that the commercial banking license policy implemented by the Central bank of Nigeria in 2010 had varied impacts on ODC's credit to the different

sectors of the Nigerian economy. Having included a dummy variable representing the commercial banking licensing regulations implemented by the CBN in 2010 in the regressions, we rejected the hypothesis that the policy did not impact on ODCs' credit to agriculture, mining and quarrying, general commerce, transportation and communication, government, and finance, capital market, and insurance. In other words, the commercial banking licensing regulations increased ODCs' credit to agriculture, mining and quarrying, transportation and communication, and government. However, it decreased credit to general commerce as well as finance, capital market, and insurance. The policy did not impact on credit to manufacturing, real estate and construction, public utilities, and education. Finally, I found that economic uncertainties and high interest rate are key determinants of SMEs' demand for loans from the ODCs.

References

Acemoglu, D. (2012). Introduction to economic growth. *Journal of Economic Theory*, *147*(2), 545-550. https://doi.org/10.1016/j.jet.2012.01.023

Acha, I. A. (2012). Microfinance banking in Nigeria: Problems and prospects. *International Journal of Finance and Accounting, 1*(5), 106-111. https://doi.org/10.5923/j.ijfa.20120105.04

Afolabi, M. A., Adeyemi, K. K., Salawudeen, O. S., & Fagbemi, T. O. (2018). MP & bank credit in Nigeria: A Toda-yamamoto approach. *Economica*, 14(5), 717–735. http://journals.univdanubius.ro/index.php/oeconomica/article/view/5 031/4600

Agarwal, S., Chomsisengphet, S., Mahoney, N., & Stroebel, J. (2018). Do banks pass through credit expansions to consumers who want to borrow? *Quarterly Journal of Economics*, *133*(1), 129–190. https://doi.org/10.3386/w21567

Aikman, D., Kiley, M. T., Lee, S. J., Palumb, M. G., & Warusawitharana, M. N. (2017). Mapping heat in the U.S. financial system. *Journal of Banking & Finance, 81*, 36-64. https://doi.org/10.1016/j.jbankfin.2017.04.013

Akhatova, M., Zainal, M. P., & Ibrahim, M. H. (2016). Banking models and monetary transmission mechanisms in Malaysia: Are Islamic banks different? *The Economic Society of Australia*, *35*(2), 169–183. https://doi.org/10.1111/1759-3441.12131

Akinleye, G. T., Olarewaju, O. M., & Fajuyagbe, B. S. (2019). Market capitalization, bank lending and manufacturing firms' output: An empirical evidence from

Nigeria. *African Journal of Business & Economic Research*, *14*(1), 69–84. https://doi.org/10.31920/1750-4562/2019/v14n1a4

Akinsola, F. A. & Ikhide S. (2018). Is commercial bank lending in South Africa procyclical? *Journal of Financial Regulation and Compliance*, *26*(2), 203-226. https://doi.org/10.1108/JFRC-09-2016-0073

Alstadheim, R., Robstad, O., & Vonen, N. H. (2017). Financial imbalances, crisis probability and MP in Norway. Norges Bank*, 21*, 1–37. http://dx.doi.org/10.2139/ssrn.3073747

Altunbas, Y., Gambacorta, L. & Marques-Ibanez, D. (2010). Does MP affect bank risk-taking? *International Journal of Central Banking*, 10(1), 95-136. https://www.ijcb.org/journal/ijcb14q1a3.pdf

Amidu, M. (2014). What influences banks' lending in sub-Saharan Africa? *Journal of Emerging Market Finance*, *13*(1), 1–42. https://doi.org/10.1177/0972652714534022

Amurtiya M., Yuniyus, D. G., Mark, P. & Zubairu, E. A. (2018). Analysis of rural farm households' access to formal agricultural credit in Yola South Local Government Area, Adamawa State, Nigeria. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *66*(4), 947-954. https://doi.org/10.11118/actaun201866040947

Aruna, B., & Acharya, H. R. (2020). Do different types of oil price shocks affect the Indian stock returns differently at firm-level? A panel structural vector

autoregression approach. *International Journal of Energy Economics and Policy*, *10*(2), 238-249. https://doi.org/10.32479/ijeep.8891

Awad, I. M., & Al Karaki, M. S. (2019). The impact of bank lending on Palestine economic growth: An econometric analysis of time series data. *Financial Innovation*, *5*(1), 1-21. https://doi.org/10.1186/s40854-019-0130-8%20

Bardach, E. (1977). The implementation game: What happens after a bill becomes a law. *Western Political Quarterly*, *30*(4), 593–593. https://doi.org/10.1177/106591297703000428

Bayangos, V. (2010). Does the bank credit channel of MP matter in the Philippines? https://www.bis.org/repofficepubl/arpresearch201003.12.pdf

Beland, D. & Schlager, E. (2019). Varieties of policy feedback research: Looking backward, moving forward. *Policy Studies Journal, 47*(2), 184-205. https://doi.org/10.1111/psj.12340

Beland, D. (2010). Reconsidering policy feedback: How policies affect politics. *Administration & Society*, *42*(5), 568–590. https://doi.org/10.1177/0095399710377444

Belinga, T., Zhou, J., Doumbe, D. E., Gahe, Z. S. Y. & Koffi, Y. S. L. (2016). Causality Relationship between Bank Credit and Economic Growth: Evidence from a Time Series Analysis on a Vector Error Correction Model in Cameroon. *Procedia - Social and Behavioral Sciences* 235, 664-671. https://doi.org/10.1016/j.sbspro.2016. 11.061

Berger, A. N. & Humphrey, D. B. (1992). Measurement and Efficiency Issues in Commercial Banking. NBER Chapters, in: Output Measurement in the Service Sectors, 245-300, National Bureau of Economic Research, Inc.

Berger, A.N., DeYoung, R., Genay, H., & Udell, G.F. (2000). Globalization of Financial Institutions: Evidence from Cross-Border Banking Performance. Brookings-Wharton Papers on Financial Services 2000, 23-120. https://doi.org/10.1353/pfs.2000.0001

Birkenmaier, J. (2018). Promoting Financial Credit-Building for Financially Vulnerable Families. *Families in Society*, 99(2), 93–99. https://doi.org/10.1177/1044389418767825

Blinder, A. (1998). Central Banking in Theory and Practice. MIT Press, Cambridge.

Boadi, I. (2016). Determinants of Ghanaian banks' credit to the "missing middle": a supply side approach. *International Journal of Bank Marketing*, 34(6), 924–939. https://doi.org/10.1108/IJBM-12-2015-0194

Buch, C. M. & Goldberg, L. S. (2014). International banking and liquidity risk transmission: lessons from across countries. Staff Reports 675, Federal Reserve Bank of New York. https://doi.org/10.3386/w20286

Buch, C. M. & Goldberg, L. S. (2016). Cross-border prudential policy spillovers: how much? How important? Evidence from the International Banking Research Network. Staff Reports 801, Federal Reserve Bank of New York. https://doi.org/10.3386/w22874

Buch, C. M., & Golder, S. M. (2000). Domestic and Foreign Banks in Germany: Do They Differ? Kiel Working Papers 986, Kiel Institute for the World Economy (IfW).

Buch, C. M., Bussiere, M., Goldberg, L., & Hills, R., (2018). The International Transmission of MP. NBER Working Papers 24454, National Bureau of Economic Research, Inc.

Buch, C. M., Koch, C. & Koetter, M. (2016). Crises and rescues: liquidity transmission through international banks. BIS Working Papers 576, Bank for International Settlements.

Buch, C.M. and Prieto, E. (2014), Do Better Capitalized Banks Lend Less? Long-Run Panel Evidence from Germany. *International Finance*, 17: 1-23. https://doi.org/10.1111/infi.12041

Burkholder, G. J., Cox, K. A., & Crawford, L. M. (2016). The scholar-practitioner's guide to research design. Baltimore, MD: Laureate Publishing.

Central Bank of Nigeria (2010). CBN scope, conditions & minimum standards for Banks

Central Bank of Nigeria (2010). Commercial banks regulations no. 01, 2010. https://www.cbn.gov.ng/out/2010/circulars/bsd/commercial%20banking%20licensing%20regulations%20%20final%20released.pdf

Central Bank of Nigeria (2019). Communiqué no. 127 of the MP Committee meeting of Monday 25th and Tuesday 26th November 2019

Chakrabarti, D., Sethi, P. & Bhattacharjee, S. (2019). Directed credit, financial development and financial structure: theory and evidence. *Applied Economics,* 51(16), 1711-1729. https://doi.org/10.1080/00036846.2018.1528338

Chaudhry, R., & Pokhrel, S. R. (2019). Linkages between Real Sector and Financial Sector in Nepal: A Vector Error Correction Model. *Journal of Finance, Accounting & Management*, 10(1), 9–25. https://www.doi.org/10.33422/5imea.2018.02.57

Chen, C., & Kieschnick, R. (2018). Bank credit and corporate working capital management. *Journal of Corporate Finance*, 48, 579–596. https://doi.org/10.1016/j.jcorpfin.2017.12.013

Cheng, M., Zhao, H., & Lin, J. W. (2017). The effects of bank privatization on performance and prudential behavior in China: does state ownership matter? *Asia-Pacific Journal of Accounting & Economics*, 24(3–4), 387–406. https://doi.org/10.1080/16081625.2016.1187071

Cohen, J. (1988). Statistical power analysis for the behavioral sciences, second edition. Mahwah, NJ: Lawrence Erlbaum Associates.

Cong, P., & Phuong, L. T. N. (2017). The Use of Credit Derivatives and Banks′ Risk Taking Behaviors. *Mediterranean Journal of Social Sciences*, 8(1), 31-40. https://doi.org/10.5901/mjss.2017.v8n1p31

Costa Junior, C. J., & Garcia-Cintado, A. C. (2018). Teaching DSGE models to undergraduates. *EconomiA*, 19(3), 424–444. https://doi.org/10.1016/j.econ.2018.11.001

Creswell, J. W. (2013). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (3rd ed.). Thousand Oaks, CA: Sage Publications.

Crocker, L. and Algina, J. (1986). Introduction to Classical and Modern Test Theory. Harcourt, New York, 527.

Cuccinelli, D. (2016). Can speed kill? The cyclical effect of rapid credit growth: evidence from bank lending behavior in Italy. *The Journal of Risk Finance*, 17(5), 562-584. https://doi.org/10.1108/JRF-03-2016-0035

Dajcman, S. (2016). The Bank Lending Channel of MP and its Macroeconomic Effects: Evidence from a Sample of Selected Euro Area Countries. *Engineering Economics*, 27(2), 124–133 https://doi.org/10.5755/j01.ee.27.2.12647

de Grooty, O. (2014). The Risk Channel of Monetary Policy. *International Journal of Central Banking*, 10(2), 115-160. https://doi.org/10.2139/ssrn.2434518

Deleidi, M. (2018). Post Keynesian endogenous money theory: A theoretical and empirical investigation of the credit demand schedule. *Journal of post Keynesian Economics*, 41(2), 185–209. https://doi.org/10.1080/016 03477.2017.1338967

DiMaggio, P., & Powell, W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147-160. https://doi.org/10.2307/2095101

Dimitras, A. I., Papadakis, S. & Garefalakis, A. (2017). Evaluation of empirical attributes for credit risk forecasting from numerical data. *Investment Management & Financial Innovations*, 14(1), 9-18. https://doi.org/10.21511/imfi.14(1).2017.01

Drakos, K., & Giannakopoulos, N. (2018). Self and bank credit rationing: a trivariate probit with double selection. *Research in International Business and Finance*, 44, 124–134. https://doi.org/10.1016/j.ribaf.2017.04.049

Duffy, F. (2013). Monetary Theory. Research Starters: Business (Online Edition)

Easton, D. (1957). Classification of Political Systems. *Political Research, Organization and Design*, 1(2), 3–4. https://doi.org/10.1177/000276425700100 201

Edelman, M. (1977). Words That Succeed and Policies That Fail. *American Political Science Review*, 73(3), 847-847. https://doi.org/10.2307/1955411

Ellis, T. J., & Levy, Y. (2009). Towards a guide for novice researchers on research methodology: Review and proposed methods. *Issues in Informing Science and Information Technology*, 6, 323–337. https://doi.org/10.28945/1062

Faisal, M., Barakzai, M. A. K., & Burney, S. M. A. (2018). Non-Linear Associations Amongst the Oil Price, Gold Price and Stock Market Returns in Pakistan: A Vector Error Correction Model. 12th International Conference on Mathematics, Actuarial Science, Computer Science and Statistics (MACS), https://doi.org/10.1109/MACS.2018.8628392

Faul, F., Erdfelder, E., Lang, A. G., & Bunchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. Behavior Research Methods, 39, 175–191.

Frankfort-Nachmias, C., Nachmias, D., & DeWaard, J. (2015). Research methods in the social sciences (8th ed.). New York, NY: Worth.

Freimanis, K. and Šenfelde, M. (2019). Credit creation theory and financial intermediation theory: different insights on banks' operations. Contemporary Issues in Business, Management and Economics Engineering. 2538-8711. https://doi.org/10.3846/cibmee.2019.033

Geraci, M. V., & Gnabo, J.-Y. (2018). Measuring Interconnectedness between Financial Institutions with Bayesian Time-Varying Vector Autoregressions. *Journal of Financial & Quantitative Analysis*, 53(3), 1371–1390. https://doi.org/10.1017/S0022109018000108

Grossman, G. and Helpman, E. (1991). Quality Ladders in the theory of growth. *Review of Economic Studies*, (58), 43-61.

Habibullah, M. (1999). Financial Development and Economic Growth in Asian Countries: Testing the Financial-Led Growth Hypothesis. *Savings and Development*, 23(3), 279-291. www.jstor.org/stable/25830696

Hacievliyagil, N., & Eksi, I. H. (2019). A Micro Based Study on Bank Credit and Economic Growth: Manufacturing Sub-Sectors Analysis. *South East European Journal of Economics & Business* (1840118X), 14(1), 72–91. https://doi.org/10.2478/jeb-2019-0006

Harangus, D. (2019). The Evolution of the Bank Credit Structure by Activity of Borrower and Risk Categories. *Agricultural Management / Lucrari Stiintifice Seria I, Management Agricol*, 21(2), 161–165. https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=bth&AN=136975868&site=eds-live&scope=site

Harris, T. S., Khan, U., & Nissim, D. (2018). The Expected Rate of Credit Losses on Banks' Loan Portfolios. *Accounting Review*, 93(5), 245–271. https://doi.org/10.2308/accr-52012

Harwell, M. (2011). Research design in qualitative/quantitative /mixed methods. In C. Conrad, & R. Serlin (Eds.), The SAGE handbook for research in education: Pursuing ideas as the keystone of exemplary inquiry (2nd ed., 147-165). Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.4135/9781483351377.n11

Hua, K., & Simovici, D. A. (2016). Long-lead term precipitation forecasting by Hierarchical Clustering-based Bayesian Structural Vector Autoregression. IEEE 13th International Conference On, 1–6. https://doi.org/10.1109/ICNSC.2016.7479002

Hutcheson, G. D. (1999). The multivariate social scientist. SAGE Publications, Ltd. https://doi.org/10.4135/9780857028075

Ibarra, R. (2016). How important is the credit channel in the transmission of MP in Mexico? *Applied Economics*, 48(36), 3462–3484. https://doi.org/10.1080/00036846.2016.1139680

Igharo, A.E., Osabohien, R.A., Onyemariechi, G.O., & Ibidapo, D. (2020). Monetary policy transmission mechanism, innovative banking system and economic growth dynamics in Nigeria. International Journal of Business Innovation and Research, 21, 1. http://dx.doi.org/10.1504/ijbir.2020.10025707

International Monetary Fund (2019). Monetary and Financial Statistics Manual and Compilation Guide

Ippolito, F., Ozdagli, A. K., & Perez, A. (2013). Is Bank Debt Special for the Transmission of MP? Evidence from the Stock Market. Working Paper Series (Federal Reserve Bank of Boston), 13(17), 1–56. https://search-ebscohostcom.ezp.waldenulibrary.org/login.aspx?direct=true&db=bth&AN=94198362&site=eds-live&scope=site

Istrate, L. G. & Ionescu, B. Ș. (2018). The impact of macroeconomic variables on the evolution of the credit risk rate.

Jayaratne, J., & Strahan, P. (1998). Entry Restrictions, Industry Evolution, and Dynamic Efficiency: Evidence from Commercial Banking. *The Journal of Law & Economics*, 41(1), 239-274. https://doi.org/10.1086/467390

Jegede, C. A. (2014). Effects of Automated Teller Machine on the Performance of Nigerian Banks. *American Journal of Applied Mathematics and Statistics* 2(1), 40-46.

Jeon, Y., & Miller, S. M., (2000). Bank Concentration and Performance. Economics Working Papers. 200225. http://digitalcommons.uconn.edu/econ_wpapers/200225

Jeong, Y.-C., & Kim, T.-Y. (2019). Between Legitimacy and Efficiency: An Institutional Theory of Corporate Giving. *Academy of Management Journal*, 62(5), 1583–1608. https://doi.org/10.5465/amj.2016.0575

Jimenez, G., Moral-Benito, E., & Vegas, S. R. (2018). Bank Lending Standards Over the Cycle: The Role of Firms' Productivity and Credit Risk. Banco de Espana

Working Paper No. 1811, Available at SSRN: https://ssrn.com/abstract=3163419 or http://dx.doi.org/10.2139/ssrn.3163419

Joppe, M. (2000). The Research Process. http://www.ryerson.ca/~mjoppe/rp.htm

Kalaian, S. A., and Kasim, R. M. (2008). Applications of Multilevel Models for MetaAnalysis. In A. O'Connell and B. McCoach (Eds.), Multilevel Analysis of Educational Data, 315-343. USA: Information Age Publishing, Inc.

Kaminsky, G., & Reinhart, C., (2000). On crises, contagion, and confusion. *Journal of International Economics*, 51(1), 145-168. https://www.sciencedirect.com/science/article/pii/S0022199699000409

King, R. G. & Levine, R. (1993). Finance and Growth: Schumpeter Might Be Right. *Quarterly Journal of Economics* 108(3), 717-37. https://doi.org/10.2307/2118406

Knetter, M. (1989) Price Discrimination by U.S. and German Exporters. *American Economic Review*, 79, 198-210.

Kolapo, T. F., Ayeni, R. K. & OKE, O. (2012). Credit risk management and performance of commercial banks in Nigeria, A panel model approach. *Austrian Journal of Business and Management Research*, 2(2), 31–38.

Kraska, M. (2010). Quantitative Research. In N J. Salkind (Ed.), Encyclopedia of Research Design (1167-1172). Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.4135/97 81412961288.n352

Kumar, A., Mishra, A. K., Sonkar, V. K., & Saroj, S. (2020). Access to Credit and Economic Well-Being of Rural Households: Evidence from Eastern India.

Journal of Agricultural & Resource Economics, 45(1), 145-160. http://dx.doi.org/10.22004/ag.econ.298439

Lambo, E. (1977). Portfolio Behaviour of Nigerian Commercial Banks: A Decomposition Analysis. *Vikalpa*, 2(3), 207–212. https://doi.org/10.1177/0256090919770303

Lartey, L. (2018). The Signaling Effect of MP Rate on Lending Rates in Ghana.

Laureate Education (Producer). (2014). Research methods and design II – part 2 [Video file]. Baltimore, MD: Author

Lemay-Hebert, N. (2009). State building without Nation-building? Legitimacy, State Failure and the Limits of the Institutionalist Approach. *Journal of Intervention and State building*, 3(1), 21-45. https://doi.org/10.1080/17502970802608159

Lerman, A. E., & McCabe, K. T. (2017). Personal Experience and Public Opinion: A Theory and Test of Conditional Policy Feedback. *Journal of Politics*, 79(2), 624–641. https://doi.org/10.1086/689286

Levine, R. (2005). Finance and Growth: Theory and Evidence. Handbook of Economic Growth, in: Philippe Aghion & Steven Durlauf (ed.), Handbook of Economic Growth, 1(1) Chapter 12, 865-934, Elsevier.

Li, L., Hermes, N. & Lensink, R (2020). Political connections and household access to bank loans: evidence from China. *Economic Research-Ekonomska Istraživanja*, 33(1), 288-309. https://doi.org/10.1080/1331677X.2019.1656099

Lindé, J. (2018). DSGE models: still useful in policy analysis? *Oxford Review of Economic Policy*, 34(1-2) Spring-Summer, 269–286, https://doi.org/10.1093/oxrep/grx058

Lipsky, M. (1980). Street Level Bureaucracy: Dilemmas of the Individual in Public Services. Russell Sage Foundation. http://www.jstor.org/stable/10.7758/9781610447713

Liu, C. (2008). Cross-sectional data. In P. Lavrakas (Ed.), Encyclopedia of survey research methods. (171-173). Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.4135/9781412963 947.n119

Lokesha, L & Hawaldar, I. T. (2019). Impact of factors on the utilization of agricultural credit of banks: an analysis from the borrowers' perspective. Banks and Bank Systems, 14(1), 181-192. https://doi.org/10.21511/bbs. 14(1).2019.16

Loredana, P. C., & Daniela, H. (2018). The Role of Bank Credit in Financing Romanian Agriculture. *Agricultural Management / Lucrari Stiintifice Seria I, Management Agricol*, 20(3), 265–270. https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=bth&AN=134395958&site=eds-live&scope=site

Loseke, D. R. (2013). Methodological thinking: Basic principles of social research design. Thousand Oaks, CA: Sage.

Lowi, T. (1964). American Business, Public Policy, Case-Studies, and Political Theory. *World Politics*, 16(4), 677-715. https://doi.org/10.2307/2009452

Luan D. X. & Kingsbury, A. (2019) Thinking beyond collateral in value chain lending: access to bank credit for smallholder Vietnamese bamboo and cinnamon farmers. *International Food and Agribusiness Management Association*, 22(4), 535-555. https://doi.org/10.22434/IFAMR2019.0030

Lucas, R.E. (1988). On the Mechanics of Economic Development. *Journal of Monetary Economics*, 22(1), 3-42. https://doi.org/10.1016/0304-3932(88)90168-7

Maloba, M. & Alhassan, A. L. (2019). Determinants of Agri-lending in Kenya. *Agricultural Finance Review*, 79(5), 598-613. https://doi.org/10.1108/AFR-10-2018-0094

Mardika D.R.W., Damayanti T.W., Supramono. (2018). Understanding the Determinant of SME Owners' Intention to Have Bank Credit. *Polish Journal of Management Studies*, 17(1), 165–174. https://doi-org.ezp.waldenulibrary.org/10.17512/pjms.2018.17.1.14

Marshall, T. H (1964). Class, Citizenship, and Social Development. Garden City, New York: Doubleday & Company. Social Forces 43(2) 266–267. https://doi.org/10.2307/2574345

McDavid, J. C., Huse, I., & Hawthorn, L. R. L. (2013). Program Evaluation and Performance Measurement: An Introduction to Practice (2nd ed.). Thousand Oaks, CA: Sage Publications.

McKinnon, R. I. (1973). Money and Capital in Economic Development. Washington D.C. The Bookings Institution, 1-20.

Mettler, S. (2002). Bringing the State Back in to Civic Engagement: Policy Feedback Effects of the G.I. Bill for World War II Veterans. *American Political Science Review* 96(2), 351–365. https://doi.org/10.1017/S0003055402000217

Mettler, S., & Sorelle, M. (2018). Policy Feedback Theory. In Theories of the Policy Process (4th ed.). Routledge. https://doi.org/10.4324/9780429494284

Meyer, J., & Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology*, 83(2), 340-363. http://www.jstor.org/stable/2778293

Minni, V. (2016). Can Greater Bank Capital Lead to Less Bank Lending? *Atlantic Economic Journal*, 44(1), 135–137. https://doi-org.ezp.waldenulibrary.org/10.1007/s11293-016-9485-7

Mishkin, F. S. (1995). Symposium on the Monetary Transmission Mechanism. *Journal of Economic Perspectives*, 9(4), 3-10. https://doi.org/10.1257/jep.9.4.3

Mishkin, F.S. & Eakins, S.G. (2016). Financial Markets and Institutions (8th ed.). Boston: Pearson

Montiel, C.J. (1995). Peaceful Termination of Unsuccessful Coup Attempts in the Philippines. *Journal of Contingencies and Crisis Management*, 3: 215-227. https://doi.org/10.1111/j.1468-5973.1995.tb00101.x

Moynihan, D. P., & Soss, J. (n.d.). Policy Feedback and the Politics of Administration. *Public Administration Review*, 74(3), 320–332. https://doi-org.ezp.waldenulibrary.org/10.1111/puar.12200

Mrsik, J., & Vasilev, G. (2018). Evaluation of Macedonian banks` credit policies before and after the 2008 crisis: a comparative study. *Ekonomika,* 64(2), 111-124. http://dx.doi.org.ezp.waldenulibrary.org/10.5937/ekonomika1802111M

Mwabutwa, C. N., Viegi, N., & Bittencourt, M. (2016). Evolution of MP Transmission Mechanism in Malawi: A Tvp-Var Approach. *Journal of Economic Development*, 41(1), 33–55. https://search-ebscohost-

com.ezp.waldenulibrary.org/login.aspx?direct=true&db=bth&AN=114714663&site=eds-live&scope=site

O'Sullivan, E., Rassel, G. R., Berner, M., & Taliaferro, J. D. (2017). Research methods for public administrators (6th ed.). New York, NY: Routledge.

Obadeyi, J. A., Okhiria, A. O., Afolabi, V. K. (2016). Evaluating the Impact of MP on the Growth of Emerging Economy: Nigerian Experience. *American Journal of Economics* 6(5), 241-249. https://doi.org/10.5923/j.economics.201606 05.01

Oishi, S., & Diener, E. (2014). Can and should happiness be a policy goal? *Policy Insights from Behavioral and Brain Sciences*, 1(1), 195–203. https://doi.org/10.1177/2372732214548427

Okpara, G.C., Onoh, A. N.; Ogbonna, B. M. and Iheanacho, E. (2018) Econometrics Analysis of Financial Development and Economic Growth: Evidence from Nigeria. *Journal of Finance and Accounting,* 6(1), 26-34. https://doi,org/10.11648/j.jfa.20180601.14

Omoregie, D. E. (2013). Moral suasion as a MP instrument. CBN Understanding MP Series. No 28

Ongena, S., Schindele, I., & Vonnák, D. (2017). In Lands of Foreign Currency Credit, Bank Lending Channels Run Through? MNB Working Papers, 6, 1–48. https://search-ebscohostcom.ezp.waldenulibrary.org/login.aspx?direct=true&db=bth&AN=123796959&site=eds-live&scope=site

Onyeiwu, C. (2012). Domestic debt and the growth of Nigerian economy. *Research Journal of Finance and Accounting*. 3(5), 1-13. ISSN 2222-2847 (Online)

Osborne, M., Fuertes, A. M. and Milne, A. (2017). In good times and in bad: bank capital ratios and lending rates. *International Review of Financial Analysis*, 51(C), 102-112. https://doi.org/10.1016/j.irfa.2016.02.005

Ouchchikh, R. (2018). MP Transmission Mechanism in a Small Open Economy under Fixed Exchange Rate: An SVAR Approach for Morocco. *International Journal of Business & Economic Sciences Applied Research*, 11(1), 42–51. https://doi-org.ezp.waldenulibrary.org/10.25103/ijbesar.111.05

Pawlowska, M., Gajewski, K. and Rogowski, W. (2014). What Drives the Bank–Firm Relationship? A Case Study of the Polish Credit Market. *International Symposia in Economic Theory and Econometrics*, 23, 235-268. https://doi.org/10.1108/S1571-038620140000023009

Pierson, P. (1993). When Effect Becomes Cause: Policy Feedback and Political Change. *World Politics*, 45(4), 595-628. https://doi.org/10.2307/2950710

Piven, F. F. & Cloward, R. A. (1971) Regulating the Poor: The Functions of Public Welfare. *Journal of Education for Social Work*, 8(2), 72-74, https://doi.org/10.1080/00220612.1972.10671919

Poon, W. P. H., Shen, J., & Burnett, J. E. (2017). An Empirical Study of International Spillover of Sovereign Risk to Bank Credit Risk. *Financial Review*, 52(2), 281–302. https://doi-org.ezp.waldenulibrary.org/10.1111/fire.12114

Powell, W. W. & DiMaggio, P. J. (1991). The New Institutionalism in Organizational Analysis 1st Edition. University of Chicago Press

Prochniak, M. & Wasiak, K. (2017). The impact of the financial system on economic growth in the context of the global crisis: empirical evidence for the EU and OECD countries. Springer. *Empirica* 44(2). https://doi.org/10.1007/s10663-016-9323-9

Pujeda, S. & Ceballos, R. (2019). Forecasting Gross Domestic Product of the Philippines using Vector Error Correction Models. *University of Mindanao International Multidisciplinary Research Journal*, (4)1, 13-18.

Qinghua Zhai, & Jing Su. (2019). A perfect couple? Institutional theory and entrepreneurship research. *Chinese Management Studies*, 13(3), 616–644. https://doi-org.ezp.waldenulibrary.org/10.1108/CMS-07-2017-0194

Reinhart, C., Goldstein, M. & Kaminsky, G. (2000). Assessing financial vulnerability, an early warning system for emerging markets: Introduction, MPRA Paper, University Library of Munich, Germany. https://mpra.ub.uni-muenchen.de/13629/1/MPRA_paper_13629.pdf

Riaz, S. (2009). Diabetes mellitus. *Scientific Research and Essay*, 4 (5), 367-373. https://doi.org/10.5897/SRE.9000352

Rodnyansky, A., & Darmouni, R. (2017). The Effects of Quantitative Easing on Bank Lending Behavior. *Review of Financial Studies*, 30(11), 3858–3887. https://doi-org.ezp.waldenu library.org/10.1093/rfs/hhx063

Romer, P.M. (1986). Increasing Returns and Long-Run Growth. *Journal of Political Economy*. 94(5), 1002-1037.

Rousseau, P. L. (2002). Historical Perspectives on Financial Development and Economic Growth. NBER Working Papers 9333, *National Bureau of Economic Research, Inc*. https://ideas.repec.org/p/nbr/nberwo/9333.html

Rudestam, K. E., & Newton, R. R. (2015). Surviving your dissertation: A comprehensive guide to content and process (4th ed.). Thousand Oaks, CA: Sage. ISBN: 978-1-4522-6097-6

Sabbagh, A. (2018). A Policy Feedback Theory Approach to Food Assistance Program Distribution Mechanisms. Scholar Works

Sackey, F. G. (2018). Is there discrimination against the agricultural sector in the credit rationing behavior of commercial banks in Ghana? *Agricultural Finance Review*, 78(3), 348–363. https://doi-org.ezp.waldenulibrary.org/10.1108/AFR-08-2017-0077

Salmanov, O., Zayernyuk, V. & Lopatina, O. (2015). An Analysis of the Impact of MP on Bank Lending in Russia. *Asian Social Science* 11(6). SSRN: https://ssrn.com/abstract=2911517

Sanchawa, D. H. (2015). Theoretical Approaches to Public Policy.

Santos, A. R. & Silva, N. (2019). Sectoral concentration risk in Portuguese banks' loan exposures to non-financial firms.

Sarma, M. & Pais, J. (2011). Financial Inclusion and Development. *Journal of International Development* 23(5), 613 – 628. https://doi.org/10.1002/jid.1698

Sarma, M. (2008). Index of Financial Inclusion. Working Paper No. 215, New Delhi: Indian Council for Research on International Economic Relations

Sbordone, A. M., Tambalotti, A., Rao, K., & Walsh, K. (2010). Policy analysis using DSGE models: an introduction. Federal Reserve Bank of New York Economic Policy Review, 23.

Schattschneider, E. E. (1935). Politics, Pressures, and the Tariff. New York: Prentice-Hall *American Political Science Review*, 30(2), 374-375. https://doi.org/10.2307/1947268

Schmidt, T., & Zwick, L. (2018). Loan supply and demand in Germany's three-pillar banking system during the financial crisis. *International finance*, 21(1), 23–38. https://doi-org.ezp.waldenulibrary.org/10.1111/infi.12125

Scott, W.R. (1995) Institutions and Organizations. SAGE Publications, Thousand Oaks.

Sharma, D. (2016). Nexus between financial inclusion and economic growth: Evidence from the emerging Indian economy. *Journal of Financial Economic Policy* 8(1): 13-36. https://doi.org/10.1108/JFEP-01-2015-0004

Shaw, E. (1973). Financial Deepening in Economic Development: New York, Oxford University press, 1-17.

Silva, T. C., Guerra, S. M., da Silva, M. A., & Tabak, B. M. (2018). Interconnectedness, Firm Resilience and MP. Central Bank of Brazil, Research Department Working Papers Series 478.

Skocpol T. (1992). State Formation and Social Policy in the United States. *American Behavioral Scientist* 35(4/5): 559-584

Starkey, M. (2017). The credit creation theory of banking. https://www.economicsnetwork.ac.uk/archive/starkey_banking

Tabachnick, B. G., & Fidell, L. S. (2007). Multivariate analysis of variance and covariance. Using Multivariate Statistics, 3, 402-407.

Thierry, B., Jun, Z., Eric, D. D., Yannick, G. Z. S. & Landry, K. Y. S. (2016). Causality Relationship between Bank Credit and Economic Growth: Evidence from a Time Series Analysis on a Vector Error Correction Model in Cameroon. *Procedia - Social and Behavioral Sciences* 235, 664-671. ISSN 1877-0428. https://doi.org/10.1016/j.sbspro.2016.11.061

Tran, V. T., Nguyen, H., & Lin, C. T. (2017). Herding behavior in the Australian loan market and its impact on bank loan quality. *Accounting & Finance*, 57(4), 1149 - 1176. https://doi-org.ezp.waldenulibrary.org/10.1111/acfi.12183

Triandhari, R., Safuan, S., Syamsudin M. & Alamsyah, H. (2017). Banks' Risk Taking Behavior and the Optimization MP. *European Research Studies Journal* XX(4B): 754-769. https://doi.org/10.35808/ersj/924

Trochim, W. M. K. (2006). Research Methods Knowledge Base. http://www.socialresearchmethods.net/kb/scallik.php.

Vadeboncoeur, L. R. and Jennifer. A., PhD. (2018). Institutional Theory. Salem Press

Wainer, H. & Braun, H. I. (1998). Test Validity. Routledge

Walden University, School of Public Policy and Administration. (2014). Theoretical frameworks in SPPA. Minneapolis, MN: Walden University

Warner, R. M. (2013). Applied statistics: From bivariate through multivariate techniques (2nd ed.). Thousand Oaks, CA: SAGE Publications.

Weible, C. M., & Sabatier, P.A. (2018). Theories of the Policy Process (4th ed.). Routledge. https://doi.org/10.4324/9780429494284

Willis, P. H. (1965). Theory and Practice of Central Banking. Routledge

Wilson, A. G. (1973). Editorial. Environment and Planning A: *Economy and Space*, 5(6): 665-665. https://doi.org/10.1068/a050665

World Bank (2018). 2018 World Development Indicators

Yin, R. K. (2018). Case Study Research and Applications: Design and Methods. 6th Revised edition Thousand Oaks, United States: SAGE Publications Inc.

Zandi, G., Haseeb, M., Widokarti, J. R., Ahmed, U., & Thitinan Chankoson. (2019). Towards Crises Prevention: Factors Affecting Lending Behavior. *Journal of Security & Sustainability Issues*, 9(1), 309–319. https://doi-org.ezp.waldenulibrary.org/10.9770/jssi .2019.9.1(23)

Zhang, X., Li, F., Li, Z., & Xu, Y. (2018). Macro prudential Policy, Credit Cycle, and Bank Risk-Taking. Sustainability, MDPI, Open Access Journal, 10(10), 1-18. https://doi-org.ezp.waldenulibrary.org/10.3390/su10103620

Appendix A: Business Owner Survey Questionnaire

1 What is your gender?
[ ] Female [ ] Male

2 What is your age bracket?
[ ] 18-20 [ ] 21-30 [ ] 31-40 [ ] 41-50 [ ] 51-60
[ ] 61 and Above

3 What is your highest level of Education?
[ ] No Formal Schooling [ ] Primary [ ] Junior Secondary
[ ] Senior Secondary [ ] NCE/OND/Nursing School
[ ] First Degree / HND [ ] Master's Degree & above

4 What is your Marital Status?
[ ] Never Married [ ] Married
[ ] Divorced/Separated [ ] Widow/Widower

5 What is your language proficiency?
[ ] Fluent in local language only
[ ] Fluent in English only
[ ] Fluent in English and local languages

6 Which sector does your economic activities belong?
[ ] Agriculture [ ] Education [ ] Health
[ ] Information & Communication [ ] Manufacturing
[ ] Transportation [ ] Trading

7 Location of business
[ ] Urban [ ] Semi Urban [ ] Rural

8 Business ownership type
[ ] Household [ ] sole proprietor
[ ] Partnership agreement [ ] limited liability company

9 for how long has the business been in operations?
[ ] New start up to 5years [ ] 5 to 10 years [ ] 11 to 15 years
[ ] 16 to 20 years [ ] 21 years and above

10 Employment size?
[ ] Micro (1 to 9) [ ] Small (10 - 49) [ ] Medium (50 - 199)
[ ] Large (200 & more)

11 Have your ever applied for credit facility? [ ] No [ ] Yes

12 Have you accessed credit facility for your business? [ ] No [ ] Yes

13 If yes to item 12 above, where did you source the loan from?
[ ] Regional Commercial bank [ ] National Commercial bank
[ ] International Commercial bank [ ] Regional Merchant bank
[ ] National Merchant bank [ ] Non-Interest bank
[ ] State Micro-finance bank [ ] Regional Micro-finance bank
[ ] National Micro-finance bank

14 If No to item 12 above, Why?

[ ] Do not required one [ ] Required but do not apply
[ ] Required applied but denied [ ] Required applied and in progress

15 Do you wish to apply for loan/additional now?[ ] No [ ]Yes

16 What is your view on the economic condition of your business after accessing the credit facility?
[ ] Improved [ ] The same as before [ ] Deteriorated

17 What is your view about the current economic activities of your business?
[ ] Better than before [ ] The same as before [ ] Worse than before

18 What is your view on the revenue condition of your business after accessing the credit facility?
[ ] Improved [ ] The same as before [ ] Deteriorated

19 What is your view about the current profit of your business?
[ ] Better than before [ ] The same as before [ ] Worse than before

20 Which of the following do you agreed that had constrained your business activities?

MP [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree Fiscal Policy [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree

Exchange rate policy [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree
High Interest rate [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree
High fee/commission [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree
Unclear Economic law/Order [ ] Agree [ ]Neither [ ]Disagree
Low product demand [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree
Access to credit [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree
Financial Problem [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree
Competition [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree
Labor Problems [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree
Lack of product input [ ] Agree [ ]Neither Agree/Disagree [ ]Disagree
Unfavorable political climate [ ] Agree [ ]Neither [ ]Disagree
Unfavorable economic climate [ ] Agree [ ]Neither [ ]Disagree
Insufficient power supply [ ] Agree [ ]Neither [ ]Disagree

Appendix B: Credit Officer Survey Questionnaire

1. The banking branch belong to which banking license type?
   [ ] Regional Commercial bank [ ] National Commercial bank
   [ ] International Commercial bank [ ] Regional Merchant bank
   [ ] National Merchant bank [ ] Non-Interest bank
   [ ] State Micro-finance bank [ ] Regional Micro-finance bank
   [ ] National Micro-finance bank
2. Number of credit application received in year 2019?
   [ ] Agriculture [ ] Education [ ] Health
   [ ] Information & Communication [ ] Manufacturing
   [ ] Transportation [ ] Trading [ ] Others
3. Number of credit application treated in year 2019?
   [ ] Agriculture [ ] Education [ ] Health
   [ ] Information & Communication [ ] Manufacturing
   [ ] Transportation [ ] Trading [ ] Others
4. Number of credit application denied in year 2019?
   [ ] Agriculture [ ] Education [ ] Health
   [ ] Information & Communication [ ] Manufacturing
   [ ] Transportation [ ] Trading [ ] Others
5. Number of credit application granted in year 2019?
   [ ] Agriculture [ ] Education [ ] Health
   [ ] Information & Communication [ ] Manufacturing
   [ ] Transportation [ ] Trading [ ] Others
6 Number of credit application received in 2019 by age of business?
   [ ] New start up to 5years [ ] 5 to 10 years [ ] 11 to 15 years
   [ ] 16 to 20 years [ ] 21 years and above
7 Number of credit application treated in 2019 by age of business?
   [ ] New start up to 5years [ ] 5 to 10 years [ ] 11 to 15 years
   [ ] 16 to 20 years [ ] 21 years and above
8 Number of credit application denied in 2019 by age of business?
   [ ] New start up to 5years [ ] 5 to 10 years [ ] 11 to 15 years
   [ ] 16 to 20 years [ ] 21 years and above
9 Number of credit application granted in 2019 by age of business?
   [ ] New start up to 5years [ ] 5 to 10 years [ ] 11 to 15 years
   [ ] 16 to 20 years [ ] 21 years and above
10 Number of credit application received in 2019 by business ownership type?
   [ ] Household [ ] Sole proprietor
   [ ] Partnership agreement [ ] Limited liability company
11 Number of credit application treated in 2019 by business ownership type?
   [ ] Household [ ] Sole proprietor
   [ ] Partnership agreement [ ] Limited liability company
12 Number of credit application denied in 2019 by business ownership type?
   [ ] Household [ ] Sole proprietor

[ ] Partnership agreement [ ] Limited liability company

13 Number of credit application granted in 2019 by business ownership type?
[ ] Household [ ] Sole proprietor
[ ] Partnership agreement [ ] Limited liability company

14 Number of credit application received in 2019 by business employment size?
[ ] Micro (1 to 9) [ ] Small (10 - 49) [ ] Medium (50 - 199)
[ ] Large (200 & more)

15 Number of credit application treated in 2019 by business employment size?
[ ] Micro (1 to 9) [ ] Small (10 - 49) [ ] Medium (50 - 199)
[ ] Large (200 & more)

16 Number of credit application denied in 2019 by business employment size?
[ ] Micro (1 to 9) [ ] Small (10 - 49) [ ] Medium (50 - 199)
[ ] Large (200 & more)

17 Number of credit application granted in 2019 by business employment size?
[ ] Micro (1 to 9) [ ] Small (10 - 49) [ ] Medium (50 - 199)
[ ] Large (200 & more)

18 Number of credit application received in 2019 by business location
[ ] Urban [ ] Semi Urban [ ] Rural

19 Number of credit application treated in 2019 by business location
[ ] Urban [ ] Semi Urban [ ] Rural

20 Number of credit application denied in 2019 by business location
[ ] Urban [ ] Semi Urban [ ] Rural

21 Number of credit application granted in 2019 by business location
[ ] Urban [ ] Semi Urban [ ] Rural

22 What is your view on the credit creation activities of this bank branch in 2019 in relative to 2018?
[ ] Improved [ ] The same [ ] Deteriorated

23 What is your view about the current credit behavior of this bank branch?
[ ] Better [ ] The same [ ] Worse

24 What is your view about the effect of the MP Committee decision on credit creation?
[ ] Tightened [ ] Unchanged [ ] Eased

25 In relative to year 2018, what do you think happened to the following?
Volume of loan application received [ ] Increased [ ] Same [ ] Decreased
Volume of loan application treated [ ] Increased [ ] Same [ ] Decreased
Volume of loan application denied [ ] Increased [ ] Same [ ] Decreased
Volume of loan application granted [ ] Increased [ ] Same [ ] Decreased

26 Which of the following do you agreed that had affected your credit creation activities?
i) MP [ ] Agree [ ] Neither Agree/Disagree [ ] Disagree
ii) Fiscal Policy [ ] Agree [ ] Neither Agree/Disagree [ ] Disagree
iii) Exchange rate policy [ ] Agree [ ] Neither Agree/Disagree [ ] Disagree
iv) MP rate [ ] Agree [ ] Neither [ ] Disagree v) Unclear Economic law/Order [ ] Agree [ ] Neither [ ] Disagree

vi) Lack of collateral [ ] Agree [ ] Neither [ ] Disagree
vii) Banking business outlook [ ] Agree [ ] Neither [ ] Disagree
viii) Market share objectives [ ] Agree [ ] Neither [ ] Disagree
ix) Appetite / Perception for risk [ ] Agree [ ] Neither [ ] Disagree
x) Cost/availability of funds [ ] Agree [ ] Neither [ ] Disagree
xi) Market pressure from capital market [ ] Agree [ ] Neither [ ] Disagree
xii) Business economic sector specific risk
[ ] Agree [ ] Neither [ ] Disagree
xiii) Business age [ ] Agree [ ] Neither [ ] Disagree
xiv) Business ownership type [ ] Agree [ ] Neither [ ] Disagree
xv) Business employment size [ ] Agree [ ] Neither [ ] Disagree
xvi) Business location [ ] Agree [ ] Neither [ ] Disagree
xvii) Unfavorable political climate [ ] Agree [ ] Neither [ ] Disagree
xviii) Unfavorable economic climate [ ] Agree [ ] Neither [ ] Disagree
xix) Level of non-performing loans [ ] Agree [ ] Neither [ ] Disagree
xx) Lack of credit applications [ ] Agree [ ] Neither [ ] Disagree
xxi) Pressure from completion / completion from other banks
[ ] Agree [ ] Neither [ ] Disagree
xxii) Pressure from completion / completion from non-bank institutions
[ ] Agree [ ] Neither [ ] Disagree
xxiii) Bank's risk tolerance [ ] Agree [ ] Neither [ ] Disagree
xxiv) Borrower's credit worthiness [ ] Agree [ ] Neither [ ] Disagree
xxv) General economic condition / outlook [
[ ] Agree [ ] Neither [ ] Disagree

Appendix C: National Institute of Health Course Certification

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Abiola Adeleke** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

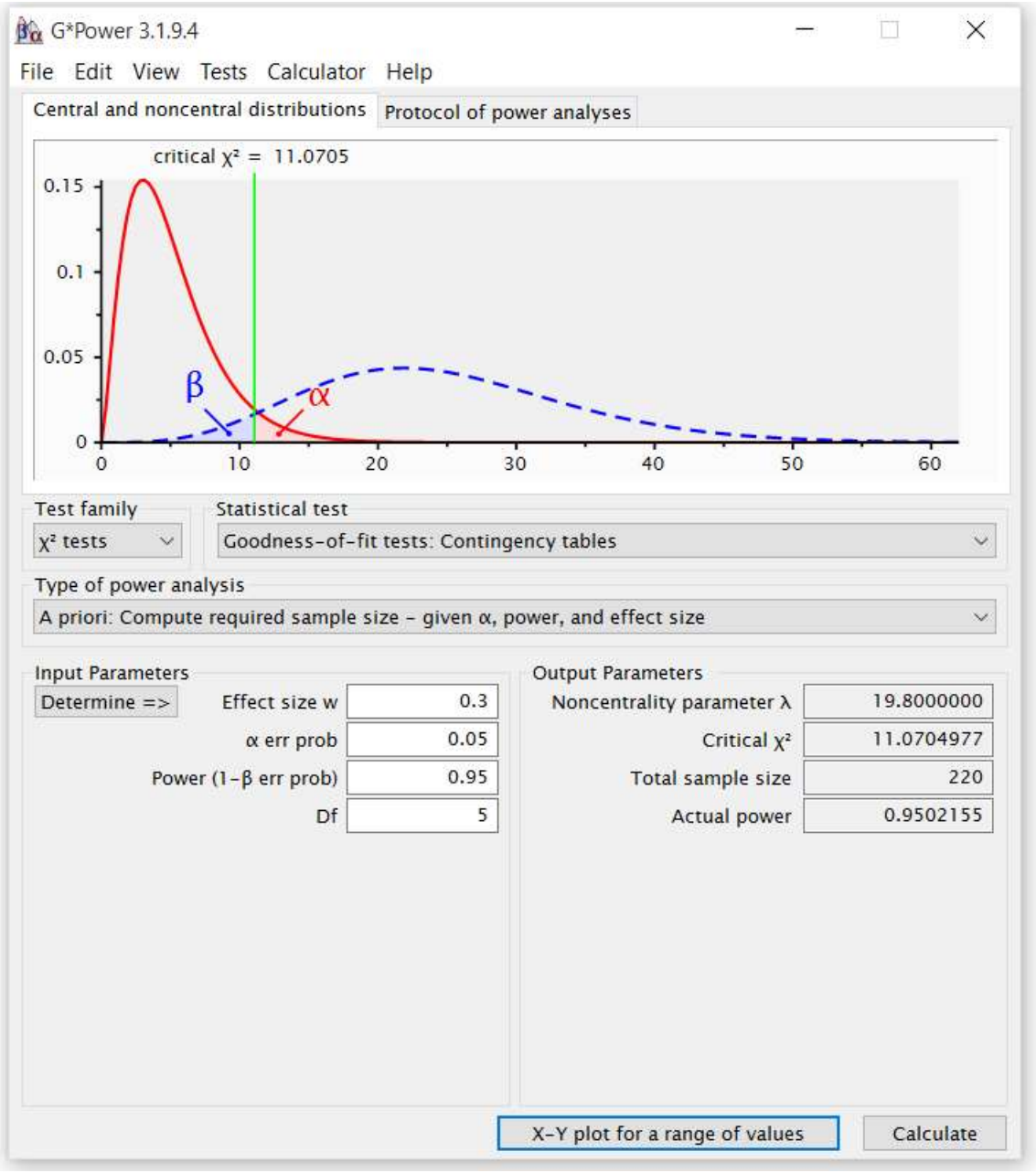
Date of completion: 04/03/2016.

Certification Number: 2042278.

Appendix D: Sample Size Power Analysis Using G*Power 3.1.9.4

Figure D1

Sample Size Power Analysis



Appendix E: Impulse Response Graphs for Agriculture and Construction Sectors

Figure E1

Impulse Response Graph for Agriculture Sector

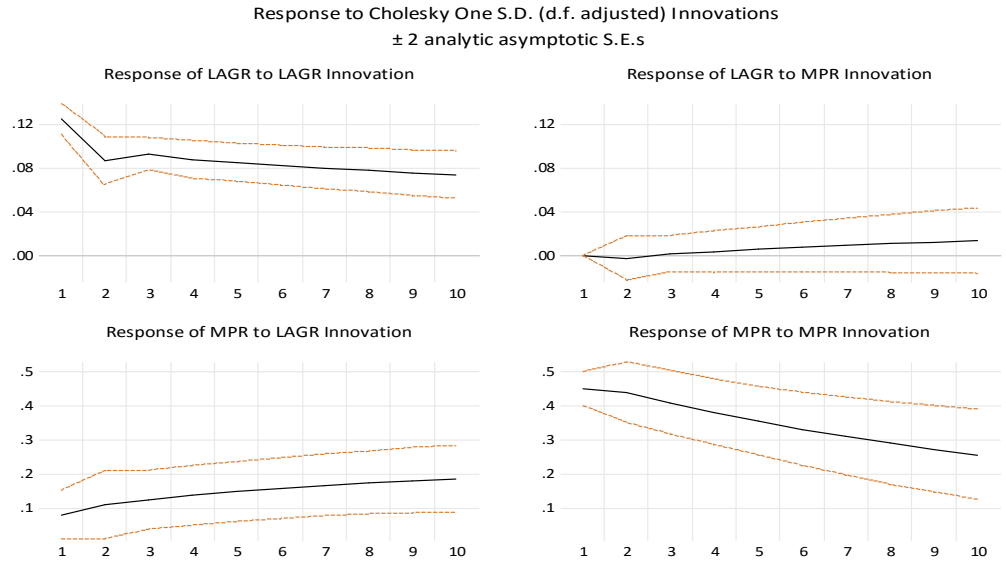
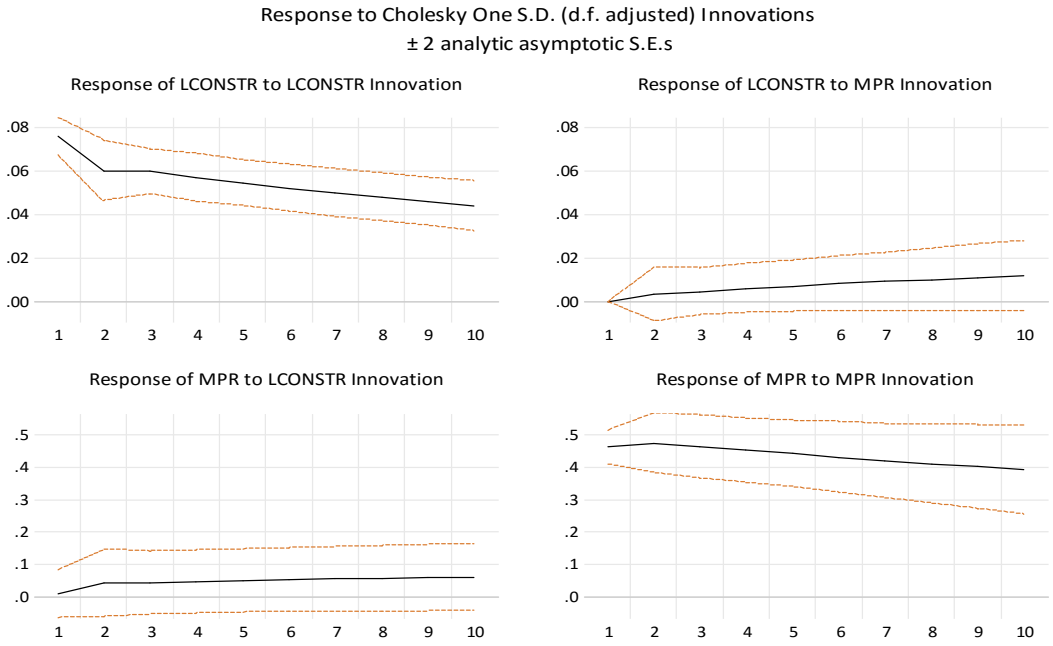


Figure E2

Impulse Response Graph for Construction Sector



Appendix F: Impulse Response Graphs for Finance and Manufacturing Sectors

Figure F1

Impulse Response Graph for Finance Sector

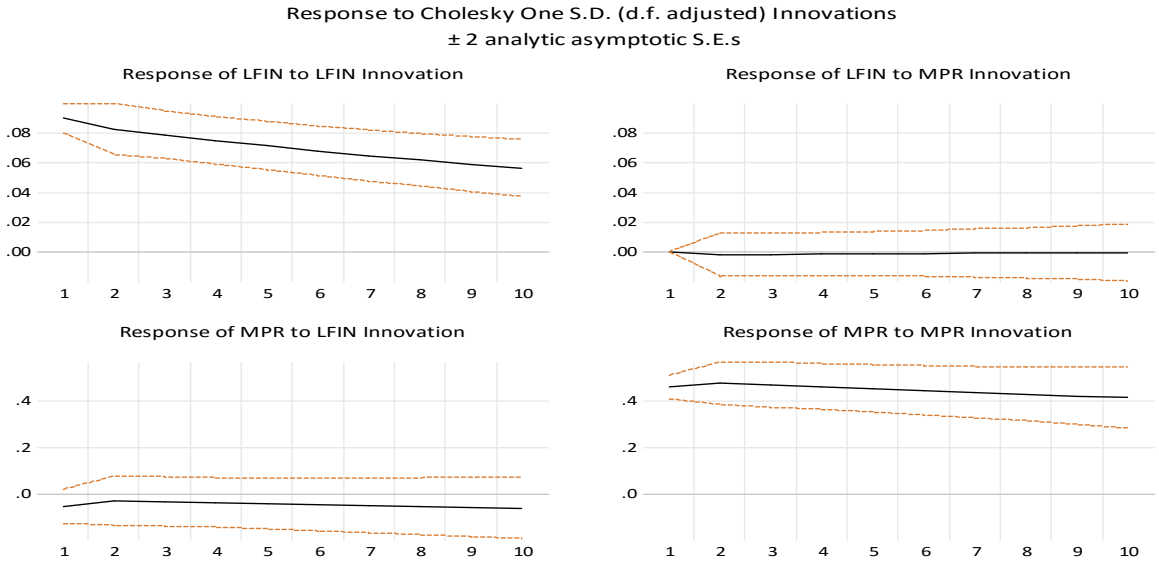
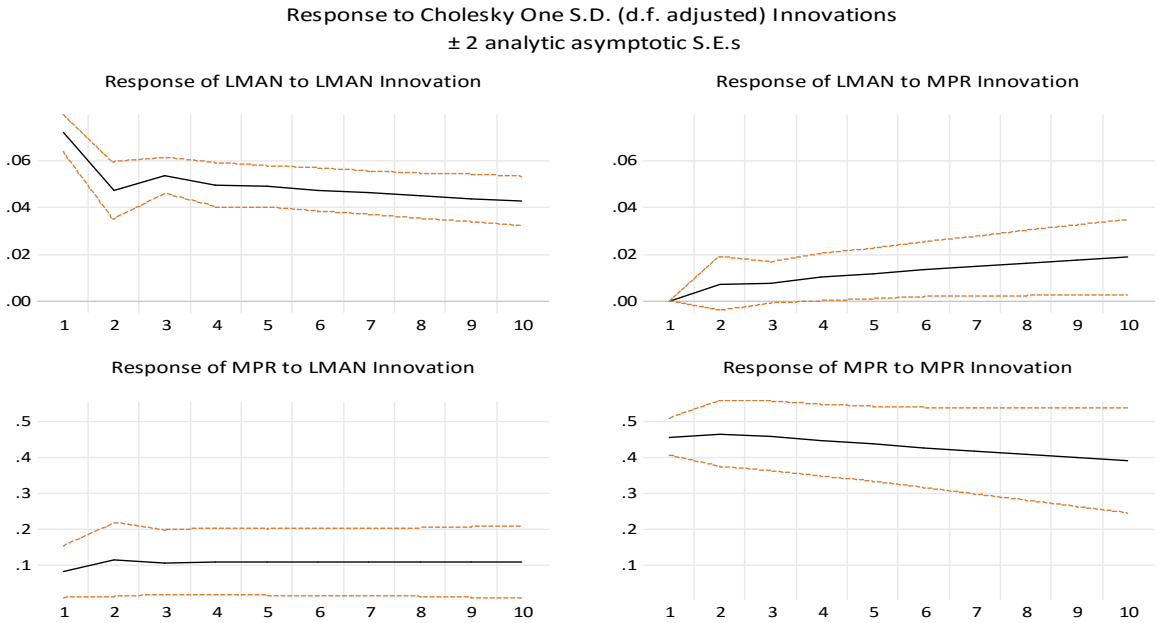


Figure F2

Impulse Response Graph for Manufacturing Sector



Appendix G: Impulse Response Graphs for Solid Mineral Sector

Figure G1

Impulse Response Graph for Solid Mineral Sector