DOCUMENT 5

THESIS: A REPORT ON A STRUCTURED PIECE OF WORK

Developing Effective Mortgage Finance System in Nigeria: Challenges and Opportunities

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CHAPTER ONE - INTRODUCTION

1.1 Background

The fifth document of this dissertation presents the thesis of the doctoral programme. As the overarching document that brings the programme together, the thesis provides an opportunity to clarify and refine the emergent conceptual framework that evolved in the research and empirical studies undertaken in previous phases of the dissertation. This document which chronicles the final piece of empirical research in the dissertation, also enables a concluding field project which has generated new knowledge to fill the critical gaps identified in the appropriate research setting. These knowledge gaps were identified by an updated and contextual review of the extant literature, which considered the critical findings in previous documents and international updates in the field.

Mortgage finance is generally understood to encompass all mortgage agreements and loans processes. In addition to the various procedures and processes surrounding the transfer of ownership between the mortgagors and the mortgagees, there are numerous other activities before and after the actual exchange which influence how these loans can be accessed. Similarly, although the mortgagor and mortgagee occupy the central role in the mortgage transaction, other stakeholders also play significant roles in how effective a mortgage sector is considered within a particular context (Cox et al., 2015; Ikekpeazu, 2018). It has been argued that access to safe and decent housing is vital for bare existence. Access to housing is also considered a veritable tool for social good since there is evidence that it promotes security and harmonious existence for individuals and their community (Leijten and de Bel, 2020; Kumo, 2011). This, therefore, means that gaining a good understanding of how mortgage finance works in various contexts is critical to the lives of the individuals in those settings.

1.2 Importance of Mortgage Finance

Mortgages have proven to be effective as a viable means of acquiring property. This form of household financing gives individuals the opportunity to own a property with payment spread over a given period of time. Compared to the outright purchase of homes, this approach makes repayment of funds more accessible and convenient (Williams and Whitehead, 2017). In many settings, the provision of mortgage facilities via mortgage banks and other private institutions helps households with steady income acquire property. These mortgages are usually flexible and enable the households to spread payments over a given number of years. The mortgage payments are usually deducted from the income of the individuals on a monthly basis. After the payment is completed, the individual owns the property. For countries that have an effective mortgage system, this approach has led to an increase in the number of citizens who can acquire property, and in turn, this has reduced their national housing deficits (Zaltzman, 2003).

In many developed countries, therefore, mortgages have not only been used as a tool for enabling people can acquire properties it has also been used to improve the level of quality that households can have immediate access to compared to what they would have been able to afford if they were paying with the cash that they possessed at that point in time (Williams and Whitehead, 2017). Households that are provided mortgages within the system are additionally protected from the fluctuating cost of payments associated with living in rented apartments (Hills, 2007)

There is also evidence in some developing country settings that effective mortgage systems are now being used to improve access to safe and affordable housing. Mexico, for instance, has made measureable progress over the past ten years in better meeting the country's housing needs (Hartman, 2021). Given the high cost of producing housing (particularly in relation to annual incomes), mortgage financing has been considered a suitable credit financing alternative. Over the last decade, there have been significant advances in expanding the flow of finance for housing through improvements in the National mortgage system, supported by substantial growth in lending by the private sector. As a result, more individuals have had access to credit, and the number of new homes brought to the market has grown substantially (Hartman, 2021). Notably, there has also been a notable increase in financing for existing homes, expanding the range of options available to homebuyers so

they can better meet their housing needs while also giving existing homeowners greater opportunity to tap into the wealth that has accumulated in their homes (Belsky and DuBroff, 2012).

One of the major success indicators of an effective mortgage system is its ability to provide safe and affordable housing for all classes of people in the country; it is not enough that certain classes have access to adequate housing and others do not. One major responsibility of a Government is to provide adequate housing for the citizenry and pathways to effective homeownership (Leijten and de Bel, 2020; Pawson et al., 2020). Therefore, mortgage financing is considered one of the most effective models for Governments to provide a flexible means for every individual, regardless of their class and income level, to access safe and affordable housing.

The importance of effective mortgage systems can be seen in country settings where little or no capacity exists. The failure to provide access to mortgages for certain classes of individuals in a country eventually leads to the mass development of unplanned and inadequate housing by individuals to meet up with housing needs in a country (Haas and Ngoga, 2018). In many developing countries that have not developed an effective mortgage system, the reality is that a significant proportion of the citizens reside in slums, shanties, and unplanned neighbourhoods, mainly due to a lack of access to financing for decent housing. This is particularly true in urban areas of Africa, with most large cities in the continent seeing a rise in unplanned housing in recent decades (Olanrele et al., 2018). In many of these settings, the dearth of mortgage facilities available to low-income earners is further complicated by the lack of stable jobs and the low wages frequently associated with their working conditions (Haas and Ngoga, 2018). This means that even if they had access to mortgages, there might be higher chances of defaults in payments. This further exacerbates the housing situation by exposing this demographic to exploring other means of housing financing, which in most cases is not favourable. On a national scale, this leads to a larger deficit in housing facilities for the majority of the population (Olanrele et al., 2018).

Additionally, the absence of a viable mortgage system means that the majority of the populace who belong to the middle and low-income category will also have to rent houses or build their houses over a long period of time (Aribigbola, 2008; Ebekozien et al., 2019). Therefore, this entire scenario underscores the importance of the existence of an effective mortgage system, both at a national level and at an individual level, for the citizens living

within the country. The role of governments and the other relevant stakeholders in developing an effective mortgage system to enable access to safe and affordable housing can therefore not be overemphasised.

1.3 Relevance of the Study

It has been established that mortgage financing is considered one of the most effective means of providing housing for the majority of the population. In developed countries, evidence suggests that effective functioning of the mortgage sector guarantees access to safe and decent housing and contributes to the economic development of those countries (Filotto et al., 2018). Therefore, mortgage finance has been recognised as a critical tool in the formulation and implementation of relevant policies aimed at improving access to population housing (Kohl, 2018). Despite the acknowledged socio-economic benefits, many developing countries struggle to provide adequate housing finance using the mortgage finance model (Haas and Ngoga, 2018; Olanrele et al., 2018).

In Nigeria, the acknowledged under-performance in the mortgage finance sector has resulted in inadequate housing for the citizenry (Ikekpeazu, 2018). Evidence suggests that more than 70% of Nigerian urban dwellers live in slums (Ayuba, 2019). The attendant conditions associated with such substandard dwellings are considered degrading to human dignity. Other consequences of the ineffective mortgage finance sector are the preponderance of temporary self-made structures, overcrowded housing, and unprecedented pressure on existing but insufficient and deteriorating urban infrastructure and social services. The evidence indicates that the population found in these dwellings are low-income earners, predominantly poor and less privileged (Ayuba, 2019; Olanrele et al., 2018).

Factors identified as barriers to housing provision in Nigeria are myriad and multi-sectoral. They include issues relating to land acquisition; inadequate capital; cost of building materials; insufficient capacity in construction and financial services: inconsistent government policies; lack of political will; and a turbulent and uncertain economic

environment (Nubi, 2000; Akinwunmi et al., 2012; Ochayi and Agbakwuru, 2013; Olotuah and Bobodayo, 2009). Although issues limiting the effectiveness of the mortgage sector had been identified by other workers, the incoherent approach adopted by past workers meant that little progress had been made in theorising a strategy to improve the overall effectiveness of the sector.

1.4 Strategy of the Thesis

To bridge this gap, this thesis aimed to gain a better understanding of issues relating to effectiveness in the Nigerian mortgage and finance sector, which were deemed critical to the sector's development. A strategy was adopted whereby the knowledge gaps in the sector were identified and processed from the perspective of the various stakeholders identified in the literature review. In the dissertation, a deliberate decision was also taken to approach the engagement with the sector's issues and stakeholders from an effectiveness standpoint. The effectiveness of a system relates to processes undertaken to ensure that set objectives are achieved (Mouzas, 2006; Porter and Kramer, 2011). According to the Nigerian Government, the state's primary goal in terms of mortgage and housing provision is to enable access to safe and decent housing for the majority of its citizenry (Ikekpeazu, 2018; Kumo, 2013). In the achievement of this objective, particular emphasis needs to be paid to enabling access for lower-income earners, who incidentally are the most disenfranchised in this respect (Ikekpeazu, 2018). Therefore, in the context of this dissertation, effectiveness refers to an engagement with strategies that will enable an increase in access for all Nigerians, particularly groups who are currently perceived to have the least access to mortgage and housing finance. This was the ethos that has inadvertently underpinned empirical research undertaken in this dissertation.

An additional strategy was also adopted in this work to adjust for weaknesses that had emerged in other studies revealed in the literature review. For the first time in the Nigerian mortgage finance setting, a conceptual framework underpinned by the General Systems Theory (GST) was adopted as the theoretical structure for empirical research. The adoption

of the GST approach has enabled a critical exploration and provided a wide-ranging and inclusive framework for engaging the various diverse factors and stakeholders.

1.5 Short Summary of Empirical Research so far

So far in this Doctoral study, two primary field studies have been undertaken in the immediate past and penultimate phases (Documents 3 and 4, respectively). Prior to the fieldwork phase, a comprehensive literature review was undertaken, which identified the key stakeholders in the Nigerian mortgage finance setting and compiled a comprehensive catalogue of the relevant issues affecting its effective functioning. Against this baseline, an original piece of research using qualitative material was then undertaken in document 3. The qualitative research approach adopted for that phase was the grounded theory approach following an interpretive paradigm. Therefore, the qualitative study focused on identifying the interrelated factors that hindered the adequate mortgage finance provision for Nigerians.

The review in document 2 had previously found four primary sectors, the Banking and Finance sector; the Construction and Estate Development sector; the Government and Public Sector; and Customer related factors, where factors identified in the literature aggregated. This was used as the basis for the thirty-one participants that were theoretically sampled, recruited, and interviewed. The majority of the participants were men and university educated. The data collected were transcribed and analysed following the constant comparison approach with the NVivo software.

The findings from the interviews led to the emergence of an overarching core category themed "access to safe and affordable housing through mortgage financing ."This core category unified six other categories: Affordability, Transparency, and Fairness; Cost of Housing; Quality of Housing; Regulation and Bureaucracy; and Attitudes to Mortgages. Under affordability, some of the themes that emerged as key to the category included accessibility of mortgages and a lack of inclusive policies, especially for the poor. Corruption and exploitation in the various relevant processes emerged as key themes in relation to transparency and fairness. The qualitative study also found that high cost and low quality

associated with mortgage housing and certain negative attitudes of customers impeded access to mortgage finance in Nigeria.

The fourth document oversaw the fieldwork involving an original piece of quantitative research that followed a structured and survey-based research methodology. As obtained with the quantitative tradition, the data management for that phase followed the positivist tradition and objectivist ontology. In line with this, a cross-sectional survey was designed to explore hypotheses developed from the qualitative phase findings. Data were collected from a random sample of bank customers and subjected to various relevant statistical analyses using the SPSS software.

The majority of the customers who responded to the questionnaire were entrepreneurs or privately employed. About one-tenth of the sample earned less than 2 US dollars a day. Following the previous document, access to mortgage finance was considered the core of the study and categorised as the independent variable. Its relationship with other variables then formed the basis for the hypotheses that were explored. The findings from the survey confirmed a strong association between the affordability of mortgages and access to mortgage finance but also found that it was influenced by high-interest rates and perceived inflexibility. The cost of housing was also strongly associated with access to mortgages, with better innovation, more efficient designs, and technical capacity in construction, seen as factors that could reduce costs. Poor regulation was, however, seen as a significant weakness. Quality of housing was explored but did not appear to have any significant relationship with how mortgages were accessed in Nigeria. Other variables that were found to be significantly associated with access to mortgages were regulation within the system and practices in mortgage administration which related to transparency and fairness, for instance, corruption and nepotism. Adoption of new technology was also seen as a factor that could strengthen various key systems within the mortgage finance sector.

1.6 Structure of the Document

The previous documents of this Doctoral study have sought evidence from both the qualitative and quantitative research perspectives to explore pertinent views and

experiences relating to the effectiveness of mortgage provision in Nigeria. Preceding the above research phases, a literature review was undertaken to assess the extant knowledge critically and properly situate various aspects of the study in the relevant contexts. The thesis of this study will now aim at consolidating the research findings of the previous documents. The thesis has also developed a conceptual framework that is contextual but also practicable in terms of its utility in engaging with the issues that limit access to mortgage finance in Nigeria. The research undertaken in this document follows the mixed methods design.

Following this introductory chapter of this document, the next chapter will provide details of how the conceptual framework has evolved from the beginning of the dissertation to this final phase. The GST philosophy underpinning the study, together with the incremental additions made by the two previous empirical field studies, will be highlighted.

The next chapter will present the revised literature review, where the new knowledge and emergent concepts being articulated in this dissertation are explored against the extant literature and current body of research in the area. Areas where gaps still exist in mortgage finance, particularly with respect to the Nigerian setting, will be revealed.

 The fourth chapter of this document will focus on providing details of the research question of the thesis, as well as elaborating on the study's objectives. The hypotheses that guided the field study were formulated from the knowledge gaps that were revealed in the revised literature review. They are also presented in this section.

In the fifth chapter of the thesis, the methodology of the study, which outlines the processes undertaken in the fieldwork in this phase of the study, is presented. All the strategies guiding the data collection and analysis will be explained and justified here. Following this is the next chapter, where the results of the empirical study are presented.
Here, both quantitative and qualitative findings are provided.

In the seventh chapter of the thesis, the Conceptual Framework of the dissertation is presented. In the eighth chapter of the thesis, findings from the empirical study are also discussed in the various relevant contexts as well as against extant literature. The final

chapter of the thesis then provides recommendations for various relevant sectors while concluding the dissertation.

CHAPTER TWO - EVOLUTION OF THE CONCEPTUAL FRAMEWORK

2.1 Introduction

From the onset of this study, the dissertation identified the development of a fit-forpurpose conceptual framework as critical to achieving the study's objectives. A conceptual framework has been identified as invaluable in understanding emerging concepts in a particular field. This approach better understands the links, relationships, and connections among the various factors and concepts under study (Varpio et al., 2020).

2.2 Initial Literature Review

The first empirical study within the dissertation was undertaken in document 2. Here, a comprehensive literature review was undertaken, and it was revealed that several key factors facilitated or hindered the provision of mortgages in the Nigerian setting. That initial review also identified that the factors identified in the extant literature seemed to aggregate within previously unidentified groupings. In the development of the conceptual frameworks, these groupings within which the factors aggregated were classified as sectors. The first that was identified were the Government and the Public Sector. Here, the factors that emerged as influential to how mortgage was provided in Nigeria included land legislation and administration, state funding of mortgages through the Federal Mortgage Bank of Nigeria, and how various aspects of the industry were regulated. In this sect r, key actors were policymakers and other professionals in government. The second grouping formed the Banking and Finance Sector, where the main stakeholders were identified as the bankers that worked in the Primary Mortgage Institutions (PMIs). In this sect r, the professionals' expertise, technical capacity, and finance-related factors were identified as the key factors affecting how mortgage was provided in Nigeria.

The Construction and Estate Development Sector represented the third grouping that emerged in the initial literature review. The factors identified in this sector included construction costs, technical capacity of the professionals, and the nature and adequacy of relevant regulation within the sector.

The final group of factors that emerged in the review related to the mortgage customer. Most of the actors in this section related to issues identified in the literature, which were perceived as influencing how customers accessed mortgages, such as land access and other socio-cultural values.

2.3 General Systems Theory

Following the first comprehensive review of the literature, it became clear that the groupings of the critical factors, as well as the stakeholders that were revealed as important in the study, were dissimilar and belonged to widely divergent sectors. There were, however, indications of the possibility of links and relationships between the stakeholders and the sectors. It, therefore, became necessary to identify a practical philosophy, model, or theory that would underpin the development of the coherent conceptual theory. General Systems Theory (GST) essentially argues that although components of a system may seem distinct, they are, in fact, interconnected and interdependent and function collaboratively towards achieving the system's objectives (von Bertalanffy, 1968). This approach was therefore identified as appropriate in the development of a conceptual framework that could explain the complex relationships between the identified stakeholders and factors.

Although GST is now widely used within the social and management sciences, it was initially developed to explain interdisciplinary relationships. Von Bertalan, who is widely acknowledged as the forebear of GST, is said to have struggled with naming GST a 'theory' since he felt that it would imply that the emergent theory would be pigeonholed within the sciences. This is evidence that von Bertalanffy intended his doctrine's utility to bridge factors and concepts that existed in various distinct disciplines (von Bertalanffy, 1968). Contemporary evidence now seems to have verified the achievement of von Bertalanffy's

intended objective. According to Hofkirchner and Schfranek (2011), GST is now widely employed in clarifying the behaviour of systems or organisations consisting of homologous or isomorphic parts. Furthermore, there is evidence of GST's relevance in widely varying fields like management, psychology, engineering, physics, and biology (Lai and Huili Lin, 2017; Wang and Li, 2018).

From the outset, this thesis aimed at developing an effective mortgage finance system in Nigeria by identifying the relevant barriers and facilitators in the system. The initial review showed that the various factors and stakeholders in mortgage and housing finance emanated from different sectors, such as the banking sector, the government, the construction sector, and the customer. GST argues that while systems comprise fundamentally diverse constituent parts, these individual parts cannot function effectively or exist in isolation. It, therefore, meant that considering the development of an effective mortgage finance system, as the overarching GST system, would enable a robust and rigorous interrogation of the relationships between the varying stakeholders and factors that had been identified in the review.

The main aim of GST is to seek out interrelationships within systems that will allow researchers to think more clearly about the goals of any possible system. For instance, regarding 'disciplinarity,' which in essence refers to various disciplines, GST tends towards trans-disciplinarity, which assumes a more profound relationship than multi or interdisciplinary. In this context, multidisciplinarity refers to unrelated coexistence between system components (Mokiy, 2019; Vagios, 2017). Interdisciplinarity goes further than multidisciplinarity and argues that rather than an unrelated coexistence between disciplines, there is, in fact, a casual relationship between mono disciplines. Trans-discipline, however, refers to a significant engagement between mono disciplines towards the development of common concepts (Mokiy, 2019; Uwizeyimana and Basheka, 2017). Juxtaposing his thinking against the varying players and aggregations identified in the Nigerian mortgage setting, it was clear that the use of the GST approach would enable a critical exploration as well as provide a comprehensive framework to explore the relevant factors and their connections, as well as roles of various stakeholders and their relationships.

From the second document of the dissertation onwards, GST, therefore, became the underpinning theory guiding the further and incremental development of the conceptual

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framework. It is important to note that until this dissertation, no other study had adopted this approach in exploring issues relating to mortgage finance in this setting. The novel approach adopted by the dissertation to group the stakeholders and key factors into the Government and the Public Sector; the Banking and Finance Sector; the Construction and Estate Development Sector; and customer-related factors formed the basis for a more holistic and comprehensive exploration of the issues limiting effectiveness in the Nigerian mortgage sector. This dessert tion also represents the first time that the GST approach would be used to gain a better understanding of how these seemingly diverse factors work together (or against each other) towards a common goal.

2.4 Document Three

In the third document of the dissertation, the conceptual framework is built on the key revelations from the literature review to undertake a qualitative research project. In this phase of the study, the focus was to empirically explore the views and experiences of stakeholders from the Government and the Public Sector, the Banking and Finance Sector, the Construction and Estate Development Sector, as well as the Customers.

Following the realist and interpretive qualitative research fieldwork and analysis undertaken in the third document, several noteworthy changes were made to the emergent conceptual framework. In that phase, it emerged that the core category of the emergent theory was 'access to safe and affordable housing through mortgage financing .'This means that after all the research participants had been interviewed and the data collected were analysed, the overarching theme that encapsulated their views and experiences was the need for the Nigerian mortgage system to be able to provide safe and affordable housing. Underpinning the core category were six categories: Affordability; Transparency, Fairness; Cost of Housing; Quality of Housing; Regulation and Bureaucracy; and Attitudes to Mortgages. These categories represented the aggregation of various thematic factors that were seen as either facilitators or barriers to how people in Nigeria were able to access safe and affordable housing through a mortgage.

In terms of affordability, some of the emergent themes included accessibility of mortgages and unavailability of inclusive policies, especially for Nigerians in the lower-income groups.

With respect to transparency and fairness, the conceptual framework revealed issues relating to corruption and exploitation in the various relevant aspects of mortgage processing. The cost and quality of housing were also identified as key categories influencing the access that Nigerians had to safe and affordable housing through mortgage financing. Here, it was perceived that the high cost and low quality of mortgage-related housing constituted a barrier to how people engaged with mortgages in Nigeria. In terms of the regulation and bureaucracy associated with mortgage provision in Nigeria, inefficient processes, lack of technical capacity, and inadequate infrastructure were some of the themes that emerged. The final category that emerged in the qualitative phase of the study revealed new themes that explained how negative perceptions and attitudes of customers limited their access to mortgages. Some of these themes included the perceived debtor mentality associated with loans and the inflexible structure of mortgage loans.

The qualitative research in document three further revealed that most of the factors identified in the six major categories that emerged were considered barriers to accessing safe housing through mortgages. The evidence also indicated a significant interconnectedness between the seemingly distinct categories. For instance, some factors emerged independently in several categories, indicating the need for a multi-sectoral strategy to develop lasting solutions to address them. This revelation could have only been achieved due to the adoption of a GST underpinned framework that enabled the exploration of seemingly distinct sectors focusing on one objective. This is the first time this approach has been used in this setting.

2.5 Document Four

The fourth document of the dissertation focused on undertaking empirical fieldwork based on structured and survey-based research methods. Again, an I rental approach was deliberately adopted to build on the findings from the previous versions of the conceptual framework in order to develop a thesis that is central to the empirical study in this dissertation.

Specifically, a cross-sectional survey was used to collect data from randomly selected bank customers through ten banks. The questionnaire items were developed from the themes that

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emerged in the qualitative study undertaken in document three. In line with the quantitative methodology that underpinned this phase, a demographic description of the sample was obtained. The majority of the sample had achieved an educational qualification from a tertiary institution and belonged to the male gender. More than half of the respondents had worked in the private sector or were engaged in entrepreneurial activities for a living. With respect to their income, about one-tenth of the sample earned less than 2 US dollars a day.

Figure 1: Conceptual Framework from Document Four

Source: Developing Effective Mortgage Finance System in Nigeria: Challenges and Opportunities- Document 4

Figure 1 above details the conceptual framework that emerged following the quantitative survey that was undertaken in document four. In this document of the dissertation, several hypotheses were explored to determine the nature of the relationships between these key variables and the level of access that Nigerians had to mortgage finance. Based on the survey and statistical analyses, the study confirmed a strong association between the affordability of mortgages and access to mortgage finance. The study provided evidence that increasing the affordability of mortgages improved access to mortgage financing. Highinterest rates and inflexibility associated with Nigerian mortgages were perceived as barriers to mortgage affordability in this setting.

Additionally, affordability was identified as the singular most important factor influencing how mortgages were accessed in Nigeria. Other variables that were explored included the cost of housing. The study found that lower housing costs facilitated better access to mortgage financing. Factors that could help lower costs in Nigeria include more efficient design, better innovation, and improved technical capacity in mortgage-related housing construction. The survey also explored the influence of quality of housing on access to mortgages, but the analysis did not reveal any statistically significant relationship.

Several other variables that the survey explored included various regulatory regimes associated with mortgages and the transparency and fairness linked to mortgage administration and other relevant processes. The study found that regulation was ineffective and weak in many relevant sectors, including construction and administration. Corruption, tribalism, and nepotism were some of the specific practices weakening the relevant systems. Respondents perceived that the adoption of new technology, better enforcement of relevant laws, and relevant supervision could strengthen regulation. For the first time in the study setting, this dissertation also surveyed how attitudes to mortgages influenced access to mortgages. It emerged that there was a need for better awareness, less documentation, and more inclusive and contextual policies within the Nigerian mortgage sector.

In the model above, the black house represents access to mortgage financing, which is the independent variable. The circles surrounding the house represent the various variables that influenced how Nigerians were able to access mortgages. The colour coding of the circles represents the strength of the variable's relationship with how people were able to access mortgage finance. For instance, 'Affordability' is represented by the darkest blue circle, signifying that it was the most important factor in enabling access to mortgages. On the other

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hand, 'Quality of Housing' has not been indicated with any shade of blue because the analyses revealed that it was statistically insignificant. 'Attitudes towards Mortgages' has been depicted by a rectangle due to its emergent status. This dissertation represents the first time this variable is being explored in the Nigerian setting. The arrows connecting the four blue circles to the house at the model's core consist of solid lines, depicting evidence of a statistically proven relationship. The arrows connecting the white circle and the rectangle to the core are dotted lines, indicating a relationship with no statistical significance.

2.6 Going Forward

Document five represents the thesis of the dissertation, where the main aim was to undertake empirical fieldwork based on structured and survey-based research methods. Here, a strategic decision was taken to build on the findings from the previous versions of the conceptual framework while focusing on areas of critical importance. The revised literature review presented in the next chapter reveals the key areas of critical importance where further work was needed to address knowledge gaps and therefore enabled the development of the relevant hypotheses. This approach represented the most logical and systematic approach to the development of the hypotheses. This step was key to the empirical study in this document but also central to the entire dissertation.

CHAPTER THREE- REVISED LITERATURE REVIEW

3.1 Introduction

This chapter of the dissertation presents the revised literature review of the study. In the early stages of the Doctorate degree, a comprehensive literature review was undertaken in document 2. The findings of that review formed the baseline for the empirical studies undertaken in documents three and four. The findings from the qualitative and quantitative research projects provided new knowledge to the contextual setting of this study but also revealed new factors and relationships that were hitherto unknown. This has indicated the need for an updated review of the literature. Furthermore, the earlier review predated the engagement of GST as the theory underpinning the conceptual framework. A new review that took this into consideration enabled a more robust engagement and facilitated the development of a more comprehensive framework.

3.2 Government Officials and Policymakers

Government Officials and Policymakers play a critical role in the provision of mortgage finance in Nigeria. Currently, the major policy-making body for mortgages in Nigeria is the Federal Mortgage Bank of Nigeria (FMBN). The FMBN, which was established six decades ago, serves as the main Government body responsible for developing a robust mortgage finance system for the country (FMBN, 2016). Some of the body's corporate objectives include encouraging the growth of the mortgage industry by supporting the emergence of PMIs with the capacity to deliver affordable housing across the nation (Boyi, 2019). The body also aims to develop sustainable funding streams, as well as sophisticated financial instruments that can adequately finance the sector. Additionally, FMBN is statutorily charged with the collection and administration of the National Housing Fund (NHF). The NHF is a Federal Government fund to which civil servants as well as private-sector employees can contribute a specific proportion of their salaries, with a view to accessing a mortgage loan from the scheme at an interest rate significantly lower than the prevailing national average rates (Moruf, 2017). Currently, participants in the scheme contribute 2.5% of their monthly salaries, and if they

meet all relevant requirements, they can access mortgage loans at a 6% interest rate (Ikekpeazu, 2018).

Based on these statutory responsibilities, the FMBN employs various mechanisms in attempting to achieve its organisational objectives. For instance, it finances mortgages created by PMIs, using funds from the NHF, and it also disburses estate development loans to Construction and Estate Development Professionals (Ikekpeazu, 2018). The FMBN also undertakes relevant developmental research and collaborates with other Government Agencies, such as the Securities and Exchange Commission (SEC), to develop sophisticated and contextual financial instruments for the sector.

A review of the extant literature, however, reveals significant weaknesses in the way that FMBN had formulated and implemented a policy with respect to mortgage financing. Nubi (2000), in a review of mortgage financing in Nigeria, indicated that FMBN processes were hindered by political interference and instability, administrative incompetence, and a lack of adequate coordination in the implementation of various relevant Government policies. In Nigeria, Government institutions also have the social responsibility to cater to citizens. It was against this backdrop that FMBN was perceived to be a key mechanism for the Government to ensure that Nigeria's oil wealth in the 1970s translated to better access to housing for the citizenry. Research has, however, revealed that FMBN had failed in fulfilling this social responsibility. Some of the reasons posited for this failure and barriers to accessing mortgage finance were examined by Nwuba and Chukwuma Nwuba (2018). The study deployed a triangulation approach and surveyed the borrowers, lenders, and members of the FMBN via a structured questionnaire. They found that various factors constitute failures and barriers, such as homeowners' financial strength for repayment, financial management restrictions, lack of access to adequate capital, issues relating to land titling and documentation, and shortage of mortgage institutions were prominent in the study.

Other areas in the literature where activities of Government officials and policymakers have influenced the effectiveness of mortgage provision in Nigeria relate to the formulation and implementation of relevant laws and regulations. In Nigeria, the National Assembly is responsible for debating and formulating national laws and regulations. Similarly, State

Assemblies of the thirty-six states that make up the country are responsible for law-making in their respective territories. Currently, there is little evidence that suggests that relevant laws underpinning regulations and practice in the Nigerian mortgage sector are fit for purpose or even exist, and this has been noted in the extant literature (Ikekpeazu, 2018; Martins, 2019). In 2014, a Minister of Finance in charge of coordinating the Nigerian Economy indicated the need for new and contextual legislation which would increase funding for the mortgage sector, reduce bureaucratic bottlenecks for Estate Developers, as well as improve access to mortgages (Okonjo-Iweala, 2014). Other research has identified several other areas where a more comprehensive and robust engagement by policymakers may influence the effectiveness of mortgage provision in Nigeria. For example, laws and regulations guiding and controlling mortgage foreclosure and emerging financial instruments for funding mortgages (Daniel, 2014; Ikekpeazu, 2018; Martins, 2019). With respect to land titling, processing, and administration, there is similar policy incoherence. Access to land suitable for mortgage financed properties varied across the country, depending on the location, technological advancement, and transparency in relevant administrative processes (Aina, 2011; Akingbade et al., 2012; Martins, 2019).

More importantly, however, this literature review has shown that although the Government Officials and Policy Makers identified in this dissertation are important stakeholders, no work has been undertaken to explore their views and experiences, using a systems approach that will ensure the interrogation of the above issues, as well as those that have been empirically developed in the previous documents of the dissertation.

3.3 Mortgage Bankers and Professionals in the Mortgage Financing

The previous section explored the role of the FMBN and other Government stakeholders in developing relevant policy to guide how the mortgage is provided in Nigeria. The implementation of policies that are developed is, however, domiciled with the PMIs, who interact directly with the customers who have the need for mortgage services. In Nigeria, these PMIs are the only organisations that are statutorily certified to offer mortgage finance services to end-users (Anidiobu et al., 2018). What this means is that the importance of people who work in these PMIs and other related customer-facing roles cannot be taken for granted (Bhutta and Keys, 2022).

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A review of the extant literature reveals that the role that PMIs play in the mortgage provision process is critical. Nubi (2000) acknowledged that the Banking and Finance sector was key to the effectiveness of mortgage provision but highlighted the fact that their profitoriented business model undermined access to mortgages and housing for Nigerians, particularly those in lower-income brackets. Another study which framed the access to mortgage issue from a social responsibility perspective, reached similar findings.

Recent studies have continued to show that rigorous financial hurdles, such as excessive documentation, mean that low-income groups are systematically disqualified from accessing housing finance (Ikekpeazu, 2018; Martins, 2019; Moore, 2019). Based on this, there have been calls for the development of a contextual mortgage finance system that will take into consideration the need to engage the social responsibility argument, which may help address access for the poor (Moore, 2019). Further evidence to support the inequitable distribution of mortgage services using the PMI structure related to the geographical spread of the relevant banks across the country. One study which investigated problems with mortgage finance identified that the majority of PMIs were concentrated in urban areas, such as Lagos, the former national capital. It also emerged that the current model of mortgage provision was not always considered profitable by these institutions, and as a result, bank resources were frequently channelled to other non-mortgage-related transactions, which were considered more lucrative (Adebamowo et al., 2012).

Further review of the international literature provided important insights that enabled a more rigorous assessment of the role of mortgage bankers and other relevant professionals in the Nigerian mortgage sector. Internationally, mortgage brokerage plays a major role in how citizens are able to access mortgage finance in many developed countries. Mortgage brokers are independent real estate financing professionals whose specialty lies in the origination of residential mortgages. Some mortgage brokers have additional experience and training in providing commercial mortgages. In some countries, such as the UK and the US, the mortgage broker is an independent contractor who markets and originates loans offered by different providers (Kleiner, 2013). In Nigeria, however, there is little or nothing in the literature regarding the existence or operation of this class of professionals. This is despite the obvious advantages that this type of service can provide in terms of increasing access.

Another area where the research is lacking is in relation to the existing technical capacity of Mortgage Bankers and other key professionals in the sector. This sector generates

participation of institutional investors in the acquisition and housing development; however, limited funding, fragmentation of small developers, and defects of skill lead to inferior housing always being built, and as a result, housing collapse and slums are obtained (Ogbenjuwa, 2018). The importance of providing relevant training in the sector has been identified as key to building capacity, both locally and at a national level. It also ensures that a standardised service is developed which is contextual to the needs of the citizenry (USDHUD, 2000). Another advantages of ensuring that the relevant training is provided for professionals is that the stakeholders are exposed to various relevant policy and organisational objectives, including new technology, industry best practices, and other regulatory issues concerning ethics and transparency (World Bank, 2007, Devex, 2012). In developed countries, one key tool for increasing financing available for the mortgage and housing finance market is the development of securities and formulation of various forms of housing finance bonds (Obay, 2014). The deployment of these and other sophisticated financial instruments can stimulate the growth of funding available for the sector by up to ten times. Unfortunately, the evidence does not indicate that such technical expertise or capacity exists in the Nigerian mortgage finance sector (Ochayi and Agbakwuru, 2013). This updated literature review has now identified professionals in mortgage banking and finance as important actors in how mortgage financing is provided in Nigeria. The review has further identified professionals such as Brokers whose activities have the potential to improve access in Nigeria but have not been effectively utilised. It has also clarified significant gaps in the literature pertaining to the views and experiences of these key stakeholders regarding how their role influences factors that underpin effective mortgage finance delivery in Nigeria.

3.4 Construction and Estate Development Professionals

Of the various groups of stakeholders identified in this study, some of the most important belonged to professionals in the Construction and Estate Development Sector. In the previous empirical studies undertaken by this dissertation, the majority of the factors that emerged as important to how Nigerians accessed mortgages related to this sector. For instance, the cost and quality of housing and reliance on the importation of building materials (IS Ajayi, 2019) associated with mortgages were perceived to influence access to housing finance in Nigeria.

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Similarly, unfair practices in mortgage housing and construction also seemed to play a role in customers' access, particularly as regulation in the sector was perceived as weak. Further review of the literature to determine researchers' assessment of the role of these key stakeholders in the Nigerian setting revealed that very little work had explored this perspective.

In the international literature, some of these identified factors have been acknowledged in other settings. In Eastern Europe, there is evidence that government policies relating to housing finance and mortgage construction are formulated with a view to ensuring not just that the building of houses is more cost-efficient but also that those in the lower-income brackets have access to moderately priced social housing (Kryukova, 2014). Similarly, reforms in Asia have attempted to use innovative taxing legislation in the housing construction sector as a means of achieving some form of redistribution that may favourably increase access for the disadvantaged (Cho and Choi, 2014). One study in Poland found that although government policies in that country were designed to reduce the cost of housing in order to increase access for the less privileged, poor policy implementation and lack of transparency meant that wealthier groups of the society ended up the main beneficiaries of this policy (Tsenkov and Polanska, 2014). Another study by HamiltonMacLaren (2013) in England explored the influence of adopting new and innovative techniques in housing construction and estate development. On the one hand, alternative housing construction techniques were found to be somewhat cost-efficient and could lead to better access to mortgages. On the other hand, however, public opinion varied in terms of how acceptable these new and innovative techniques were considered by the off-takers.

Other factors identified in the literature associated with construction and estate development with mortgage effectiveness include the level of technical expertise and the standard of training associated with the professionals in the sector. Vocational and standardised training of the relevant professionals in the housing construction and estate development sector has been identified as integral to the sustainable development of the mortgage sector (Panibratov and Larionov, 2013). Despite the acknowledged importance, various factors in the mortgage finance and housing construction sector exist that limit professionals' engagement with the relevant training, for instance, availability of sectoral funding, costs to the employer, and a lack of clear evidence with respect to returns on investment (Hogarth and Gambin, 2014). As such, it is not uncommon for there to be some inertia in professionals engaging with the

relevant standardised vocational training, even in settings where there is a clear national structure (Reis, 2015).

In Nigeria, however, little is known about how these key identified factors influence mortgage provision or what the stakeholders' views and experiences are. The need to build local capacity, improve contextual technical expertise and enhance innovation and cost efficiency in the sector has been highlighted by a few experts (National Technical Working Group, 2009; Usman, 2013). According to the Technical Working Group for Nigeria's Vision 2020, the evidence suggests a lack of skilled professionals and managers in the Nigerian housing construction and estate development sector. There are also issues with verifiable and standardised industry qualifications, which are the bedrock of innovative practice as well as effective and efficient service delivery (National Technical Working Group, 2009). The above statement was, however, issued by politicians and policymakers, and therein lies the issue. Very little in the existing literature indicates that a robust exploration has been undertaken from the perspective of construction personnel and estate developers, especially in relation to the cost and quality of housing, which this dissertation has shown influences access to mortgages. Even fewer studies have explored how this group of stakeholders' activities, in general, and in relationship with others, influence the way mortgage finance is accessed in Nigeria.

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stakeholders in the Nigerian setting revealed that very little work had explored this perspective.

In the international literature, some of these identified factors have been acknowledged in other settings. In Eastern Europe, there is evidence that government policies relating to housing finance and mortgage construction are formulated with a view to ensuring not just that the building of houses is more cost-efficient but also that those in the lower-income brackets have access to moderately priced social housing (Kryukova, 2014). In a recent study that examined wealth inequality between post-socialist countries, Brzeziński and Sałach (2021) noted that homeownership was the single biggest contributor to the disparity in wealth between the countries. The researchers found that homeownership rates in countries like Vietnam and China vary but are generally high, owing to government support for mortgage loans before the global financial crisis and the help for indebted households after the crisis. The study noted that many of the policies were geared towards poorer citizens.

Similarly, reforms in Asia have attempted to use innovative taxing legislation in the housing construction sector as a means of achieving some form of redistribution that may favourably increase access for the disadvantaged (Cho and Choi, 2014). A recent book by Phang (2018) noted this trend in Singapore by assessing the history and current state of housing policy in the country. The book notes that government policy and taxation have been used to reduce housing speculation and reduce wealth inequality through house ownership. However, government policies have not always been effective in this regard. One study in Poland found that although government policies in that country were designed to reduce the cost of housing in order to increase access for the less privileged, poor policy implementation and lack of transparency meant that wealthier groups of the society ended up the main beneficiaries of this policy (Tsenkov and Polanska, 2014). Another study by Hamilton-MacLaren (2013) in England explored the influence of adopting new and innovative techniques in housing construction and estate development. On the one hand, alternative housing construction techniques were found to be somewhat cost-efficient and could lead to better access to mortgages. On the other hand, however, public opinion varied in terms of how acceptable these new and innovative techniques were considered by the off-takers. Horsell (2022) traced the history of house ownership policies in western countries and the effect of various political ideologies on the policies. One thing that stood out in her review is the fact that most policies have continued to favour those who are most likely to own homes

without government help over those that are unlikely to own homes. Other factors identified in the literature associated with construction and estate development with mortgage effectiveness include the level of technical expertise and the standard of training associated with the professionals in the sector. Vocational and standardised training of the relevant professionals in the housing construction and estate development sector has been identified as integral to the sustainable development of the mortgage sector (Panibratov and Larionov, 2013). Despite the acknowledged importance, various factors in the mortgage finance and housing construction sector exist that limit professionals' engagement with the relevant training, for instance, availability of sectoral funding, costs to the employer, and a lack of clear evidence with respect to returns on investment (Asres et al., 2020; Hogarth and Gambin, 2014). As such, it is not uncommon for there to be some inertia in professionals engaging with the relevant standardised vocational training, even in settings where there is a clear national structure (Reis, 2015).

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3.5 Customers

Majority of the factors that have been identified in this study relate directly or indirectly to the mortgage customer. As such, discussing the effectiveness of mortgage provision would be incomplete if the access that customers have to this financial instrument is not explored. In the Nigerian setting, a number of studies have reviewed customers' views and experiences in relation to some aspects of their mortgage application process, including their accessibility.

In the previous documents of this dissertation, the factors identified which influenced how customers accessed mortgages had been identified as varied and multi-sectoral in nature. The revised literature review, however, revealed that the majority of studies that had explored customers' views had focused mainly on a superficial exploration of their satisfaction, mostly in terms of various banking services. For example, Ahmadu's (2012) exploration of banking services in Nigeria's former capital city – Lagos, to better understand customers' attitudes to existing and newly introduced banking services, especially electronic banking. Another study adopted the same perspective in its exploration of customers' views and experiences but undertook its study in a larger geographical region, encompassing the southwestern part of Nigeria. They, however, explored the relationship between perceived qualities of service received by customers and the loyalty they displayed when they decided to engage in electronic banking (Gbadeyan et al., 2015).

In the international setting as well, much of the mortgage-related literature that had surveyed customers' views focused on satisfaction and assessment of service delivered. In the United States, one study explored customers' views and experiences in relation to how they perceived communication about their mortgages had improved or deteriorated following the introduction of a new intervention (Johnson et al., 2016). Another study identified by the literature review assessed similar experiences from the customers' perspective, following training to improve staff skills in various relevant areas (Carman, 2013). Recent studies in mortgage finance in nigeria shows that the public has been debating the factors affecting access to effective mortgage housing issues44 related to mortgage finance arrangements (Ibuoye, 2021).

A few of the studies that surveyed customers actually explored their views and experiences in terms of specific factors which could influence access to mortgage finance. One study in Ogun State assessed residential satisfaction with housing units provided via housing finance

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and mortgages. Findings from the study indicated that the majority of the respondents were unhappy with their residential environment, especially in terms of water supply and electricity (Ibem and Amole, 2013). The authors inferred that a lack of adequate regulation might be responsible for the lack of relevant infrastructure.

Other aspects of the international literature that pertained to mortgage customers concerned mortgage repayment and propensity to default. In the United Kingdom, researchers identified that commitment to mortgage repayment formed a critical aspect of the National mortgage cycle. Some of the factors which studies have shown influence the ability of customers to repay their mortgage include job security, accidents, ill health, employment status, and bereavement (Burrows, 1998; Boheim and Taylor, 2000; Ford et al., 2004). In the Nigerian setting, there is little evidence to show that these aspects of the mortgage processes have been explored from the customers' perspective.

The review of the international literature also identified studies that had explored the relationship between access to mortgages and the socioeconomic characteristics of mortgage customers. This approach revealed some interesting findings. One study found that older borrowers, particularly those between their late thirties and their fifties, seemed to be less likely to default on their mortgages. The authors linked this to the fact that they seemed more experienced in managing their incomes and financial commitments (Bayer et al., 1996; Boheim and Taylor, 2000).

Likewise, other socioeconomic factors which studies correlated with how individuals were able to access their mortgages include income, education, and wealth. In terms of income, it emerged that mortgage affordability was dependent on the ratio of housing costs to total household income. Lufman (2006), for instance, found that households with higher incomes had better access to housing finance compared to those with lower incomes. The income inflow identified in his study could be from multiple sources or multiple earners. DiazSerrano's (2004) review of socioeconomic determinants of mortgage delinquency in twelve EU countries further identified that income volatility increased the risk of mortgage delinquency.

In a similar vein, evidence in the extant literature revealed wealth as another socioeconomic variable with the potential to influence how individuals engaged with mortgages. In one study, it emerged that less wealthy communities were more likely to have high-risk mortgages. Empirical evidence found that housing finance in these communities was

associated with discriminatory mortgage-lending practices, lack of access to credit, and lower incomes (Shapiro et al., 2013). This also meant that the less wealthy communities were more vulnerable to foreclosure and volatile housing prices.

Education emerged as another important factor influencing mortgage-related behaviour. One study in the US found that college-educated households saved more than less educated households. This, therefore, meant that they were more properly positioned to access mortgages. The review also revealed financial literacy as an important element. The study found that many US households lack financial literacy and that more financially literate households had a higher saving rate than other households. This higher savings and better financial literacy seemed to enable such households to manage their mortgage debts more effectively (Bayer et al., 1996).

In Nigeria, there is little indication in the literature that much research has been undertaken to understand how these identified socioeconomic factors influence access to mortgages. This indicates the need to undertake a more contextual survey of this important group of stakeholders. Also, earlier in this dissertation, several variables such as cost of housing, interest rates, transparency, and attitudes to mortgages were empirically determined as factors influencing access to mortgages in the Nigerian setting. Customers' views were obtained for that phase. The revised literature review has, however, highlighted some further issues of critical importance, such as those related to mortgage delinquency and repayment. These factors need to be better understood in the context of this study.

The thesis presented in Document five, therefore, aims to bring this study back full circle by ensuring that a robust and comprehensive exploration of the empirically identified factors is undertaken from the viewpoint and perspective of all the identified stakeholders in the Nigerian setting. The aims and objectives of the thesis, together with the hypotheses developed from the gaps indicated above, would enable the generation of new knowledge which can improve how a mortgage is accessed in Nigeria.

CHAPTER FOUR - RESEARCH QUESTION AND OBJECTIVES

4.1 Introduction

The qualitative and quantitative studies undertaken in the immediate past two documents provided a robust and comprehensive baseline for the final exploration undertaken in this thesis. The original title of this project, "Developing Effective Mortgage Finance System in Nigeria: Challenges and Prospects," has been slightly modified to read "Developing Effective Mortgage Finance System in Nigeria: Challenges and Opportunities ."This is because, unlike at the early stages of the dissertation, the issues limiting effectiveness in the Nigerian mortgage setting were somewhat clearer, and the focus of the thesis was therefore targeted at recommending practical solutions. Operationally, the thesis maintained the initial strategy adopted, which involved identifying the knowledge gaps and developing a strategic research project to address them. This approach facilitated the emergence of context-specific processes and policies that could eliminate barriers and facilitate effectiveness.

The revised literature review in the preceding chapter built on the previous findings of the dissertation to reveal major barriers and facilitators within the Nigerian mortgage and housing setting, as well as where gaps still existed in the literature. In document 4, a strategic decision was taken to only explore the views and experiences of Customers since it was argued that being on the demand side, they were major stakeholders. In this document, however, the thesis adopted a radically different approach. Here the views and experiences of all the key stakeholders identified in the revised review were explored. This strategy achieved two objectives. Firstly, it ensured a multi-sectoral engagement with all relevant facilitators and barriers. This is in line with the ethos of the GST philosophy. Secondly, the simultaneous engagement with varying factors and stakeholders enabled the development of a cross-cutting conceptual framework that will facilitate the formulation of more efficient policies.

4.2 Research Questions

It should, however, not be forgotten that the core aim of this dissertation was to develop an effective mortgage finance system in Nigeria. The effectiveness of a system relates to how well the system functions to ensure that predetermined goals and objectives are achieved

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(Mouzas, 2006; Porter and Kramer, 2011). In Nigeria, the previous strategies where factors influencing access to mortgages had been addressed on a sector-by-sector basis had not been successful and, as such, could be said to be ineffective. Since the government's goal in the housing sector is to improve access to housing for the majority of its citizenry (Kumo, 2013), adopting a strategy that concurrently engages the key stakeholders and the germane issues in all the relevant sectors was decided as the most logical approach to achieving the desired results.

In achieving the core aim of developing effective mortgage finance in Nigeria, this study further sought to understand the barriers and facilitators to the development of the mortgage/housing sector in Nigeria.

The following research question were regarded as critical to the achievement of the studies aim.

1   What factors influence the provision of mortgage/housing finance in Nigeria?
2   What factors constitute barriers to facilitating access to mortgage/housing finance in Nigeria?
3   What requirements do stakeholders perceive as important to improving the provision of and access to mortgage/housing finance in Nigeria?

4.3 Hypotheses

Based on the amended conceptual framework that emerged in previous documents of the dissertation, the thematic areas which emerged as critical to the effective provision of mortgage finance in Nigeria were selected to underpin the development of the hypotheses. These thematic areas include Affordability; Corruption, Cost of Housing; and Regulation and Bureaucracy. Additionally, some of the new knowledge that emerged from the revised literature review contributed to the development process. They, therefore, formed the basis of the following hypothetical statements. These hypotheses were tested in the questionnaire so as to ascertain the relationship between the dependent and independent variables.

Hypothesis One - Affordability of Mortgages

Affordability of mortgages remains a key factor underpinning the kind of access which exists, concerning housing through mortgages, in any particular setting. This is indicated by the significant amount of international literature, which has identified an association between the affordability of mortgages with the level of access that people have to houses (Lea, 1994; Norris and Shiels, 2007; McCord et al., 2011). It has been further revealed that depending on the setting, various factors may underpin the affordability of mortgages for people seeking to access housing in that setting. For instance, the lack of effective laws, regulations, and policies governing the mortgage setting in Turkey has been seen as an impediment to how affordable mortgage housing was perceived in that setting (Karakas and Özsan, 2005). Other issues relating to affordability that have emerged in the literature include high-interest rates, prohibitive deposits/down payments, and a lack of access to subsidies (Davenport, 2003; Maor, 2014). It was therefore decided that this critical factor needed to be explored in the Nigerian context.

Hypothesis One

H1: There is a significant relationship between Access to Mortgage Financing and the Affordability of Mortgages in Nigeria.

H0: There is no significant relationship between Access to Mortgage Financing and the Affordability of Mortgages in Nigeria.

Hypothesis Two - Corruption in the Mortgage System

Internationally, corruption in the mortgage system has been identified as a barrier to how effectively housing finance is used to provide access to safe and affordable housing. There is evidence that corrupt practices in the mortgage sector impede the growth of the sector. Some of the forms of corruption identified within the mortgage sector internationally include document falsification, valuation, and organised flipping (Sanga, 2004; Bianco, 2008). These practices have all been proven to affect the mortgage sector negatively. One of the most important outcomes of corrupt practices in mortgage lending is the fact that it limits the ability of people who need the mortgages most from getting them (Adekunle, 2008). Corrupt practices also negatively affect the returns due to the mortgage companies and make homes and housing finance unaffordable even in settings where mortgage finance exists (Alufohai,

2013). It was, therefore, important to explore the nature of corrupt practices in the Nigerian mortgage setting and the level of influence that this may have on the access that citizens have to mortgage finance.

Hypothesis Two

H2: There is a significant relationship between Access to Mortgage Financing and corruption in the Mortgage System in Nigeria.

H0: There is no significant relationship between Access to Mortgage Financing and the corruption in the Mortgage System in Nigeria.

Hypothesis Three - Cost of Housing

The literature indicates that the high cost of housing has been implicated as one key reason behind the inability of low-income earners to access quality housing and mortgages (Rojas and Greene, 1995). This issue has been identified as a recurring problem in the provision of adequate housing finance options in many developing countries in Africa as well as in other continents in the world (Cain, 2007). In some settings, the exorbitant cost of housing and mortgage finance has been linked to the overall macroeconomic environment within which the mortgage and housing system is situated. There is also strong evidence that land prices and the functioning estate market within which these transactions take place have a significant influence on the cost of housing (Fegurson, 1999). In some settings, the high cost of housing and its associated lack of access has resulted in households being forced to use informal mechanisms to access housing. Documented practices include fraudulent land transactions and land purchases in illegal subdivisions, as well as the unlawful occupation of public land (Greene and Rojas, 2008). It was therefore important for this thesis to explore the nature of the relationship between the cost of housing and access to mortgages in the Nigerian setting.

Hypothesis Three

H3: There is a significant relationship between Access to Mortgage Financing and the Cost of Housing associated with the Mortgage System in Nigeria.

H0: There is no significant relationship between Access to Mortgage Financing and the Cost of Housing associated with the Mortgage System in Nigeria.

Hypothesis Four - Influence of Regulation

The importance of a fit-for-purpose regulatory environment is essential for the effective functioning of any system which is supervised by the government. In many developed countries, Government regulation, administration, and policies in the mortgage housing sectors have contributed immensely to the successes associated with the availability and affordability of housing for all classes of people (Kagan, 2000). In these settings, the adherence to relevant regulations by firms associated with the provision of mortgage and housing facilities has been argued to be the main factor underpinning high mortgage uptake in developed countries. In other less well organised settings, however, more often than not, regulations and other relevant Government processes can, however, be perceived as a barrier to the effective functioning of these key systems (Eliasson, and Petursson, 2006). In Nigeria, the provision of adequate housing for the population is one of the core responsibilities of the government. As such, the government is expected to create an enabling environment for the provision of mortgage finance and other forms of housing finance to enable citizens' access to safe and affordable housing (Alufohai, 2013). It was therefore of critical importance to explore this aspect of the Nigerian mortgage sector, especially in relation to how it influenced access in the country.

Hypothesis Four

H4: There is a significant relationship between Access to Mortgage Financing and the Regulatory system associated with the Mortgages in Nigeria.

H0: There is no significant relationship between Access to Mortgage Financing and the Regulatory system associated with the Mortgages in Nigeria.

CHAPTER FIVE - METHODOLOGY

5.1 Introduction

The research approach that was adopted in the fieldwork constituting the empirical aspect of this thesis was the mixed methods approach. In previous phases of this dissertation, research projects following the qualitative (document 3) and the quantitative paradigms (document 4) have been carried out. The findings from each of the relevant phases were limited by the weaknesses associated with the respective paradigms. Adopting the mixed methods approach in this thesis will therefore ensure that the findings of the dissertation benefit from the strength of combining these two methodologies.

5.2 Mixed Methods

Although qualitative and quantitative research seem to be divergent in many ways, as far back as half a century ago, researchers have already demonstrated an awareness of how these two approaches could be used complementarity in answering research questions (Kuhn, 1961). Mixed methods research is a term generally used when a strategy is adopted, which includes using different research methods or approaches in a synergistic manner with the aim of reaching a common goal (Bryman, 2001). This research goal can be to answer one specific research question, different aspects of the same question, or even different questions within a project. Mixing methods have been suggested to have the potential to reduce individual limitations associated with using each individual method alone, as well as to enable a more comprehensive and rigorous interrogation of the different aspects of a specified area (Gorman and Clayton, 2005; Mahoney and Goertz 2006). Some other advantages associated with using mixed methods include a means of rapid and more comprehensive skills acquisition, as this usually means that users would need to be trained in more than one approach. Also, this strategy has been known to help researchers move out of their comfort zones regarding being able to now consider research they were not previously used to. On the converse side, adopting this approach could turn out to be more expensive and time-consuming compared to just using one approach or method. (Bazeley, 2004).

Mixed methods research is part of the multimethod research approach that involves the collection and analysis of both qualitative and quantitative research data (Anguera et al., 2018). This method

was selected for this study because of the contrasting strengths and limitations of the two types of data collected. Quantitative data is data that is either numerical or sufficiently structured to be numerically defined (Baškarada and Koronios, 2018). Numeric and structured data is easier to manipulate and analyse in scientific ways compared to non-numeric data. Hence the findings of quantitative research studies tend to be more objective and applicable in broader contexts (Bergin, 2018). While qualitative data is less objective and generalisable, it offers more in-depth knowledge and analysis of phenomena. It is particularly useful for things that are difficult to quantify using numbers, such as subjective human experiences (Baškarada and Koronios, 2018). Qualitative data is also useful where it is more appropriate to let participants express themselves freely and drive the process of providing data. The quantitative and qualitative approaches were both highly relevant to this study. Quantitative data allowed for objectivity, generalisation, and effective comparison to the findings of previous research studies. Qualitative data, on the other hand, allowed for the collection of data on the unique experiences of Nigerians in their struggles to own homes. In this context, both methods were highly useful in this research.

5.3 The Survey

In this thesis, the data collected from the relevant stakeholders was undertaken using a cross-sectional survey. Although other data collection methods such as interviews and focus groups were considered, the cross-sectional survey was selected since it is designed to collect structured data as well as textual data for quantitative and qualitative analysis, respectively (Frey and Oishi, 1995; Rubin and Rubin, 2005; Krueger and Casey, 2009). The tool that was used contained both close-ended and open-ended questions to allow for the collection of both quantitative and qualitative research data. The data collection tool used was a paper questionnaire. There is evidence that indicates that this tool is compatible with the semi-structured cross-sectional surveys and is sufficiently reliable. The survey strategy was also adopted because it allows for quick, cost-effective data collection. The strategy is particularly apt when collecting data from a large group of respondents in research and where data collection needs to be done quickly and with minimal fuss (Connelly, 2016). For instance, a survey questionnaire can be sent out to respondents negating the need for faceto-face meetings, which can be time-consuming and an inconvenience for respondents. Hence the cross-sectional survey design was selected for this study based on its efficiency in data collection. The semi structured format enables a combination of signatures and quantitative data and can accommodate wide ranging and varying responses (Connelly, 2016). this is also particularly apt for a study targeting participants from different and seemingly in related sectors.

5.4 Questionnaire Development and Design

Ahrens and Pigeon (2005) advise that in the early stages of deciding what tool to use in a survey, one should consider a pre-validated instrument. Employing a pre-validated is more efficient and confers significant confidence in the study. As such, the extant literature was searched to identify any study that had explored similar phenomena within a setting that was comparable to the Nigerian mortgage and housing finance context. The search did not reveal any questionnaire or survey tool that had been used to explore similar phenomena in

comparable contexts. It would be recalled, however, that the tool used in document four was validated using an expert panel approach. The overall strategy that has been employed

throughout the dissertation has been incremental and augmentative, meaning that each phase of the study built on the findings from the previous ones. In line with this, the questionnaire developed for document five was predicated on the tool used in document 4. A significant effort has, however, been made to incorporate findings from the updated literature review, as well as the need to engage with a wider range of stakeholders targeted as the respondents.

The relevant skills and knowledge required to facilitate the designing of the questionnaire have been gained through the relevant training seminars organised by Nottingham Trent University.

The first part of the questionnaire provides a short introduction to the study and gives some insight as to the main aim of the research. The introduction also assures that the ethical principles of confidentiality and anonymity will be maintained in the study. The researcher/practitioner's contact details are provided in case any further information is required by the respondents. The reason for having an introduction is to ensure that respondents understand exactly what the study entails and the terms of participation in the research for ethical reasons.

The relevant demographic details of the respondents are captured in the second part of the questionnaire. These details are indicated in items 1 through to item 6. The data to be collected in this section relate to the respondents' age, sex, education, marital status, and income level, as well as what stakeholder sector they belong to. Demographic data was collected because it is standard in research to collect demographic data. Demographic variables are known to influence many aspects of life and can have a significant confounding effect on the findings of a research study (Connelly, 2016). Collecting demographic data allows for the confounding effects of demographic variables to be identified, such as when explaining differences between replicated studies. Item 7 explores the level of importance that was attributed to the variables under consideration.

The next section of the questionnaire commences the exploration of the respondents' views regarding barriers and facilitators to mortgage and housing finance in Nigeria. It will be recalled that a major objective of this dissertation is to better understand the factors that influence the provision of and access to mortgages and housing finance in Nigeria. In document 4, it was revealed that these factors aggregated in 4 main areas that emerged as

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statistically significant in their association with influencing access to mortgages. These include Affordability, Transparency, and Fairness; Cost of Housing; and Regulation and Bureaucracy (see figure 1). The adoption of these variables to underpin the questionnaire development in this thesis is in line with the incremental approach adopted throughout this Doctoral study. Some of the findings from the updated literature review were, however, considered.

The strategy adopted for the questionnaire design was to develop sub-items to explore the factors that were pertinent to customers. In line with this strategy, item 8 (a to h) explores the factors related to affordability, such as interest rates, flexibility, and access. An open question was included to enable the capturing of views and experiences that were not indicated in the structured section.

Similarly, Item 9 (a to e) explores stakeholders' views and experiences relating to corruption. Here, the relevant factors included regulations and enforcement. To enable the capturing of stakeholders' views and experiences, an open question was also included.

The cost of housing associated with mortgage finance was explored in item 10. Here, stakeholders' perception of the cost of houses associated with a mortgage in Nigeria was explored. Factors that were explored here include regulation, innovation, and availability of the land for mortgage housing construction. An open question has also been included to capture any further views or experiences.

Using the same strategy as above, the relevant factors in item 10 were explored in relation to Regulation and Bureaucracy. To ensure comprehensive data collection, open questions were included for this item too. For items 8 through to item 11, the levels of agreement associated with the various relevant items are measured on five-point Likert scales (strongly agree to strongly disagree) (Oppenheim, 1992). Item 12 in the questionnaire has been included to capture any further relevant suggestions that are contextual to the Nigerian setting. Findings in this item will be analysed thematically. A copy of the questionnaire that was used in the study is reproduced in appendix 1.

5.5 Reliability and Validity

In this section, strategies that were employed to ensure quality in this dissertation are discussed. The two relevant concepts discussed here are validity and reliability due to their

relevance to the project. Although a similar questionnaire to the one developed for this thesis was used in document four, it is still important to ensure that the psychometric properties of this tool are subjected to relevant tests. The first concept that was considered was reliability, which refers to the extent to which the views, opinions, and attitudes that the measurement tool measures remain consistent when repeatedly subjected to the same or similar conditions (Carmines and Zeller, 1979; Kirk and Miller, 1986).

In research, various relevant forms of reliability are considered when assessing the quality and suitability of a measurement tool being used in a research project. For instance, interrater reliability, which is also called inter-rater agreement or concordance, refers to the level of agreement between different rates who are assessing or measuring the same phenomenon. This concept is employed in the assessment of the degree to which different researchers or research instruments give consistent estimates of the same phenomenon (Armstrong et al., 1997). Test-Retest Reliability focuses on assessing the consistency of a measure evaluated over a period of time. This concept is, therefore, more likely to identify a variation in relevant measurements undertaken by a researcher or data collection instrument. For test-retest reliability, the measurements, however, have to be considered under the same conditions (Golafshani, 2003). Parallel-forms reliability is yet another form of reliability concept that is considered in assessing the quality of data collection tools and techniques. This measure of reliability, however, focuses on comparing different versions of the same measurement tool. It must, however, be noted that this measure is only valid when the two assessment tools being considered are constructed in the same manner. For instance, they must be probing the same constructor knowledge base (Lord, 1983).

In statistics and research, the concept of internal consistency reliability is used to assess the consistency of the components that make up the items in the data collection tool. This concept is assessed based on the correlations of the different items that make up the same test. It could also apply to the same subscale if a larger test is being considered. Internal consistency reliability can therefore be said to measure whether the different items within the same instrument, which aim at measuring the same general construct, are able to produce similar scores (Henson, 2001). Since the data collection tool used in this survey was a questionnaire and was made up of several sections which were informed by different themes and aimed at extracting different forms of data, the most relevant of the reliability concepts applied in this aspect of the thesis was the Internal consistency reliability. Based on the foregoing, the data collection tool was subjected to Cronbach's alpha. This enabled the determination of the internal consistency of the instrument (Gliem and Gliem, 2003). A Cronbach Alpha value of 0.7 or above was deemed acceptable for the questionnaire. A value below that would have necessitated adjustments to the questionnaire. Cronbach Alpha was selected because it is a statistical tool that has been widely used and validated in the assessment of questionnaire reliability (Taber, 2018).

Validity is another concept that focuses on testing the correctness or precision of a data collection tool. It is mainly concerned with determining the degree to which a data collection tool actually measures the phenomena that it intends or claims to measure (Carmines and Zeller, 1979; Lewis and Ritchie, 2003).

In research, there are several main types of validity used in determining the level of precision that a data collection tool can be said to have in terms of its applicability. Construct validity relates to how well a test or an experiment is said to actually measure the phenomenon it was designed to measure. In other words, it measures whether the variable operationalized in the test or experiment really reflects the true theoretical meaning of the concept underpinning the study (O'Leary-Kelly, 1998). It is important to note that construct validity is further subdivided into convergent validity, which tests the relationship between constructs, and discriminant or divergent validity, which on the other hand, is used to ensure that constructs that should have no relationship do not emerge (Stober, 2001).

Another aspect of the validity concept applied in research is the Criterion validity. In psychometrics, Criterion validity refers to the extent to which a measure is related to an

outcome for which it was designed to predict. Criterion validity as a concept explores the actual relationship between variables purported to be related. This form of validity is useful in foretelling or predicting the performance or behaviour in specified circumstances and is also referred to as concrete validity (Law et al., 2004). Criterion validity is further subdivided into concurrent and predictive validity (Farrington et al., 1996).

For the questionnaire that was developed, another two types of validity testing were also carried out. The first, face validity, is concerned with the design of the data collection tool and its ability to reliably and accurately measure the phenomenon that it was designed to measure (Bull et al., 2019). Face validity was assessed in several ways in this research study. First, the researcher went through the questionnaire carefully to assess whether, at face value, the questionnaire tested what it was intended to test. This was found to be the case for the study. Face validity was also tested during the pilot study phase of this research study. After the pilot was done, the respondents of the pilot were debriefed and asked about their understanding of the questions posed to assess whether they felt the questions related to what the study intended to assess. Face validity was also found to be appropriate based on the debriefing.

The second, content validity, refers to the degree or extent to which the data collection tool represents all the components of an intended domain of content (Carmines and Zeller, 1991). Content validity typically requires an expert opinion. The strategy employed in undertaking the validity tests was by expert panel. This approach has been identified as an efficient and acceptable method of determining face and content validity (Hyrkas et al,. 2003). The expert panel used for this phase of the documents consisted of the two supervisors, who has close to three decades experience in the Nigerian Banking setting.

5.6 Piloting

Following the validation of the questionnaire, it was also necessary to undertake a pilot of the survey so as to determine the suitability of the tool developed for the study. For this dissertation, a pilot was undertaken on a convenience sample of forty respondents. During the pilot phase, all the relevant strategies recommended in the literature were employed (Sudman and Bradburn, 1982; Czaja and Blair, 2005). Additionally, it is generally recommended that participants of the pilot study should not be included in the final study.

The participants of this pilot study were not included as participants in the final study, although they were drawn from the same target population. Participants in the pilot were asked to provide feedback relating to any difficulties or complications encountered while completing the questionnaire. The feedback was used to gauge the validity of the questionnaire, compute the reliability of the questionnaire using Cronbach Alpha analysis, assess the feasibility of the study, and estimate the duration that it would take to complete the questionnaire. Based on the feedback provided, no major changes were made to the questionnaire.

5.7 Sample

The updated literature review of this dissertation identified four main stakeholder groups: Practitioners in the Banking and Finance sector, the Construction and Estate Development sector; the Government and Public Sector; and the Customers. These groups, therefore, formed the template for developing the sampling framework. For this phase, 1200 paper questionnaires were prepared for randomly sampled respondents in 8 selected locations, meaning that each stakeholder group was allocated two locations. A text message was sent to the individuals randomly selected from the frame to contact the gatekeeper in order to complete the paper questionnaire. Gatekeepers such as Directors in Government Agencies, Customer Service Personnel in the Banks, and Human Resources Managers in the PMIs were used as contact points and had custody of the questionnaires.

These gatekeepers were properly briefed on the importance of adhering to relevant research ethics. Gatekeepers were only used for the professional classes of participants. They were selected based on their authority, relevance of employees in their purview to this study, and their willingness to be gatekeepers in the study. For instance, gatekeepers for government agencies were drawn from management (human resource management workers being preferable) from the departments and governmental organisations that are concerned with housing. In this study, the gatekeepers for government agencies were human resource management workers at the ministry of works and housing and from the National Housing Fund. Human resource managers were targeted to serve as gatekeepers because of their ability to easily reach many employees. Human resource managers were also selected for participants drawn from practitioners in the Banking and Finance sector and the Construction and Estate Development sector. Gatekeepers were not used in the case of customers who

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were approached directly. Incentives were used both for the participants and gatekeepers of the study. Different incentives were used for the different groups since they have differing requirements. For instance, customers were given pamphlets that contained detailed information on the process of securing mortgages and pertinent information on housing in Nigeria. Gift baskets mainly containing groceries were used for the gatekeepers of the study since they were few and it was affordable to give them a few groceries. Other participants were given candy and biscuits as incentives. The process of selecting the gate keepers where not straight forward they were selected with the help of colleagues who suggested the right gate keepers and approaching these gatekeepers was made easy with the references from colleagues and WhatsApp groups. They aided by delegating individuals to handle the distribution of questionnaires, collecting questionnaires and handing out incentives.

Determining the sampling strategy and selecting the sample and sample plan is crucial in planning any survey-based research. For this study, a random sampling strategy was employed in selecting respondents from the sampling frame. This means that every potential respondent from the sampling frame had an equal chance of being selected to be invited to complete a questionnaire. Some of the major advantages associated with the random sampling technique include the fact that it confers additional confidence to the findings from this phase of the dissertation. It is also associated with a minimization of various sampling-related biases, as well as an improvement of the study findings' external validity (Kothari, 2005; Mathiyazhagan and Nandan, 2010).

5.8 Statistical Analysis

In the quantitative paradigm, data analysis is important as it enables the arrangement and manipulation of the data to achieve answers to the relevant research questions. The analysis also helps to organise collected data into intelligible and interpretable forms in order to enable a robust interrogation of the associations existing among the relevant variables (Rao and Vakil, 1984). Following the data collection, the data were inputted into SPSS from the completed paper questionnaire. The data were also prepared for analysis by ensuring that all the variables were defined and converted to the relevant form. Univariate analysis was carried out on the collected data to yield descriptive statistics. Associations between variables were tested using cross-tabulations and other similar strategies. All relevant results were subjected to statistical tests such as Chi-square tests. The choice of the relevant tests applied

depended on the analysis being carried out. Other relevant sophisticated statistical processes such as multivariate logistic regression analysis were undertaken. Structural equation modelling using the Stata software was applied to the dataset. An a priori decision was taken to assign a p-value of 0.05 or less as representative of the threshold for statistical significance in this study.

5.8.1 Structural Equation Model

The structural Equation Model (SEM) is a reliable multivariate technique that is employed in the testing and evaluation of multivariate causal relationships. SEM technique is a model that allows for indirect and direct effects on causal relationships. The statistical methods combined into SEM are confirmatory factor analysis (CFA) and path analysis. These two statistical methods are combined to establish the utility of SEM in examining phenomena in numerous disciplines and many fields such as business, social and behavioural science, natural science, and health science, among others (Bollen, 2011; Fan et al., 2016).

The first step in applying SEM is the model specification, and it involves the construction of a measurement model where the primary latent variables are specified as well as their relation to each other. The model specification is often represented by a path diagram or sometimes done by employing latent variables and measurement models. The next step is the model-implied moments and the moments of the observed variable are the means, variance, and covariance. The implied moments are essential in the estimation and assessment of the model fit. The identification aids the discovery of whether it is possible that all the values of the SEM parameters can be uniquely estimated. If this is not possible, the model is assumed to be under-identified. When the model is identified, the estimation is done. The next is to assess the fit of the model, and this has two components which are the component fit and the overall model fit. Based on the modification needed to be done due to the fitness assessment, the researcher will respecify the model. Almost all the initial model specified requires one modification or the other. So, specification simply refers to revising the initial model (Weston and Gore).

The SEM framework has been employed in some relevant studies, and an example of such is the works of Clark (1997), as he investigates the effects of homeownership using the SEM. The study focused on Black Americans as participants of the study, and the sample size was

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1618. The relationship examined was between homeownership and the African Americans community involvement, political involvement, self-efficacy, and positive and negative selfesteem. Another relevant study in which the SEM has been employed is the study conducted by Kohn and Bryant (2010). They used the SEM to explain factors leading to the housing bubble in the US. Ali et al. (2017) also employed the SEM in the study that examined Islamic home financing in Pakistan. The study employed the modified theory of planned behaviour model to examine the relationship between the intention of customers to use Islamic home financing and their attitude, perceived behavioural control, subjective norm, pricing, and religious belief.

One major reason why all these studies employed the SEM in providing answers to their research question is the interdependence and interconnection of many of the variables in the study. Some of the variables in their study played a dual role in which a variable might act as the dependent variable and also be acting as the independent variable for other variables it influences. More so, the SEM technique addresses the challenges posed by the high degree of multicollinearity among the many factors used in the study.

The reason why the SEM was used in this study is that the variables in the model of this current study are interdependent and interconnected to each other, which renders the traditional multiple regression analysis ineffective. This dissertation had established that the factors constituting barriers or facilitating access to mortgage finance in Nigeria aggregate within four main variables, affordability, cost of housing, regulation, and corruption. Considering the complexity of the mortgage finance system and also establishing the role played by each variable in the development of an effective mortgage finance system, the path analysis offered by SEM is more useful for this study. Also, some variables in the model are observed while some are unobserved (latent) variables. This makes SEM remain the best technique to approach the analysis as the measurement modelling, and structural modelling allows examination of the relationship among observed and latent variables.

5.9 Thematic Analysis

In line with the mixed methods philosophy, a qualitative research technique was employed to analyse the textual data recorded in the relevant sections of the questionnaire by the

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respondents. As indicated earlier, each item that explored the views and experiences of the stakeholders also contained a section that enabled the recording of views and practices not captured within the predetermined alternatives. It also provided an opportunity for the respondents to provide relevant details of other issues that they considered important to how a mortgage is provided in Nigeria. Thematic analysis, which was employed to examine and evaluate the data, is a qualitative method of analysis designed to construct theories that are grounded in the data by capturing and structuring the minutiae of relevant meaning within that data set (Braun and Clarke, 2006; Guest et al., 2011).

Although thematic analysis is commonly used in examining data from interviews and related data collection methods, there is evidence that suggests its utility in analysing textual data emanating from open-ended questions (Saldana, 2009). This confirms the suitability of this approach for the qualitative research aspect of the data analysis. Following the extraction of the relevant data from the questionnaire, the data were subjected to a series of processes to enable the generation of new knowledge in the area. Some of the phases that the data were subjected to included familiarisation and initial codification, as well as reviewing, defining, and categorising the themes (Braun and Clarke, 2006). The final report from the thematic analysis fed into the relevant aspects of the conceptual framework, in line with the mixed methods approach adopted.

5.10 Ethical Considerations

Considering the ethical implications of any research project is an important and integral aspect of the research process. As the study did not involve sensitive or potentially hazardous issues, the likelihood of encountering any major ethical issues was small. Nevertheless, adherence to the highest ethical principles for the entire duration of the dissertation was considered a top priority.

In research ethics philosophy, acting justly, doing good, eschewing harm, and respecting autonomy, are some of the guiding principles. In the thesis of this dissertation, ethical approval was sought and obtained from Nottingham Trent University. The researcherpractitioner had also been keenly involved in all the necessary training and was conversant with the pertinent materials. This enabled the relevant adherence to the highest

ethical standards throughout the dissertation, including during the data collection, analysis, and writing up. Some of the practical measures that were taken to achieve this included ensuring participant anonymity and removing any names or identifying characteristics from data collection materials during all stages of the data management and report writing.

Also, at every stage of the study, the highest standards of data security and protection were adhered to. Questionnaires were always secured, and all computers that were used for the data input and analysis were adequately encrypted. A copy of the Ethics Application Form is included in appendix 3.

CHAPTER SIX - RESULTS

6.1 Introduction

The findings presented in this chapter represent the findings from the mixed methods analysis of the cross sectional survey undertaken in this phase of the study.

In the presentation of the findings, an incremental approach has been adopted which takes relevant cognisance of the emergent factors revealed in the previous documents. These results and findings from the previous documents were considered in the development of various aspects of the thesis, for instance, the questionnaire and the hypothesis.

For this thesis, the articulated hypotheses were tested, together with other contributory factors to determine what influence they had on the way that Nigerians could access mortgages.

The first section of the chapter details the respondents' demographic information, followed by the results from the statistical analyses that explored the relevance of various factors. The penultimate section of the chapter presents findings from the qualitative aspect of the mixed methods study. IN the final section of the chapter, the summary of the combined findings from both approaches are presented. In this chapter, where appropriate, graphs and other figurative depictions of the variables have been provided to enable the relevant comparisons to be undertaken.

6.2 Demographics

A high response rate was achieved in the study, as 1004 questionnaires out of the 1200 distributed were completed (84%). The table below provides a summary of the participants' demographics details.
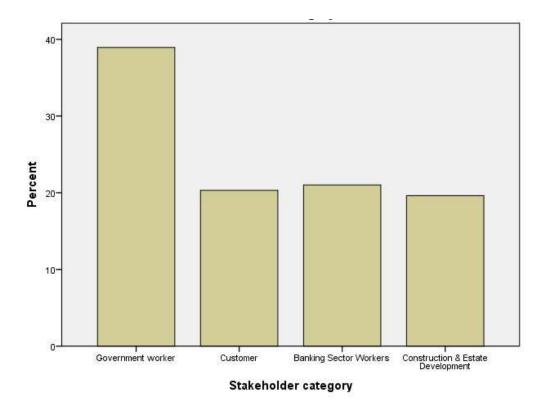
Table 1: Respondent Demographics 3

Demographic	
Sex	N (%)

Female	363 (36%)
Male	641 (64%)
Stakeholder Category	N (%)
Government and Policy	391(39%)
Customer	204 (20%)
Banking Sector	211 (21%)
Construction and Estate Development	197 (20%)
Marital Status	N (%)
Single	313 (31%)
Married	662 (66%)
Divorced or Separated	27 (3%)
Monthly Income	N (%)
N7,500 or Less	13 (1%)
N7,501 to N12,000	14 (1%)
N12,001 to N24,000	60(6%)
N24,001 to N48,000	127 (13%)

N48,001 to N100,000	314 (31%)
N100,001 to N250,000	348 (35%)
More than N250,001	128 (13%)
Highest Educational Qualification	N (%)
Uneducated	6 (1%)
Primary School	6 (1%)
Secondary School	106 (11%)
University/Polytechnic	649 (64%)
Post-Graduate	237 (23%)
* N =1004 (some respondents did not complete all sections)	

Following the collation of the results, it emerged that the majority of respondents were male (64%), suggesting that the female respondents were marginally less in proportion (36%).

The quantitative analysis also explored the distribution of the respondents, with respect to the sector that they belonged to. Below is the bar chart depicting the distribution of the stakeholder groups.
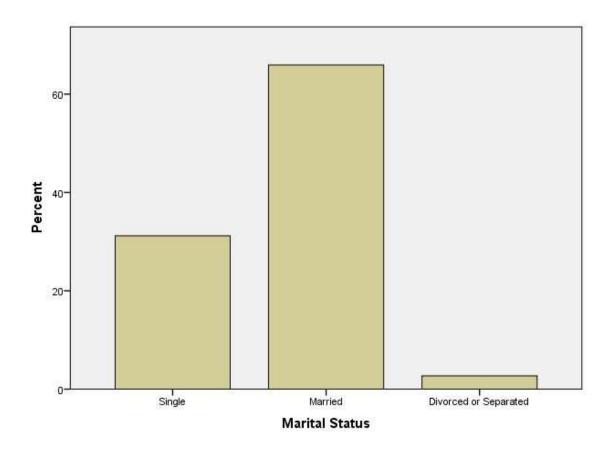
Figure 2: Stakeholder grouping of survey respondents

Efforts were made using a stratified sampling technique to ensure an adequate representation of all stakeholder groups. It emerged that the majority indicated working in Government and Policy (39%), whereas the other Groups were somewhat evenly distributed: Banking Sector (21%); Construction and Estate Development (20%); and Customers (20%).
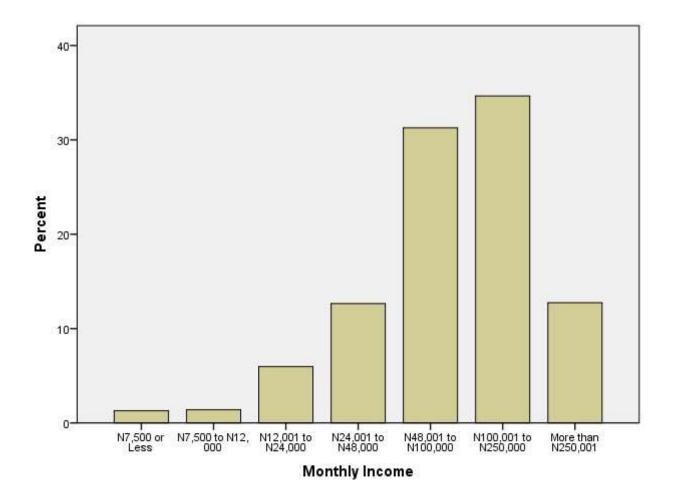
With respect to marital status, the majority of the respondents indicated that they were married (66%). The next highest proportion of the sample was the group that indicated that they were single (31%). A significantly smaller proportion of the sample indicated that they were either divorced or separated (3%). These findings provide some insight as to the number of potential income earners in households interested in mortgage finance.

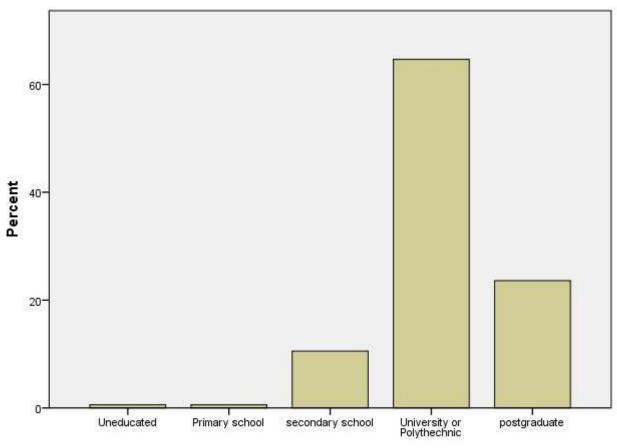**Figure 3: Marital status of survey respondents**

Another important variable that was explored was the monthly income earned by the respondents in the survey. The highest proportion of the sample indicated that they earned between N100,001 to N250,000 (35%). This was followed closely by the proportion of the sample that earned between N48,001 and N100,000 (31%). The two lowest income categories (N7,500 or Less and N7,501 to N12,000) constituted the smallest proportion of the sample, constituting 1% of the sample each Further details are provided in the figure below.

Figure 4: Monthly income distribution of survey respondents

Details of the highest educational qualification as indicated by the respondents in the sample are provided below. The majority of the respondents surveyed indicated the possession of a University Degree or a Diploma from a Polytechnic (64%).

Figure 5: Bar chart indicating the highest educational qualification attained by respondents

The two lowest qualifications stipulated on the questionnaire ('Uneducated' and 'Primary School') constituted the smallest proportion of the sample, representing 1% of the sample each. This variable provided some indication as to the literary ability of the sample.

6.3 Affordability of Mortgages

The first of the hypotheses made prior to the commencement of the data collection related to affordability. The following hypothesis was proposed:

H$_1$: There is a significant relationship between Access to Mortgage Financing **and** the Affordability of Mortgages in Nigeria.

H$_0$: There is no significant relationship between Access to Mortgage Financing **and** the Affordability of Mortgages in Nigeria.

The results from the empirical survey support the alternative hypothesis (**H$_1$**). In the analysis, cross tabulation was undertaken with the responses to the item exploring affordability against the responses to the item exploring access. It emerged that the higher proportion of the sample (47%) disagreed that there was adequate access to mortgage in the Nigerian setting, compared to those that indicated that access to mortgages were adequate (43%). In the cross tabulation, it also emerged that the greater proportion (59%) attributed the lack of access to unaffordability. In comparison, the proportion perceived mortgages as being affordable (24%). This finding was statistically significant (P<0.05). The analysis therefore confirmed a significant relationship between Access to Safe and Affordable Housing through Mortgage Financing and the Affordability of Mortgages in Nigeria. With respect to the direction of the relationship, the evidence suggested that an increase in affordability of mortgages was associated with better access to mortgage finance.

Other factors were also revealed as having influence on the affordability of mortgages In Nigeria. Over two thirds of the sample (71%) agreed that the interest rates charged on the loans were a barrier to affordability of mortgages in Nigeria, compared to a much smaller proportion that disagreed (17%).
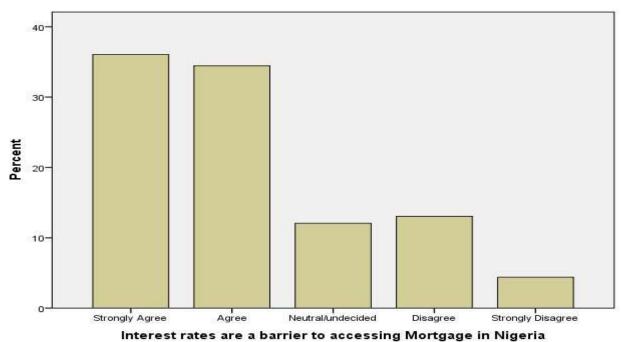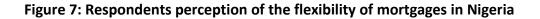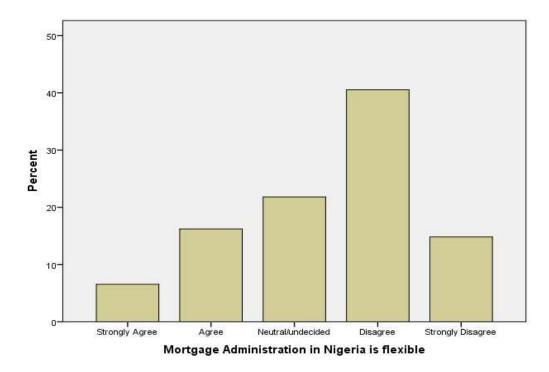
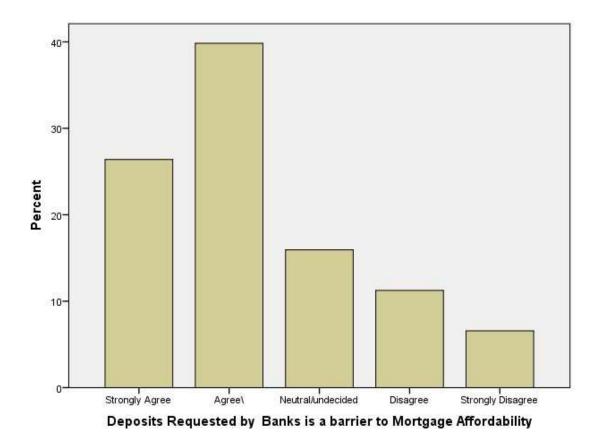**Figure 6: Respondents' views on the influence of interest rates**

The survey also identified that a lack of flexibility associated with mortgages in Nigeria constituted a barrier to affordability. While about one-fifth (23%) indicated that mortgage arrangements in Nigeria were flexible, over half of the sample disagreed with the statement (55%).

Figure 7: Respondents perception of the flexibility of mortgages in Nigeria

Mortgage banks require the deposition of a proportion of the total price of the desired property as a deposit during the mortgage application process. From the findings of the survey, the majority of the respondents viewed this practice as a barrier to the affordability associated with mortgage processing in Nigeria.

Figure 8: Views on deposits requested by banks as a barrier to mortgage affordability

Two–thirds of the sample agreed that the requests for deposits were barriers (66%), compared to the much smaller proportion that disagreed 18%). This suggests the need for some intervention that can provide support for certain demographics in this regard.

6.4 Corruption in the Mortgage System

The second hypothesis proposed in the thesis related to corruption within the various relevant sectors associated with mortgage financing in Nigeria. Based on this, the following was the hypothesis proposed:

H₂: There is a significant relationship between Access to Mortgage Financing **and** the Corruption in the Mortgage System in Nigeria.

H₀: There is no significant relationship between Access to Mortgage Financing **and** the Corruption in the Mortgage System in Nigeria.

The findings that emerged following the survey support the alternative hypothesis (**H₂**). In the analysis, cross tabulation was undertaken with the responses to the item exploring affordability against the responses to the item exploring the influence of corruption.

For this hypothesis as well, the findings support the alternate hypothesis. While the majority of the sample who indicated that access to mortgage was inadequate (47%), more than three-quarters (81%), agreed that corruption in the mortgage system limited access to mortgages in Nigeria. In comparison, only about a tenth of the sample (11%) felt that corruption was not an issue in how Nigerians could access mortgages. This finding was statistically significant ($P<0.05$).

Findings relating to the frequencies of responses provided further insight as to the origin of the corrupt practices perceived in the sector.
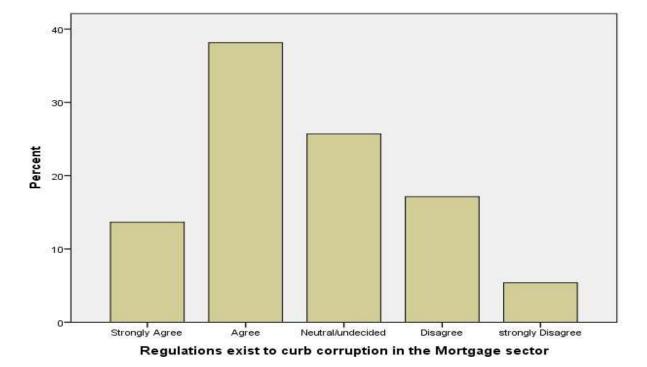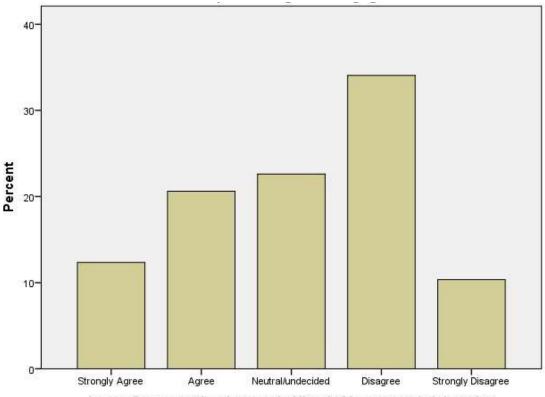
Figure 9: Views on the existence of regulations against corruption

Regulations exist to curb corruption in the Mortgage sector

The results indicated that over half of the sample agreed that in the Nigerian mortgage setting, regulations existed against corrupt behaviour (52%), compared to a much smaller proportion that disagreed (22%). This suggests that the pervasive corruption perceived may be as a result of a lack of enforcement of the relevant regulations.

Further analysis of the quantitative data collected by the survey would indicate a validation of the above suggestion. For the item that explored the adequacy of enforcement in the mortgage sector, it emerged that the majority of the respondents indicated that overall enforcement in Nigerian mortgage administration was inadequate.

Figure 10: Views on the adequacy of enforcement in Nigerian mortgage administration

The majority of the sample disagreed with the statement that law enforcement was adequate in Nigerian mortgage administration (45%) compared to the proportion that agreed with the assertion (33%).

Another factor that was explored was the potential for the introduction of new technology to curb corrupt practices in the mortgage finance sector. Here, close to three quarters of the sample (73%) agreed that new technology can contribute to the reduction of corruption in the sector, compared to just about a tenth that disagreed with the statement (11%).
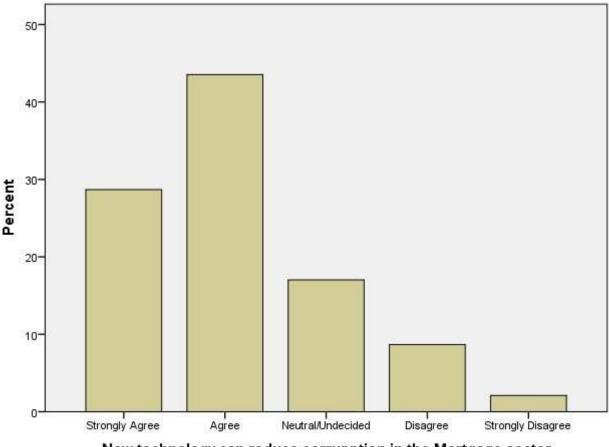
Figure 11: Potential for new technology to curb corrupt practices

This finding therefore provides new evidence to support the development of contextual technological solutions which by limiting corruption, will also improve access to mortgages.

6.5 Cost of Mortgage Housing

The third hypothesis explored the relationship between cost of mortgage housing and access to mortgages in Nigeria. The following statements were used to test the hypothesis:

H_3: There is a significant relationship between Access to Mortgage Financing **and** the Cost of Housing associated with the Mortgage System in Nigeria.

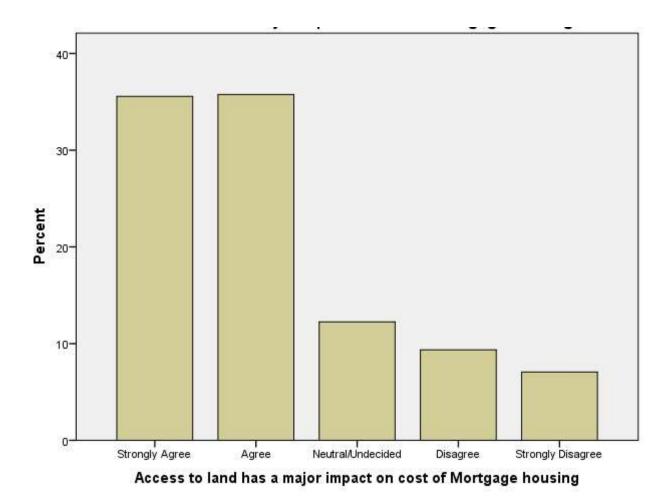**H_0**: There is no significant relationship between Access to Mortgage Financing and the Cost of Housing associated with the Mortgage System in Nigeria.

In the analysis of the survey results, the findings indicated support for the alternative hypothesis. Whilst the majority of the sample had indicated that access to mortgages in Nigeria was inadequate, over half of them (55%) disagreed that the prices of mortgage associated housing was reasonable. This indicates the perception that high prices contributed to mortgages not being affordable in Nigeria. This is in comparison to those within the same proportion that felt that mortgage housing was reasonably priced (31%). The Pearson's Chi Square test applied indicated that the finding was statistically significant ($P<0.05$).

With this finding, there is sufficient evidence indicating a significant relationship between Access to Mortgage Financing and the Cost of Housing associated with the Mortgage System in Nigeria. Findings from the study also provide an insight to the direction of the relationship. The evidence suggests that lowering the cost of housing would lead to an increase in access to housing finance.

Other relevant factors which were perceived to possess some contributory influence on the cost of mortgage housing in Nigeria were also explored. One key factor that emerged related to the access to land for the construction of mortgage housing.
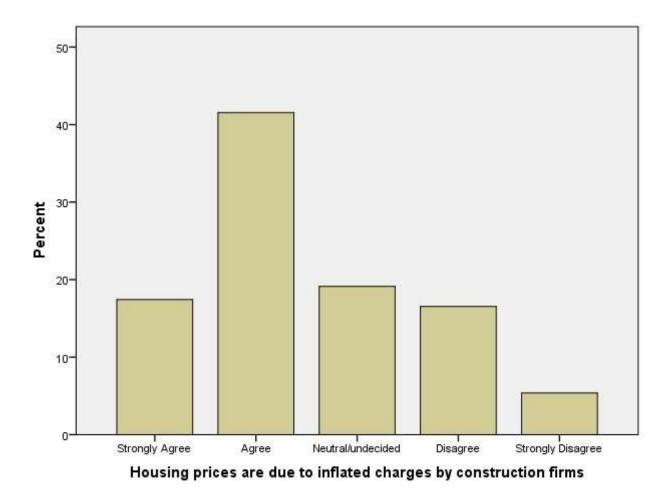
Figure 12: Access to land and cost of Mortgage Housing

The results indicated that close to three quarters of the respondents agreed that access to land had a major impact on the cost of mortgage housing (72%). This is in comparison to the much smaller proportion of the sample that disagreed with the statement (16%).

Another major factor that was perceived by the respondents as contributory to the high cost of mortgage housing related to unfair practices by the mortgage construction sector.

Figure 13: Influence of charges by construction firms on the cost of mortgage housing

Over half of the respondents sampled (59%) agreed that the high cost of mortgage housing resulted from inflated charges by construction firms in the Nigerian Mortgage sector. Less than a quarter of the sample disagreed (21%). This revelation provides further insight as to specific areas where government regulation and supervision should be strengthened.

The study further revealed other factors that were perceived to have some influence on the cost of mortgage related housing. Over a third of the respondents indicated that innovation in the Nigerian mortgage sector disagreed that there was sufficient innovation to drive down costs in mortgage construction (39%), compared to a slightly smaller proportion that agreed to the statement (32%). Similarly, only about a third of the sample indicated that mortgage houses in Nigeria were efficient in their design (35%), compared to just under half of the sample that disagreed with the statement (40%). These findings on how innovation and

efficiency influence cost of mortgage housing represents the first time that these factors have been interrogated with respect to access to mortgages.

6.6 Influence of Regulation

In the final hypothesis proposed in this study, the thesis sought to explore the influence of Government Regulation on Access to Mortgages. The association was tested by the following hypothesis:
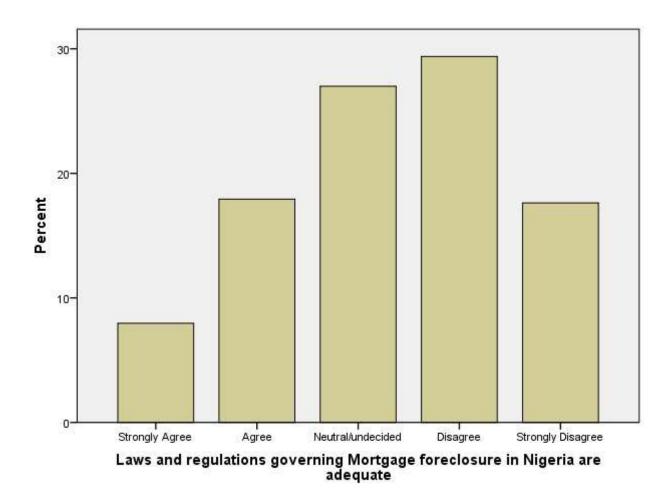
H_4: There is a significant relationship between Access to Mortgage Financing **and** the Regulation associated with the Mortgages in Nigeria.

H_0: There is no significant relationship between Access to Mortgage Financing and the Regulation associated with the Mortgages in Nigeria.

The results from the empirical survey support the alternative hypothesis (H_4). In the cross tabulation analysis undertaken it emerged that the higher proportion of the sample (47%) disagreed that there was adequate access to mortgage in the Nigerian setting, compared to those that indicated that access to mortgages were adequate (43%). The findings further indicated that in this group, a greater proportion (47%) associated lack of access with inadequate regulation, compared to the smaller proportion that perceived that there was now association (32%). This finding was statistically significant ($P<0.05$).

With this finding, it has emerged that a significant relationship exists between Access to Mortgage Financing and the relevant Regulation associated with the Mortgage System in Nigeria. The findings have also indicated the direction of the relationship indicating that a more adequate regulation may lead to an improvement of access to mortgages In Nigeria.

The study also identified one critical area where it was perceived that there were significant weaknesses in the relevant laws and regulations. The findings of the study indicated inadequacies in the laws and regulations governing mortgage foreclosure in Nigeria. An overview of the respondents' views and experiences in this are presented in figure below

Figure 14: Perception the adequacy of laws and regulations governing mortgage foreclosure

Almost half of the sampled respondents (47%) disagreed with the statement about the adequacy of current laws and regulations governing mortgage foreclosure in Nigeria. Only a quarter of the sample had agreed with the statement (26%). This finding has significant
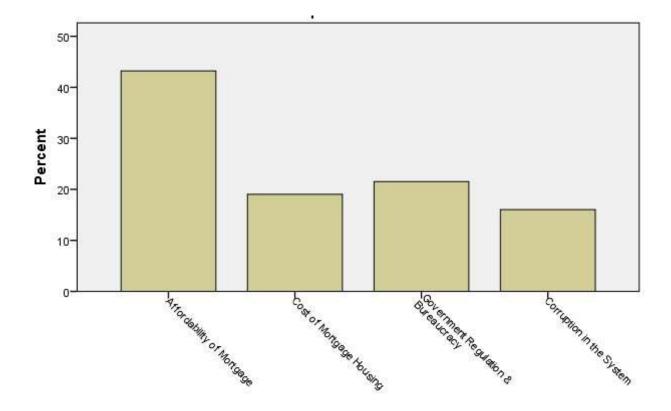
implications for the sector, given the critical nature of loan repayment, to the concept of mortgage lending.

The analysis of the survey results also explored the impact of technology on how mortgage was administered in Nigeria. While only about a third of the sample (38%) agreed that mortgage administration in Nigeria was technologically advanced, a significantly higher proportion disagreed (46%). With respect to the existence of innovative practices, a more balanced view was expressed by the respondents. While a third of the respondents (36%) agreed that the mortgage finance sector was contextually innovative, a similar proportion disagreed (35%). Another major barrier to effective administration in the Nigerian mortgage sector that was revealed by the analysis, related to the existence of corruption in the sector. In relation to the statement "there is no corruption in the Nigerian mortgage sector", only one in five of the respondents agreed (19%) with the statement. On the contrary, over two thirds of the sample disagreed with the statement, suggesting that corruption was a major limiting factor on how Nigerians were able to access housing through the mortgage finance sector.

6.7 Importance of the Factors influencing access to Mortgages

During the cross sectional survey, respondents were to undertake a ranking of the variables in terms of their importance with respect to facilitating mortgages in the Nigerian context. The variables considered in this ranking had been identified as critical to the provision of effective mortgage in the Nigerian setting and are those that have been theorised in the hypotheses. They include Affordability of Mortgage; Corruption in the System; Government Regulation and Bureaucracy; and Cost of Mortgage Housing. In relation to the perception of respondents' importance, Affordability of Mortgages emerged as the most important factor influencing access to mortgages in the Nigerian setting. The bar chart below provides further details.

Figure 15: Importance of variables in relation to facilitating access to mortgages

From the survey results, the majority represented by over a third of the sample (43%) indicated that affordability was the most important factor influencing how Nigerians accessed mortgages. Government Regulation and Bureaucracy was identified as the next most important factor (22%), followed by Cost of Mortgage Housing (19%). Corruption in the system (16%) emerged as the least important factor.

6.8 Structural Equation Model

The structural Equation Model (SEM) is a reliable multivariate technique that is employed in the testing and evaluation of multivariate causal relationships. SEM technique is a model that

allows for indirect and direct effects on causal relationships. The statistical methods combined into SEM are confirmatory factor analysis (CFA) and path analysis. These two statistical methods are combined to establish the utility of SEM examining phenomena in numerous disciplines and many fields such as business, social and behavioral science, natural science, and health science among others (Bollen, 2011; Fan et al., 2016). The CFA has the goal of estimating the latent psychological traits which can be satisfaction and attitude while the path analysis has the objective of finding a causal relationship among variables based on the path diagram created. The modelling steps are the specification of the model, model implied moments, identification, estimation of the model, model fit, and re-specification (Hatcher & O'Rourke, 2013).

The first step in applying SEM is the model specification and it involves the construction of a measurement model where the primary latent variables are specified as well as their relation to each other. The model specification is often represented by a path diagram or sometimes done by employing latent variables and measurement models. The next step is the model-implied moments and the moments of the observed variable are the means, variance, and covariance. The implied moments are essential in the estimation and assessment of the model fit. Identification aids the discovery of whether it is possible that all the values of the SEM parameters can be uniquely estimated. If this is not possible the model is assumed to be under-identified. When the model is identified, the estimation is done. The next is to assess the fit of the model and this has two components which are the component fit and the overall model fit. Based on the modification needed to be done due to the fit assessment, the researcher will respecify the model. Almost all the initial model specified requires one modification or the other. So, specification simply refers to revising the initial model (Weston & Gore).

The SEM framework has been employed in some relevant studies and an example of such is the works of Clark (1997) as he investigates the effects of homeownership using the SEM. The study focused on Black Americans as participants of the study and the sample size is 1618. The relationship examined was between homeownership and the African Americans community involvement, political involvement, self-efficacy, and positive and negative selfesteem. Another relevant study in which the SEM has been employed is the study conducted by Kohn and Bryant (2010). They used the SEM to explain factors leading to the housing bubble in the

US. Ali et al. (2017) also employed the SEM in the study that examined Islamic home financing in Pakistan. The study employed the modified theory of planned behaviour model to examine the relationship between the intention of customers to use Islamic home financing and their attitude, perceived behavioural control, subjective norm, pricing, and religious belief.

One major reason why all these studies employed the SEM in providing answers to their research questions is the interdependence and interconnection of many of the variables in the study. Some of the variables in their study played a dual role in which a variable might act as the dependent variable and also be acting as the independent variable for other variables it influences. More so, the SEM technique addresses the challenges posed by the high degree of multicollinearity among the many factors used in the study.

The reason why the SEM was used in this study is that the variables in the model of this current study are interdependent and interconnected to each other which renders the traditional multiple regression analysis ineffective. This dissertation had established that the factors constituting barriers or facilitating access to mortgage finance in Nigeria aggregate within four main variables, affordability, cost of housing, regulation and corruption. Considering the complexity of the mortgage finance system and also establishing the role played by each variable in the development of an effective mortgage finance system, the path analysis offered by SEM is more useful for this study. Also, some variables in the model are observed while some are unobserved (latent) variables. This makes SEM remain the best technique to approach the analysis as the measurement modelling and structural modelling allows examination of the relationship among observed and latent variables.

Structural equation modelling was therefore conducted to enable a better understanding of the patterns of correlation and covariances among the set of variables considered in this study. The essence of structural equation modelling is to enable the development of a model that comprehensively and robustly explains the relationship between variables, whilst also providing a useful representation of a realistic but parsimonious overview of the entire ecosystem.

In this study, two modelling approaches were employed, measurement modelling and structural modelling. While measurement modelling defines the relation between observed

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and unobserved (latent) variables, the structural modelling approach enables a definition of the relations among unobserved variables.

The results in the model below shows that there was a fairly positive relationship between Affordability and Regulation (r = 0.455), as well as Affordability and Corruption (r = 0.446). It also emerged that there was also a fairly positive difference between Affordability and Cost (r = 0.434) as well as between Regulation and Corruption (r = 0.451). The model however revealed that the relationship between Corruption and Cost was positive and weak (r = 0.425), whilst the relationship between Regulation and Cost emerged as positive and strong (r = 0.622). This indicates that the strongest relationship exists between Regulation and Cost while the least among the variables was between Corruption and Cost.

The result also indicates that Affordability, Cost of Housing, and Regulation had a significant contribution (p < .05) to the Access to Mortgage, while Corruption did not (p > .05). This implies that Affordability, Cost of Housing, and Regulation by Government can promote Access to Mortgage while Corruption hinders its progress.

The findings further revealed that Affordability contributed 40% variance to Access to Mortgage Finance, Regulation by Government contributed 25% variance to Access to Mortgage, while Cost of Housing contributed 7% variance. It however emerged that Corruption contributed only 2% variance, indicating a very low contribution to the structural model (see Table 2)

Figure 16: Structural Equation Model indicating relationship between Access and Variables

Table 2: Analytics from Structural Equation Model
Structural equation model   Number of obs = 1000
Estimation method = adf

```
--------------------------------------------------------------------------------
Standardised  | Coef.    Std. Err.   z    P>   |z|    [95% Conf. Interval]

------------------------+-------------------------------------------------------------------
Structural         Access to Mortgage <-  |

   Affordability    | .400477 .0292821 13.68 0.000  .3430851 .4578689

  Regulation by govt.  | .2525644 .0351358  7.19 0.000  .1836994 .3214293

    Corruption    | .0209153 .0313834  0.67 0.505 -.0405949 .0824256   Cost
of Housing   | .0715891 .0343665  2.08 0.037  .0042319 .1389462

     constant     | -1.254579 .1278312 -9.81 0.000 -1.505124 -1.004035
------------------------+-------------------------------------------------------------------
```

In the analysis carried out in this study, the model developed was also assessed for fit. For a structural equation model to be considered as fit for purpose, several relevant tests or assessments need to have been undertaken. The acceptable criterion for a model to be fit is that Chi square value should not be insignificant (i.e. $p > .05$), root mean square error approximation should be less than 0.05 (i.e. RMSEA < .05) and lastly the values of comparative fit index (CFI) and Tucker – Lewis index (TLI) should be close to 1. For this study, although the p value was greater than .05, the RMSEA was less than 0.05 and both the CFI and TLI were 1.00. Based on this evidence, the model is fit and adequate, as three out of the four criteria were met.

6.9 Thematic Analysis

This section of the chapter presents the results of the thematic exploration of the respondents' comments in the unstructured items of the questionnaires. Here, the six categories that emerged in the qualitative data exploration are presented in line with the emergent themes that were revealed by the analysis. In the presentation of the results from the qualitative analysis, quotes and verbatim terms from the respondents have been included. This is to enable a more contextual understanding of the theme being presented. Qualitative researchers refer to this approach as the deployment of 'in vivo' terms. It is important to note that although many comments may have been provided in relation to the emergent theme,

only a few representative themes are included in the thesis. Experts in the qualitative paradigm argue that this approach confers further rigour and trustworthiness to the qualitative research being undertaken (Shenton, 2004; Charmaz, 2006).

6.8.1 Disadvantaged Groups

From the respondent's perspective, the nature of access which the majority of Nigerians had was an issue. However, it emerged certain groups of Nigerians were severely disadvantaged, with respect to the level of access that they had to mortgages.

"Nigeria is not ready to provide houses for the poor, low income and Middle level income everything has been politicised var10H....Cost of housing very high because only public thieves purchase them" (Respondent 622)

Some respondents perceived that the way the mortgage system was currently structured was skewed towards favouring only Nigerians that belonged to the high income group.

"Houses are constructed for the high class in society. We have houses for sale in most of the mortgage institutions...cost is a major issue for the middle class......" (Respondent 22)

In addition to Nigerians who belonged to the lower income groups, another demography whose access to mortgages had not been previously interrogated also emerged in the study.

"I suggest that the Nigerian Mortgage sector should create more awareness on what mortgage is, especially for those in the rural areas, and also bring down cost on the interest rate. So that Nigerian will have access to Mortgage....especially those in the rural areas" (Respondent 309)

For some of the respondents, a scenario whereby some populations were systematically excluded from accessing mortgages was ironic, given the fact that the very concept was developed to enable an increase in access for these groups.

"The low income earners basically are the ones that are surcharged in an industry that was developed to enhance their opportunity as home owners. Therefore, adequate measure should be put in place to ensure that high-income earners are excluded from the NHF scheme" (Respondent 181)

From the quote above it is clear that some of the respondents were irked by the apparent lack of fairness in the way that the current mortgage system in Nigeria was structured. While their suggestion that high income groups be excluded may provide some implementation challenges, it gives an indication as to the need for a deliberate and targeted strategy to enable the inclusion of Nigerians in other less advantaged groups.

Some respondents even went as far as suggesting that there should be a complete separation of the schemes for potential applicants that belonged to various groups.

"There should be a different mortgage scheme for every income class." (Respondent 177)

Interestingly, the respondents also identified a linkage between the apparent lack of access that certain populations in Nigeria had, to the propensity for them to engage in corrupt practices.

"The cost of housing is generally high for a civil servant that does not want to steal. The system seems to encourage corruption to be able to afford decent accommodation." (Respondent 25)

From the comments provided in the study, the respondents seemed to have the view that there were inequalities in the way that various segments of the Nigerian population were able to access mortgages.

6.8.2 Affordability

An important theme that resonated with a significant proportion of respondents in the study was in relation to affordable mortgages in Nigeria. This is noteworthy, given that this theme also emerged from the quantitative analysis of the results.

From the point of view of the respondents, mortgages in Nigeria were not considered as being affordable for the majority of the country's population.

" Mortgages are not affordable because it doesn't take into consideration the greater population who are very low income earners, it can on this note never be seen to be effective in Nigeria because that's where you find the greater population of citizens that sadly are the real people in need at mortgage facilities." (Respondent 462)

Furthermore, respondents indicated that one major issue that contributed to the perceived unaffordability of the mortgages, related to underpinning government policy.

"...changing the FMBN act to make it more accessible to civil servants... I believe that the biggest bottleneck to the development of the mortgage industry is affordability of mortgage..." (Respondent 565)

"I think the problem is not about access, instead the obstacle is the affordability of the mortgages in view of the current mortgage being operated in the country...
" (Respondent 184)

The statements provided by the respondents in the study corroborate the findings from the quantitative analysis of the data. This qualitative analysis of the data has also revealed that to the demographic groups identified in the previous section, civil servants constituted another demographic whose contextual situation needed to be considered in the development of strategies to improve access.

The feeling was that although the concept of mortgage financing could be employed as a model that would address inequitable access to housing in the country, this potential was not being currently harnessed.

"Mortgage prices must be reviewed adequately to accommodate the common man if not the purpose of the housing scheme will be defeated. The Nigerian whose average income cannot be contained in the pricing scheme of the mortgage facility must not be ignored, if not the purpose of affordable houses and environmental hazards will not be curbed...." (Respondent 129)

The theme explored in this section of the qualitative report represents one of the most critical findings relating to the nature of access that Nigerians had to mortgages. As well as corroborating the findings from the qualitative analysis, the emergence of 'Affordability' as a theme has also revealed that the concept impacted some demographic groups more than others. The development of relevant and contextual policies was seen as strategic to improving affordability in the system.

6.8.3 Transparency

The emergence of transparency in the qualitative exploration of the data is in line with some of the evidence already emerging from the quantitative phase of the thesis. The qualitative analysis had already shown that corruption and other related practices had a negative influence on the nature of access that Nigerians had to mortgages.

From the thematic analysis, respondents indicated that the perceived lack of access to mortgage in Nigeria was linked to the existence of corrupt practices in the industry.

"Since corruption has been identified as militating against affordability and access to mortgage, it is important to introduce an independent supervisory body to check the activities

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of federal mortgage banks. The recruitment process should be strictly on merit rather than nepotism or sentiment. This will help deal with the issue of ineffective personnel." (Respondent 609)

Furthermore, it emerged that the respondents perceived that the high cost of mortgage related housing was underpinned by corrupt practices in the mortgage construction and mortgage administration.

"Exorbitant housing prices are not only due to inflated charges by construction firms also by corrupt practices of mortgage personnel" (Respondent 17)

This indicates the existence of a vicious relationship between these variables identified as constituting barriers to how Nigerians are able to access mortgages.

One major solution that respondents identified could enforce transparency in the mortgage system, as well as curb corruption was the introduction of new technology.

"There is every need to say no to all forms of sharp and corrupt practice in the Nigeria mortgage subsector. By employing technologically advanced standard that are automated where anybody can have access to mortgage houses provided genuine standard in quote are met" (Respondent 36)

Additionally, respondents were of the view that Government policies and relevant contextual regulation were other potent tools that could be employed in improving access within the Nigerian context.

"Government should impose heavy property tax or tenement rate on properties that are vacant... land owners are not willing to rent or live in them especially in Abuja. Government should intervene in property prices especially in estates in Abuja by making legislation to control prices because many houses' duplexes, bungalow, terrace and others are fully completed but vacant for many years due to exorbitant prices charged by developers" (Respondent 424)

"Mortgage in Nigeria should be based on fairness no discrimination of any sort; all Nigerians should have full information and access to mortgage plans and benefit should be properly regulated" (Respondent 486)

From the above it is implied that policymaking and regulation that foster a more transparent and less corrupt approach in the mortgage finance sector could enable an improvement in the access that Nigerians had to mortgages. The second quote however raised the issue of access to information. From the GST approach being adopted in this study, the linkage between corruption and poor information dissemination can be better understood. This is however further explored in the theme that explored awareness.

From the views and experiences of the respondents, it is clear that issues concerning transparency and corruption were perceived to have a significant influence on how Nigerians accessed housing and mortgage. The emerging evidence suggests the lack of transparency that was characteristic of the sector was also linked to the high cost of housing and lack of awareness associated with the Nigerian mortgage sector.

6.8.4 Efficiency

This category emerged from the qualitative exploration of the data as a result of various procedural challenges encountered by respondents which in their opinion militate against their ability to access mortgages.

The majority of the issues in this theme related to the efficiency with which various bureaucratic processes were undertaken, for instance, the amount of time within which mortgages were processed.

"....most times, you apply for mortgage and wait for donkey years and after the years of waiting, you still don't get disbursement" (Respondent 921)

Some strategies which the respondents identified could enable more efficiency in the Nigerian mortgage finance sector was by adopting the use of new technology

"....mortgage finance sector needs to improved technologically in terms of designing a suitable model fit for Nigerian for mortgage purposes" (Respondent 422)

"Training on modern mortgage technology, corruption should not be encouraged to enhance more productivity and advancement. There should be more contextual innovation on financial management and serious attention should be effectively implemented" (Respondent 796)

"Let the sector be computer or technologically oriented with updated ideas all round, let the colonial idea of the sector be dropped and give way for the new technology." (Respondent 383)

Respondents however cautioned that new innovation needs to be contextualised to the Nigerian setting. This advice is apt, given the unique challenges that are characteristic of the Nigerian mortgages sector, as has been revealed by this study.

Some of the potential benefits that will be gained from adopting a more technologically efficient system include a reduction of corrupt practices, as well as cost of housing.

"..Mortgage administration in Nigeria should advance more mortgage technology in the system....Corruption in the system should be burned and cost of mortgage housing will be reduced. Government should increase the affordability of mortgage by putting more effort in regulation and bureaucracy in the system of mortgage" (Respondent 281)

This buttresses the system wide perspective as encouraged by the GST approach, as a robust consideration of these related factors will enable the development of more effective interventions.

Other relevant areas where respondents identified weaknesses in terms of mortgage system efficiencies included: poor planning; a lack of integration with other Government Agencies; and untimely processing of applications.

"...Government should create good environment; proper planning should be put in place and encourage more investors" (Respondent 724)

"Avoid delays in the process and disbursement of mortgage. There must be a standard timeline in processing the mortgage loan and also a standard timeline for the developers to hand over properties under the program. If the system of recoveries and disbursement works well, everyone will be proud to be a beneficiary and a landlord or landlady in the country......" (Respondent 263)

"Working with other parastatals will help develop the mortgage sector for instance, The Nigeria Bureau of Statistics and The National Identity Management Commission...." (Respondent 21)

"...The process of accessing mortgage facility in Nigeria should be timely and transparent, adequate monitoring structures need to be in place to punish offenders and fraudsters" (Respondent 738)

Here as well, the quotes from the respondents suggest that a more technologically efficient functioning of the mortgage system in Nigeria will inadvertently enable a more transparent system.

In the emergence of this theme, participants have engaged vigorously with the various factors that influence the efficient functioning of the Nigerian mortgage system.

Technological advancement and more sophisticated innovation were seen as facilitators. Some of the barriers identified include a lack of relevant planning and integration amongst key agencies, together with poor attitudes to timelines for processing and delivery. In reforming the system, necessary effort needs to be made to ensure adequate contextualisation of interventions.

6.8.5 Awareness

The emerging findings in this theme relate to how much Nigerians understood the basic principles of mortgages, together with their willingness to engage with the process. According to the respondents, there was a significant level of ignorance with respect to mortgage financing, among some key demographics in Nigeria.

"Enough enlightenment should be done concerning the mortgage because I have little knowledge about the subject matter." (Respondent 16)

"The average roadside mechanic does not understand "a Mortgage". Nigerians should be more enlightened through the public ombudsman about mortgages." (Respondent 128)

From the emerging evidence, there are indications that while there was some form of knowledge or understanding about mortgages, there was still a significant lack of awareness of relevant processes and potential benefits associated with mortgages in the country.

The respondent above indicates that the responsibility for enlightening the populace about mortgages belongs to the Government. However, other respondents also felt that operators in the Sector also had a role to play in increasing awareness in the populace

"I suggest that the Nigerian Mortgage sector should create more awareness on what mortgage is, especially those in the rural areas, and also bring down cost on the interest rate.. so that Nigerians will have access to Mortgage...especially those in the rural areas." (Respondent 309)

"The Nigerian mortgage sector should improve in their advertisements and awareness programs because a common Nigerian feels only the rich can have access to mortgage houses." (Respondent 353)

Here as well, the adoption of a GST approach allows for a development of an intervention that will not only address a lack of awareness, but also provide a targeted solution that can increase access for some of the previously identified disadvantaged groups.

Other comments from respondents further suggest that the use of this approach, in addition improving access to mortgages in rural areas, can also encourage development in these areas.

"Taking mortgage to the grass-root levels, that is, a de-concentration of mortgage houses in the urban areas." (Respondent 366)

Some practical and contextual solutions were proffered which the respondents perceived would enable the Nigerian populace better understand the concept of mortgages, as well as potential benefits and implications in the Nigerian setting.

"If the technology of the sector is improved, a good database will be developed by the government and based on that awareness can be taken to the rural settler." (Respondent 79)

"It will be of utmost importance to create radio and TV programmes for the full awareness both in pidgin and in local language." (Respondent 303)

From the respondents' perspective, one way to address the current lack of awareness in the sector is to combine the relevant technological innovation that targets disadvantaged groups, with a more effective information dissemination strategy.

This theme has emerged as a critical finding with the potential to determine the nature of access that Nigerians have to mortgages. From the evidence, a significant proportion of the population were not adequately aware of the concept or its benefits. Furthermore it seemed that some of the populations with the least access to mortgages were incidentally those who were also most unaware. The development of intervention can increase access should follow

an integrated approach in line with GST thinking. These could include contextual awareness programmes in local languages conceptualised to target specific disadvantaged populations. Government and Mortgages sector operators such as banks and developers need to partner to deliver effective and efficient awareness campaigns.

6.9 Summary

The mixed methods approach adopted in this study represents a novel and creative approach to exploring issues in the Nigerian mortgage finance sector. Furthermore, the GST approach chosen to underpin this thesis further lends itself to the robust and comprehensive exploration of the data collected from various stakeholders from seemingly diverse, but interrelated sectors.

The statistical analysis undertaken involved the testing of the hypotheses formulated from the relevant research questions, guided by findings from the previous documents which make up this thesis together with the updated literature review presented in the third chapter. Relevant statistical analysis was applied to all pertinent variables to provide the appropriate overview as well as indicate the necessary guidance for further more sophisticated analysis. Further to this, structural equation modelling was applied to the data to enable a better understanding of the emergent patterns and correlations, as well as measure their interconnecting relationships.

Finally, a thematic analysis, following the qualitative paradigm, was applied to the textual data collected in unstructured sections of the questionnaires. These had been included to ensure that any of the participants' views, opinions and experiences which were not adequately represented in the items included in the questionnaire, could also be captured. The adoption of this approach ensured that a comprehensive interrogation of relevant issues pertinent to the all identified stakeholders could be undertaken within the same framework.

Affordability of mortgages emerged as the first hypothesis tested and the evidence indicated that while mortgages in Nigeria were not considered affordable, its improvement would enable better access to mortgages in this setting. The evidence of the existence of this relationship was corroborated by the structural equation model developed. From the perspective of the respondents, Affordability also emerged as the most important factor

influencing access to mortgage finance. The thematic analysis as well provided a further substantiation of the influence of this variable, as Affordability also emerged as a key theme in the qualitative phase. The findings indicated that factors such as interest rates and request for deposits contributed to how affordable mortgages were perceived to be in this setting.

While Corruption emerged from testing of the second hypothesis in the quantitative phase, Transparency emerged from the thematic review. Here, they are however presented together, given their relationship. Findings from this thesis provide evidence of corruption in the Nigerian mortgage setting. It also emerged that corruption had a negative influence on how Nigerians were able to access mortgages. The thematic review revealed Transparency as important to how mortgages were accessed in Nigeria. Respondents further indicated that poor enforcement of relevant regulations contributed to corrupt practices, while contextual policy and adoption of new technology could foster transparency in the system.

In the third hypothesis tested in this thesis, it emerged that the cost of mortgage housing in Nigeria had a statistically significant relationship with access to mortgages. Currently, respondents' perception was that mortgage related housing in Nigeria was high in cost and factors that contributed to this include poor access to land and lack of innovation and design efficiency in the sector. The relationship between cost of housing and access to mortgages was validated by the structural equation model.

Regulation in the mortgage sector represents the last hypothesis tested in this thesis. The statistical analysis provided evidence of a relationship with access to mortgages in the Nigerian setting and this was further corroborated in the statistical equation modelling undertaken. The analysis revealed weaknesses in regulatory activity governing foreclosures, but identified the adoption of innovation and new technology as key factors that can improve regulation in the sector.

In addition to Affordability and Transparency, three other themes emerged in the qualitative phase of the mixed methods study. The first 'Disadvantaged Groups' emerged due to the fact that respondents identified that certain specific populations were systematically disadvantaged with respect to the nature of access that they had to mortgages within the Nigerian setting. This grouping represents the first time that seemingly dissimilar populations who suffer similar disadvantages are considered together, based on their level of access.

Efficiency was the next theme that emerged from the qualitative phase. Here, respondents provided examples of various relevant factors which they perceived hindered the efficient functioning of various relevant procedures within the mortgage financing process. Poor planning and a lack of adherence to timelines and guidelines were identified as barriers. Transparency was seen as a factor that could improve efficiency in the system.

In the last theme that emerged in this thesis, respondents identified the need to improve Awareness with respect to the existence and relevance of the financing model in the Nigerian context. Further findings in this area indicated the need to develop targeted and contextual campaigns. Adoption of partnership models between Government and Private Sector were considered appropriate for the Nigerian setting.

The GST chosen to underpin this thesis has led to the emergence of several remarkable findings. Although the structural equation modelling undertaken focused on unravelling what kind of influence the various variables had on access to mortgages in Nigeria, it also provided strong evidence of interconnection among these relevant factors. Without adopting the GST approach, it is unlikely that research in these seemingly diverse sectors would consider any linkages with each other. This new revelation however provides additional evidence supporting the adoption of this novel approach as a contextual basis for developing comprehensive, yet robust reforms that can improve effectiveness in the Nigerian mortgage setting.

The mixed methods approach adopted in this thesis also enabled the relevant rigour that further validates the findings of the study. In academic research, triangulation is a term used to describe a scenario whereby findings that are emerging from a study are empirically verified by similar results that emerge following the employment of other methods (Lincoln and Guba, 1985; Sandelowski, 1995). In this study, Triangulation occurred when findings relating to the four hypotheses tested were validated by findings from the structural equation model. The emergence of the relevant themes provided further triangulation for two of the four hypotheses.

7. Conceptual Framework

In this chapter of the thesis, the conceptual framework of the dissertation is presented. The framework presented in this section emerged from the empirical study undertaken following the mixed methods paradigm. However it should be noted that findings from the previous studies contributed significantly to the research questions and hypotheses that guided the empirical field study. A summary of these studies have been presented in chapter two, together with conceptual framework in the immediate past document. It should also be noted that an updated literature review has been undertaken in chapter three, to properly situate the research questions and hypotheses in the current relevant contexts.

This thesis is focused on developing an effective mortgage finance system in Nigeria. The conceptual framework of the thesis presented in Figure 17 aptly captures this overarching goal with the representation 'Access to Mortgage Finance' indicated by the black house in the centre of the model. The central position of the overarching goal is also indicative of the GST approach which argues that the various seemingly independent and diverse factors are working together towards achieving the same objective. The overarching goal together with the various interrelated factors make up the system. In this context, this system is represented by the entire model.

It will be noted that the black house is surrounded by four circles and three rectangles. These are representative of the various variables and factors that emerged in the study as influential to how Nigerians accessed mortgages. The four circles are representative of the hypotheses formulated in the study from the previous documents in this study together with the relevant research literature review. These variables were subsequently statistically tested to determine the strength and direction of their relationship with access to mortgage finance. These variables include Affordability; Corruption and Transparency; Cost of Housing; and

Regulation. Although only 'Corruption' underpinned the hypotheses tested,

'Transparency' was included in this category following its independent emergence

from the qualitative thematic review. The decision to collectively consider these two concepts in the framework is due to their obvious relationship.
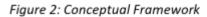
A closer view of the model will also reveal a deliberate colour differentiation on the circles representing the indicated variables. Further observation will reveal a colour variation ranging from light blue to a dark blue. In relation to the blue circles, the colour intensity provides some insight with respect to the variable's influence on access to mortgages.

The most important variable that emerged in the study 'Affordability' is represented by the darkest blue circle, as various relevant analyses undertaken in the thesis that indicated evidence of its influence access to mortgages. The other three circles are of the same shade of blue, however the location of 'Corruption and Transparency' is indicative of its relevant importance, compared to the other two hypothesised variables. In the model, the proximity of the circles to the black house is also indicative of the level of influence they exert on the overarching objective of the system. It will be recalled that 'Corruption and Transparency' emerged from both the quantitative and qualitative phases of this thesis.

In the conceptual framework, 'Regulation' and 'Cost of Housing' are indicated by blue circles of about the same colour intensity, which are also located at approximately the same distance from the black house. This is an indication that they exert about the same level of influence on how Nigerians are able to access mortgages.

In the empirical analysis that was undertaken, five themes emerged from the thematic analysis undertaken in the qualitative paradigm. Of these five, two have been subsumed in the hypothesised variables, 'Affordability' and 'Corruption and Transparency'. Their incorporation contributed to the level of importance attributed to them, as discussed above. The remaining three are indicated by rectangles situated in the lower part of the conceptual framework. Unlike the Circles whose importance are indicated by their colour, the emergent themes were left uncoloured, as their level of importance were not statistically determined. In the same vein, their relative distance from the back house is not indicative of their importance.

The double headed arrows in between the circles indicate the presence of a relationship between Regulation and Affordability, Cost of Housing and Affordability, Regulation and Corruption and Transparency and between Regulation and Cost of Housing, also between Corruption and Affordability

The first rectangle from the right represents 'Disadvantaged Groups' followed by 'Awareness' then, 'Efficiency' located at the top righthand side of the model. As indicated earlier, their positioning is arbitrary and does not signify their importance or relevance.

Figure 2: Conceptual Framework

The nature of the arrows connecting the circles and rectangles to the black house indicating 'Access to Mortgage Finance' is significant. It will therefore be observed that the arrows connecting the four blue circles to the black house are made up of solid lines. Conversely, the arrows connecting the rectangles to the black house consist of dotted lines. The interpretation relates to the statistical significance of the relationship between the variables and the system's core objective. The solid arrows are indicative of a statistically proven relationship, while the dotted lines represent relationship whose emergence has not been statistically tested.

For each of the variables and themes under consideration, factors which determine their status or potential within the current mortgage finance system are presented alongside the shapes. For the variables represented by circles, these are presented on their respective right sides, while the themes indicated by the rectangles have theirs listed within them.

Furthermore, the factors have been colour coded to give some indication of their perception within the relationship. Red colours are used to indicate factors which have been associated with negative influences. For instance, poor enforcement is perceived as a factor contributing to corrupt practices in the sector. This in turn limits access to mortgage finance. Similarly, high interest rates and requests for deposits contribute to unaffordability of mortgages, which in turn limits the relevant access. The long timelines associated with mortgage processing is indicative of the excessive bureaucracy currently characterising mortgage processing in Nigeria. This is therefore indicated in red, as this is seen a negative factor limiting efficiency in how mortgages are accessed. All three factors/categories presented under 'Disadvantaged Groups' are depicted in red as an indication of the significant lack of access suffered by groups identified in this category. Low-income earners, rural dwellers and civil servants were specifically identified as being severely disadvantaged.

For the factors depicted in green, this represents an indication of the existence of a positive relationship in the way the variable or theme is able to influence access to mortgage finance. It also represents initiatives that emerged from the study, which respondents perceived would have a positive influence access to mortgage, if properly implemented. The adoption of new technology is depicted in green since it was identified by the respondents as having the

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potential to foster transparency and curb corruption. A similar colour coding has been used for the same factor under regulation, since new technology was considered a facilitator for better regulation. The positive influence of new technology in both categories was seen as having the potential to improve access to mortgage finance. Similarly, contextual policymaking was perceived by the respondents as having the capacity to improve affordability, as well as enhance transparency. In both cases, improved affordability and more transparency could enhance access to mortgages. All three factors/categories presented under 'Awareness' are depicted in green. Respondents indicated that improving awareness amongst Nigerians would enable access, and went on to provide specific strategies that were deemed contextual to the Nigerian setting. Contextualised campaigns, grassroots engagement and the adoption of the Public Private Partnership (PPP) model were all considered factors that could improve awareness, which in turn would enable better access to mortgages. The relationships between disadvantaged groups and access to mortgages, efficiency and access to mortgages, and awareness and access to mortgages are depicted using black arrows. The effects of these relationships are expected to be statistically significant. The effect of each on access is varied. For instance, the effect of awareness is positive while that of disadvantaged groups is negative. The effect of efficiency is also positive.

A few of the factors are depicted in amber, which means that the factor was perceived by respondents as existing between the positive and negative ends of the influence continuum. In certain cases, even though they were perceived as being able to facilitate access to mortgages, their inefficient utilisation, or less that adequate application limited their effectiveness in influencing access to mortgages in the Nigerian setting. For example, respondents believed that although relevant regulations existed, they were not being properly enforced in the Nigerian setting. This means that while regulations were viewed as positive, their lack of enforcement encouraged corruption, which in turn limited access to mortgages.
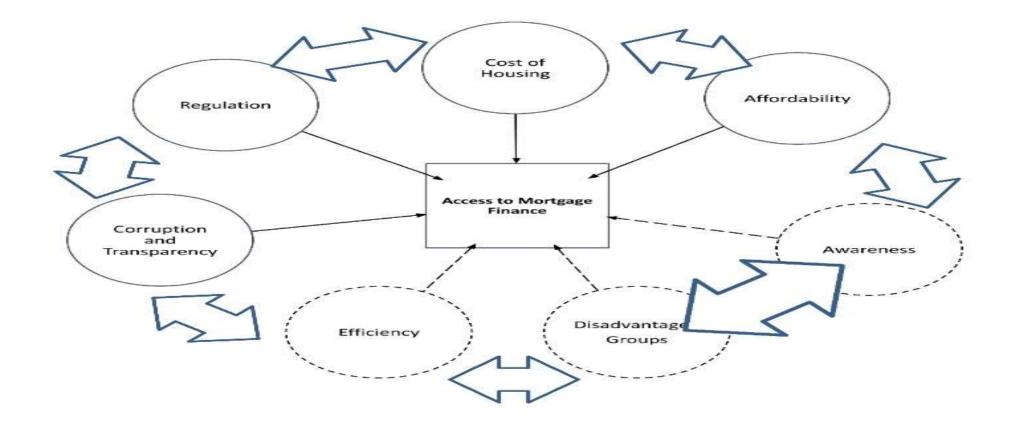
The double headed arrows depicted in blue, indicate the interconnection of the variables and themes as emerged from the thesis. While innovative technology could improve regulatory processes an improved regulatory system would lead to reviews of policies affecting initial deposits, interest rates and acceptable flexibility in the mortgage processes and particularly limiting the long timelines associated with mortgage processing in Nigeria. It had been

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mentioned earlier in this thesis that mortgage interest rates and initial deposits, though unfavourable to mortgagors, are controlled by regulation in Nigeria. These factors have been identified as having negative influence on affordability of mortgage, and hence access to mortgage finance. This explains the interrelationship between Regulation and Affordability.

The double headed arrow connecting Cost of Housing to affordability is indicative of their interdependence and interconnection to access to mortgage finance in Nigeria. Inefficient land administration and unfair construction practices have been identified to having negative influence on cost of housing. High cost of mortgage houses has been identified as resulting to high initial deposits and interest rates, both of which exert negative influences on affordability of mortgage.

The arrow between Regulation and Corruption and Transparency indicates the interconnection and interrelationship of the both identified variables and factors facilitating or limiting access to mortgage finance. For instance, the adoption of new technology which was perceived as a facilitator with respect to enhancing transparency as well as for improving regulatory activity necessary for enabling access to mortgage.

While the influence of innovation was not perceived as being fully utilized in improving cost of housing, it was identified as a factor with great potential to improve relevant regulatory processes. Also the introduction of technology has been identified to improve land administration and facilitating access to land by mortgage housing constructors. Ineffective regulation has also been identified to lead to the existence of arbitrary practices and corruption in mortgage housing construction and land administration. Both factors have been found to constitute barriers to access to mortgage finance. The foregoing clearly describes the interconnection between Regulation and Cost of Housing.

The arrow connecting Regulation and Affordability also describes the interconnection of both variables and their associated factors in influencing access to mortgage finance. Deliberate policy making has been identified to improve access to mortgage by making them more affordable. For instance high initial deposits which have been identified as barriers to mortgage affordability in Nigeria can be controlled by contextual policy interventions to lower

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interest rates and initial deposits. Strategic policy making will improve transparency, eliminate bureaucracy and other inflexible practices limiting access to mortgage finance. Lack of flexibility has been identified as having a negative influence on mortgage affordability. Deliberate policy making will also enable equitable access to mortgage finance for the citizenry and particularly for the low income earners.

Figure 18: Diagrammatic representation of the Conceptual Framework indicating relationship between variables

The selection of GST as the relevant theory to underpin this thesis was due to its utility in enabling a comprehensive yet robust exploration of the emergent relationships and interconnectedness identified between the various seemingly diverse variables and themes. It also enabled a framework allowing the relevant engagement with various distinct stakeholder groups. Previous studies identified in the literature had either focused on just one sector, or explored views and experiences of only one pertinent stakeholders' group.

In the development of his theory, von Bertalanffy, (1968) argued that it would enable a better understanding of intricate and complicated interactions of components within complex systems. The GST approach argues that within a system, although component factors may appear seemingly distinct and diverse, when they are viewed as part of the same system working towards a common goal, their interrelatedness and interconnectedness begins to emerge. Figure 18 further clarifies the emergent conceptual framework by providing a representation of interconnectedness of the variables and themes as emerged in the thesis.

The overarching goal of the mortgage finance system is to enable 'Access to mortgage finance', as such, this is indicated in the centre of the model. Surrounding this central objective of the system, are the various variables and themes that emerged empirically, as having influence on the overarching goal. These include four variables (Affordability, Corruption and Transparency, Cost of Housing and Regulation) that statistical evidence has indicated have an influence on access, together with three themes which emerged from the qualitative analysis of the data (Disadvantaged Groups, Efficiency and Awareness).

The factors with statistically significant relationships to the core of the model are represented by circles depicted with continuous lines. The themes that emerged from the qualitative exploration are represented by circles depicted by broken lines. Both the variable and themes are presented as orbiting 'access to mortgage finance' which is at the core of the entire system.

The relationships that exist within the system are represented by arrows. The nature of the relationship in the system is determined by the type of arrows. The black stick arrows moving from the circular variables and themes indicate that they are working towards achieving the same goal. This is in tandem with the GST principle which argues that although the seemingly distinct factors may appear diverse, within the system, they have the ability to work towards the same goal. The

continuous stick arrows indicate statistically significant relationships, while the curved arrows indicate relationships, as identified by the thematic analysis.

The other type of arrow represented in the model indicates a different type of relationship. The double headed block arrows indicated between the revolving circles represent the interconnectedness of these variables and emergent themes. For instance, the adoption of new technology which was perceived as a facilitator with respect to enhancing transparency, as well as for improving regulatory activity necessary for enabling access to mortgages. Similarly, while the influence of innovation was not perceived as being fully utilised in improving the cost of housing, it was identified as a factor with great potential to improve relevant regulatory processes. It is important to note that the use of the double headed block arrow symbolises the dynamic and continuous interaction of factors between the relevant variables/themes, in addition to the interconnectedness between the distinct variables/themes.

This thesis' adoption of GST to underpin a framework that aims at better understanding interactions of relevant factors with a view to improving access to mortgages, represents the first time this approach is being employed in this setting. This original thinking therefore has the potential to unravel new dimensions, by radically changing the viewpoint concerning how these variables interact and relate with each other to influence access to mortgages in Nigeria. The system wide approach being adopted in line with GST has yielded some interesting findings. For the first time the combined consideration of these seemingly diverse factors has enabled a rigorous determination of their importance, in relation to each other, as well as in terms of their influence in enabling access to mortgages. These are important considerations, not only for the Nigerian setting, but also for many developing country settings, where a significant proportion of the population struggle for access to mortgages. The clear depictions of how the various distinct factors interrelate within systems that aim to provide mortgage finance, can be used as a framework for developing contextual, resource efficient, and effective solutions.

CHAPTER EIGHT- DISCUSSION

8.1 Introduction

In this chapter, the results from the data analysed using the mixed methods approach are discussed against the relevant evidence and findings published in the extant literature. In the thesis, both quantitative and qualitative methods were used to empirically assess variables and factors that were theorised as having influence on how Nigerians accessed mortgages.

In the thesis, four hypotheses were formulated to enable a robust and rigorous exploration of how various factors identified as influencing access to mortgages either facilitated or hindered the process. While the quantitative analysis statistically tested the hypotheses, the thematic analysis following the qualitative paradigm, ensured a comprehensive interrogation and engagement with relevant factors and themes that emerged.

The adoption of the mixed methods approaches also ensured that the various interconnections between these factors were revealed. This is in line with the GST approach, and encourages the emergence of a fit for purpose framework that identifies where the challenges and opportunities lay, in the development of an effective mortgage system in the Nigerian setting.

8.2 Affordability

The first hypothesis of this thesis sought to test affordability of mortgages in the Nigerian setting, particularly with respect to how this concept influenced how Nigerians were able to access mortgage finance. The results of this thesis provided statistically significant evidence which showed that mortgages in Nigeria were not affordable. This lack of affordability was also perceived to limit the access that Nigerians had to mortgage finance in this setting. The findings from the qualitative phase of the analysis also mirrored the statistical analysis, providing a strong confirmation of the importance of this variable in enabling access to mortgages in this setting.

Several factors such as interest rates and request for deposits emerged as contributing to the level of affordability associated with mortgages in Nigeria. These factors have also been highlighted in

the international literature as barriers to the development of the mortgages sector. According to Atati (2014), the combination of bureaucracy, large initial deposits, and exorbitant high interest rates, have limited the growth and development of the mortgage finance sector in various relevant settings. The researcher further identified that the negative effects of these factors were experienced more by low-income earners, but argued that effective regulation could be employed to address the imbalance (Atati, 2014). Another Nigerian study done by Nwuba and ChukwumaNwuba (2018) also identified affordability as a significant barrier in accessing mortgages in Nigeria. The survey study of 450 households in Kaduna found that many low income earners were unable to afford the high interest rates or qualify for housing loans.

Other studies which have explored the influence of interest rates on around the world affordability of mortgages have reached similar conclusions. In Israel, high interest rates, together with high cost of mortgage housing were identified as key barriers to affordability in that setting (Maor, 2014). In other settings such as the United Arab Emirates, policies had been formulated and implemented with the aim of deliberately reducing interest rates associated with poor access to mortgage finance. Evidence suggests that this policy was associated with an increase in access to mortgages (Maceda, 2013). Interestingly, the PPP model, which respondents in this thesis identified as a useful model for implementing various innovative interventions, was also used in the United Arab Emirates, where the Government collaborated with Mortgage Establishments in developing interventions aimed at reducing interest rates. In China, Roy (2021) found that the financialisaton of home ownership meant that the size of loans needed and the interests applied are simply beyond the means of the average citizen.

In addition to high interest rates, request for deposits was another factor identified by respondents in this thesis, as influencing affordability to mortgages in Nigeria. High initial deposits was also noted by Nwuba and Chukwuma-Nwuba (2018) in their assessment of barriers to accessing mortgages in the Nigerian housing market. Boyi (2019) also identified high deposit requirements as a significant barrier to home ownership. Other studies have reached similar findings. In Saudi Arabia, following the realisation that requests for high initial deposits was perceived as a limiting factor for accessing mortgages in that setting, a reduction of deposits were initiated, as part of policies formulated to encourage mortgage uptake in that setting (Fattah, 2016). This initiative resulted in limited success in the achievement of its objective, as correspondent uptake was not as high as expected. Evidence

however suggests that this is due to other macroeconomic indices associated with the economic downturn experienced in the setting at the time that the policy was implemented (Fattah, 2016).

One key thread that runs through the above factors is policy. Respondents in this thesis identified that in Nigeria, the lack of deliberate use of policy to improve affordability of mortgages, remains a major challenge in this setting. In other settings, considerable evidence exists of how the employment of this approach has led to improved affordability. This issue has also been noted in Africa. A. Gayi and Karakayali (2020), in a study assessing housing affordability in Kenya, noted that the excessive focus on rural to urban migration masks the important role played by other factors. According to the researchers, an important factor contributing to the problem was failed housing policies. Crucially, the study noted that it is not the absence of policies but rather their quality that is the problems in Kenya. The nature of the policies means that there is excessive government interference in the housing market with little positive impact in terms of affordability and accessibility of housing finance for the poor.

Some of the policy interventions in the Asian setting have been given above, however, even in Europe where mortgages are seemingly well developed, deliberate policy making has been adopted to improve access to mortgages by making them more affordable. Recently in Finland, new policies were developed to lower interest rates, with the aim of making mortgages more affordable. There is evidence that this has increased access to mortgages (Marrez and Pontuch 2013). Another area where there is considerable evidence that contextual policymaking has been used to improve affordability of mortgages, relates to the provision of subsidies. In some settings subsidised mortgages programmes have been developed for low income earners. Characteristics of these mortgage packages include longer tenors and lower interest rates, compared to normal mortgage packages in the same setting (Erbas and Nothaft, 2002).

There is also evidence that indicates that this form of strategic policymaking not only improves access to mortgages by making it more affordable, it also enables the Government to achieve other relevant policy objectives. Some of the broader policy objectives identified in the literature include access to infrastructure, improved security of life and better population health indices, all of which can be directly linked to better housing (Stein and Castillo, 2005). What this means is that the development of a contextual policy that would specifically target the most disadvantaged

populations will not only help address relevant housing deficits, but can also improve several other developmental and socioeconomic indices as well.

8.3 Corruption and Transparency

This section encompasses the second hypothesis, whereby the influence of corruption on how Nigerians were able to access mortgages, was subjected to relevant statistical analysis. The findings from this thesis have provided statistically significant evidence indicating that corruption has a verifiable but negative influence on how mortgages are accessed in Nigeria. Additionally, qualitative findings from the thematic analysis also identified Transparency as a major theme enabling access to mortgages in the Nigerian setting. Corruption and transparency are therefore discussed together as representations of opposite sides of the same continuum.

The issue of corruption is very pertinent in Nigeria and affects virtually all sectors of life in the country. Most research on the issue has generally focused on corruption in other walks of life beyond housing and housing finance (Uma and Eboh, 2013; Okoh, 2001). However, in recent years, some studies have begun examining the effect of corruption in housing affordability and access to housing financing in the country. One study which reviewed the Government's construction of houses for low income workers in what was then the new National Capital found that only 20% of the targeted number had been completed at a time the first phase of the project ought to have been concluded (Alufohai, 2013). The review identified gross indiscipline by the ruling political class as well as widespread corruption in Government as responsible for the failed project.

Other Nigerian studies identified prevalence of corruption in land administration, whereby corrupt practices such as tribalism and nepotism were noted as some of the more common activities that impeded the effective functioning of Government systems. Interestingly, the evidence here also indicated that innovative interventions such as new electronic technology for various processes such as searches and certification improved transparency in land administration (Akingbade et al., 2012; Aina, 2011). Although these Authors' findings pertain to land administration, they mirror the findings that emerged in this thesis.

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The relevance of access to land also features prominently in the cost of mortgage housing, another important factor that emerged as critical to how Nigerians could access mortgages. This underlines the importance of the GST approach that has been chosen to underpin this thesis, since a better understanding of how these factors are linked, can foster more robust and contextual solutions. A recent empirical study was done by Ebekozien et al. (2022) to assess the root causes of housing loan inaccessibility for low income pensioners despite repeated government promises and efforts to provide the housing loans. A key finding of the study was that a corrupt system of loan administration at NHF is an important contributor to the high rejection rate for loan applications by low income pensioners. Keke et al. (2022) also noted that corruption in Nigeria is driving up costs for affordable housing projects in Nigeria making them inaccessible to low income earners. Interest in this issue is rising in the country.

In the extant literature, there is some evidence of corruption in housing provision in other nations. Van Der Molen and Tuladhar, (2007) argue that corruption is a major contributor to the poor growth and development of housing sectors in various countries. They single out land acquisition and administration as areas where a high level of corruption exists, particularly in developing country settings (Van Der Molen and Tuladhar, 2007). This international evidence supports this dissertation's findings that suggest there are strong linkages and relationships governing how the various identified factors interact in influencing how mortgage is accessed in Nigeria. This finding therefore constitutes a strong argument for the adoption of a systems approach in developing strategies that aim to improve access to mortgages and housing, especially in the developing country setting.

Bah E.M, Faye I, Geh Z.F,(2018) identified arbitrary and uncontrolled housing prices and negatively affecting the African Housing Market. In reviewing the Great Housing Crash, Van Order.R, (2018) noted that compromise and adherence to mortgage rules and regulation by the providers contibuted to the crash of the housing/mortgage market in the instance

The international literature also reveals certain specific fraudulent activities that are known to be peculiar to the mortgage sector. According to Fulmer (2010) one particular dishonest activity that is widespread in the mortgage and housing industry is the fraud of "flipping". In this type of fraud, fraudsters tend to buy out foreclosed houses at very cheap rates and sell them off at a much higher

rate to the buyer who wants to buy a house outright, or one who may need a house urgently or may not have the required documents required for accessing a mortgage. Another common fraud in the mortgage industry involves the burning down houses, although this is more popular amongst developed nations. In this type of fraud, houses are intentionally or unintentionally allowed to burn so that the fraudsters can collect the insurance on the house. Although these activities are not common in the NIgerian setting, the international evidence suggests that these frauds contribute to limiting access to mortgages (Fulmer, 2010). It is therefore important that any reform that seeks to improve effectiveness in the Nigerian mortgage sector takes cognisance of this, to ensure that adequate protective measures are taken to guard against the risk of exposure to such activities which are likely to arise with further development of the sector.

Improvement in transparency in the Nigerian mortgage sector was also identified in the study as a tool with which the Government can employ in achieving other policy objectives. One of the Government's key objectives is to enable access to housing for the citizenry in an equitable manner (FRN, 1999). Currently, this is not the case. Access to mortgages in Nigeria is skewed towards those in the higher income brackets and residents of urban areas (Aribigbola, 2008). Although another twist of this challenge is that several residents in urban cities are unable to access mortgages due to their low income earning. This further exacerbates their cost of living (savickas, A.I, and Yoem, C., 2020). Strategic policy making that improves transparency in the sector will enable a more equitable access for the citizenry. Further initiatives can be used to favour the most disadvantaged, in order to address the current skew. Transparency is the only concept that will ensure that these initiatives are not hijacked by the usual suspects.

Findings from the thesis suggest that although policies and regulations existed which had the capacity to limit corruption and foster transparency the weak link lay in the implementation and enforcement of these laws. There is also evidence which outlines transparency as a tool for enabling a more equitable access to mortgages in the Nigerian setting. This therefore suggests that there is a need for a system wide reform to reduce corruption and improve transparency in all relevant sectors associated with mortgage finance. One way of achieving this is to adopt the GST approach which will ensure that in developing strategies to curb corruption in one sector, other related sectors will also be considered. This approach is sufficiently robust and comprehensive in ensuring

the eradication of corruption in interrelated sectors, while at the same time enabling more transparent monitoring and enforcement of relevant processes and regulations.

8.4 Cost of Housing

The cost of housing is another important category whose association with access to mortgage finance was explored by the hypotheses formulated in this thesis. In relation to the cost of housing associated with mortgages in Nigeria, the findings in this thesis indicated that the high cost associated with mortgage related housing constituted a barrier to access.

Internationally, the relevance of accessing mortgages at a population level has been used as a means of housing provision, particularly when compared to renting or buying houses outright. Due to this fact, Mortgages seem to be the preferred means of acquiring property ownership in most developed countries that have effective mortgage systems in place (Forrest et al., 2021). In these settings, the average cost of housing through mortgage is within the reach of many medium and low income earners. As such, mortgages become an attractive option for potential house buyers who are prepared to spread their loan repayment over many years. However, while mortgages improve house ownership rates, their affordability is also an issue for most people. The price of mortgages depends on the prices of property in a given region or country. If property prices are high, mortgages will also be more costly raising the prospect that many will still be unable to afford them (Fernandez and Aalbers, 2020).

The issue is high property costs appear more prevalent in developing countries. In many developing countries settings the high cost of mortgage related housing, coupled with low earning power of those in the lower income categories, limits access to this form of housing financing for those interested in the model. Fernandez.and Aalbers (2020) noted that this problem has become particularly pertinent in recent decades due to the increasing financialization of housing in the global south. Financialization has driven up housing costs relative to income in many countries resulting in the need for higher mortgages to purchase housing property. In addition to this, Furlong and associates (2014) identified poor access to land and shady building practices as critical factors that increased costs of housing and limited access to mortgages. These findings are similar to the results that emerged in this thesis.

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In this thesis, the lack of innovation emerged as another factor that triggered high cost of mortgage related housing and in turn limited access to mortgages. Although innovation seems too broad a term, a review of the extant literature provides some insight as to specific examples of innovations that have succeeded in other settings. In his article, Zanin (2016) agrees with the findings of this thesis that indicates that cost of mortgage housing not only limits access to housing, but also specifically disenfranchises those in the low income bracket. This thesis further identified rural dwellers and civil servants as other specific populations whose access was severely limited. The author also argued for the adoption of innovative models to enable the achievement of affordable housing. Among the specific initiatives proposed include increased collaboration between government and private investors, as well as more transparent policies in the development of mortgage programmes (Zanin, 2016). These specific initiatives also independently emerged in the empirical analysis of the data collected in this study.

Other studies have also highlighted the suitability of the Public Private Partnership model for improving the cost of mortgage housing. It has been argued that while business by the mortgage banks and construction professionals may be underpinned by the need to make profit, the involvement of the Government can help lower costs and make mortgage housing accessible for those in the lower income brackets. One way that this can be achieved is by the Government providing subsidised land for construction of mass housing by private companies (Moskalyk, 2008). Another aspect of Innovation is taxation. Dewilde (2018) notes that the Netherlands has bucked the trend of declining affordability of housing for low-income earners through innovative taxation. The country effectively taxes those that can afford high end properties to provide mortgages for low-income earners. The taxation system also prevents property speculation.

The example provided in the previous paragraph however brings up another factor that emerged in this thesis as a factor that contributed to increasing the cost of mortgage housing in Nigeria. It emerged in this thesis, that a lack of access to land was also a major contributory factor to high cost of housing in this setting. In Nigeria, The Land Use Act gives powers to the Governors of various states to consent to the sale and administration of land (FRN, 1999). This in effect puts all land in the custody of the Government and its agents in Nigeria. As with many other sectors that depend

on Government for the relevant administration and control, this sector is characterised with unwieldy bureaucracy and widespread corruption (Mabogunje, 2010). Although some of this has already been discussed in the section that explored 'Corruption and Transparency', it is important to note here that the lack of efficiency associated with the process translates to significant increases in the resources expended in developing mortgage related housing, particularly with respect to time, effort and money.

In addition to innovation, design efficiency is another factor that respondents in this study identified as critical in reducing housing costs, and thereby increasing access to mortgages. Previous documents in this study, as well as the updated literature review have identified the desperate need for capacity building in mortgage related housing construction. The review of existing curricula (or the development of a new one) for professionals in the Mortgages related Estate and Housing Construction Sector provides an opportunity for introduction of relevant innovation and more efficient building techniques. Anidiobi, G.A, Okolie, P.I and Ugwuanyi, W.N; (2018) noted that the operation of primary mortgage institution was not driven by technology. The mortgage lending institution in Nigeria are yet to be truly Information and Communication Technology (ICT) compliant. This opportunity can be used to enable an industry wide reform that will introduce international best practices, as well as other innovative interventions that can go on to drive down the cost of mortgage related housing.

It also emerged in this study that the existence of corrupt or unfair practices amongst mortgage construction and finance practitioners contribute to the high cost of mortgage related housing. The need to curb corruption in all related sectors as well as enhance transparency in various relevant processes, have been discussed extensively in the relevant section of this chapter. It is however important to note that these practices also exist in other settings and have been empirically proven to impede processes and limit access to mortgages (Lane, 2016). In Ghana, over "politicisation" of land practices by Government agencies has negatively affected housing developers and hence increased cost of housing. The average Ghanaian family is yet to have access to affordable housing (Owusu-Ansah, soyeh, K.W and Asabere, P.K, 2019). It is therefore important that in the development of relevant reforms, innovations and interventions from other settings can be considered, as far as they are appropriately contextualised to fit the Nigerian setting.

8.5 Regulation

The thesis also explored the relationship between regulation and access to mortgages. The statistical analysis undertaken by the study indicated that the lack of access to mortgages in Nigeria was influenced by the inadequate regulation that existed in various aspects of the sector.

Internationally there is robust evidence indicating the prime role of regulation and legislation in initiating or driving system reforms aimed at improving access to mortgages. In America for instance, Government policy and regulation has centred on ensuring that the majority of the citizenry, irrespective of socioeconomic status, have some form of access to mortgage finance (Dwyer et al., 2016; Immergluck, 2015). The Literature further suggests that in settings where regulation is perceived as ineffective or inadequate, the existence of arbitrary practice and lack of uniformity can limit the development of the mortgage sector.

While it is beyond the scope of this study to undertake a comprehensive review of the appropriate legislations and regulations underpinning the relevant practice in the mortgage sector, one area that emerged as particularly weak was in relation to foreclosures. Appropriate legislation and regulations on foreclosure provide the relevant guidance with respect to processes that need to be undertaken when a default occurs on a mortgage. It should further outline procedures for the relevant disposal of the mortgaged property after repossession (Immergluck and Smith, 2006). Although widespread mortgage foreclosures are an indication of prevalent defaults, it is also a necessary process for the effective functioning of a mortgage finance system (Scanlon et al., 2008). The power and influence of mortgage regulation has been evident during the COVID-19 pandemic around the world. Stay at home orders and job losses led to a significant decline in income for many people around the world and a significant portion faced difficulties meeting their financial obligations including making mortgage payments. Many governments across the world put in place regulatory measures to prevent foreclosures for citizens in financial distress (Acree and Cockrell, 2021).

Against this backdrop, the emergence that legislation and regulations governing foreclosure in the Nigerian setting were perceived to be inadequate, was therefore surprising. The findings in this thesis regarding relevant inadequacies were further confirmed by a recent publication by the FMBN requesting defaulters to self-report before a specified deadline (see appendix 4). The long duration

covered by the notice together with the apparent inaction for what appears to be decades of defaulting, suggest inadequate legislation or poor enforcement mechanisms to address mortgage defaults.

Without contextual and fit-for -purpose legislation and enforcement mechanisms to ensure that mortgage loans are repaid, the sustainability of the entire process is threatened. Furthermore, this revelation is worrisome when viewed in the light of the evidence that some mortgage beneficiaries may access mortgages, with the intention of not honouring their agreed repayment contracts. Owojiri and Oluwagbuyi, (2011) had identified that a significant proportion of people who engaged with mortgages in Nigeria did not intend to pay back their loans since they believed that their mortgages were their own share of the 'national cake'. The use of this term meant that they perceived these loans to be hand-outs. This phenomenon, according to the authors, could explain the high level of mortgage default in the Nigerian mortgage system. High defaults by mortgagers id the bane of the Nigerian mortgages system. This is worsened by the near absence of laws and regulation on foreclosure. Recommendation on the relevant reviews have been forwarded to the National Assembly since July 2019 (Technical committee on review of Nigerian housing policies, 2021).

This revelation of these weaknesses in the Nigerian mortgage sector necessitates the development of novel system wide reforms, aimed at addressing these gaps. In addition to developing and enforcing 'fit for purpose' regulations, it is also of critical importance to enlighten customers about the need to repay mortgage loans. Respondents in this thesis have already indicated the need to increase awareness of mortgages in Nigeria. This could be one theme that will be included in the awareness campaigns advocated by this thesis.

Respondents in the survey undertaken in the thesis also indicated that the introduction of new technology will make regulation in the sector more efficient and thereby improve access to mortgages. This assertion is a direct result of the immense bureaucracy associated with mortgage finance in Nigeria. Evidence suggests that this could act as a deterrent to access in the sector. According to Shier (2016) when Government regulations are perceived to be unnecessarily burdensome and stressful, potential applicants seek other methods of accessing housing. Although Government policy may seek to target certain populations, inefficiencies in the process may actually alienate the same population being targeted. This implies that although various stakeholders and processes are involved in the overall mortgage process, Government regulation probably plays the

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most significant role in enabling access to mortgages (Sheir, 2016). What this therefore means is that while the introduction of new technology can drive regulatory reforms in the mortgage sector, the Government, traditionally perceived as late adopters of new technology, must be encouraged to play a more dominant role.

8.6 Disadvantaged Groups

In addition to the four hypotheses that were tested in the quantitative phase of the study, several thematic areas emerged from the qualitative analysis undertaken on the data that respondents provided in the textual data provided in the comments section of the questionnaires. The emergence of this theme is novel as this represents the first time that this approach has been adopted in the Nigerian mortgage setting. Following the relevant thematic analysis, it emerged that several demographics in the population were more severely disadvantaged compared to others when it concerned access to mortgages. Among the groups identified were rural dwellers, low income earners and civil servants. In England Terry.P,(2019) suggested government commitment to provision of social housing to reduce the burden of housing costs on low income earners. The author identified increased housing expenditure on a segment of the population operating outside the formal sector.

In the extant literature, there is evidence that this form of systematic disadvantage also affects some specific populations in other settings. Rahman (2008) identifies that worker in the nonformal sector may also be systematically disadvantaged. The author goes on to suggest that the relevant flexibilities be considered in the formulation of the mortgages, to enable the relevant participation of this sector (Rahman, 2008). In the United Kingdom, this same population has also been identified as underserved by the formal mortgage sector. Evidence suggests that innovative approaches using advanced data mining and improvement of access to land registries are being employed to improve access for this sector (Council of Mortgage Lenders, 2014). This evidence is similar to the findings of this thesis. Various previous sections of this chapter have discussed respondents' views on the potential role of innovation and new technology, on access to mortgages in Nigeria. Recent studies have continued to highlight the fact that low income earners working in the informal sector are

particularly disadvantaged when it comes to access to mortgage financing in Nigeria (Ebekozien et al., 2022; Ghani, 2021; Keke et al., 2022).

In this thesis, low income earners emerged as one of the key groups that were systematically disadvantaged when it came to access to mortgages. This is particularly worrisome, given that in many developing countries, a significant proportion of the population fall into this category (World Bank, 2016). The international literatures identified that low income earners of any country are the ones who need mortgages the most, however, in settings where mortgage arrangements are inadequate, processes alienate low income earners thus creating a wider housing deficit gap between the low, middle and high income earners (Dewilde, 2018; Fernandez and Aalbers, 2020). What then emerges is a situation where stated policies which on paper are aimed at improving access for this population actually have the potential to further alienate them.

A practical scenario is presented from the Malaysian setting, where over 60% of the population are low income earners whereas the current mortgage system appears to be underpinned by income projections for only mid-level and high income earners. The analysis from this setting appropriately theorises that unless relevant interventions are applied, the overall policy objectives may not be achieved (Ebekozien et al., 2019; Norazmawati and Rahim, 2015). This means that in developing mortgage policies aimed at achieving widespread and equitable access to housing, considerable effort needs to be made to capture all relevant demographics, while preventing systematic alienation. This thesis has provided original evidence that can form the basis for this policy approach. The development of a contextual policy that would specifically target the most disadvantaged populations will not only help address the housing deficit, but also improve several other developmental and socioeconomic indices as well.

8.7 Efficiency

Another important theme that emerged from the qualitative analysis of the data collected in the survey related to efficiency. It will be recalled that the core of this thesis is focused on effectiveness of the Nigerian mortgage system, which is an interrogation as to how well the system functions, in relation to enabling access to housing, which in this case is the predetermined goal of the system (FRN, 1999; Keke et al., 2022; Mouzas, 2006; Porter and Kramer, 2011). It is therefore interesting that efficiency, a related but different concept, which focuses more on the relationships between

the process input and outputs (Mouzas, 2011), should emerge independently in the thematic analysis.

In Nigeria, the Government acknowledges that one of the key functions it was constituted to facilitate is the provision of safe and affordable housing (FRN, 1999). In practice however, accessing housing through mortgage in Nigeria is characterised by various relevant barriers including poor planning, lack of access to land, issues with documentation and poor adherence to relevant guidelines (Nubi, 2000; Akinwunmi at el., 2012; Akinyede 2016).

In this thesis, respondents identified a lack of adherence to relevant timelines and guidelines as a key efficiency issue. In Kenya, Arucey, K., (2019) emphasized the need for setting of clear processing timelines by the various government departments involved in Housing deliver. According to the author an efficient and affordable housing policy in Kenya should involve land acquisition, cost-effective development and affordable housing cost for mortgage. Poor planning and corruption were indicated as major factors contributing to these inefficiencies. In the literature also, excessive bureaucracy has been identified as a barrier to accessing mortgages in the Nigerian setting. This issue is pertinent for not just the mortgagee, but for other stakeholders as well, including those in mortgage construction (Ayedun and Oluwatobi, 2011). This indicates the need for a multi stakeholder approach in addressing relevant issues. Some of the specific issues identified include excessive documentation requested for approvals, poor time management and unnecessary expenses (Akinyede 2016; Ayedun and Oluwatobi, 2011).

Respondents in this study indicated that the adoption of new innovation would enable a more efficient process in the sector. There is empirical evidence indicating that this approach has significantly improved efficiency in land administration in the Nigerian context (Aina, 2011). This implies that the adoption of this approach may also improve efficiency in the Nigerian Mortgage Finance sector.

Another factor that respondents identified would enable efficiency, was improved transparency in various relevant processes. Evidence from land administration in the Nigerian context also supports this position. In their study, Akingbade et al (2012) found that the introduction of new technology in land administration in Abuja fostered more transparent processes and this in turn reduced corruption and improved efficiencies. The updated literature review in Chapter three as well as previous documents in the study has outlined the need for consideration of a mortgage brokerage

system in Nigeria. Introducing mortgage brokerage as an innovation in the Nigerian setting can help achieve several interrelated objectives that can improve relevant efficiencies in mortgage processing. In addition to providing support that can improve document processing and time management, a brokerage system can also contribute to improving transparency, enhancing capacity and improving awareness in the Nigerian mortgage setting.

8.7 Awareness

In the final theme that emerged in the thematic analysis, it emerged that there was a need for improving the level of awareness that Nigerians had, in relation to mortgages and their relevance to the Nigerian setting. This thesis found that from the respondents' perspective, there were significant gaps in the relevant knowledge associated with processes linked with how mortgages were accessed in Nigeria. In light of this, it emerged that undertaking the relevant awareness campaigns or programmes would not only help address the knowledge deficit which exists in the Nigerian setting, it can also be used to correct misconceptions about the concept. Earlier in this chapter, it emerged that such misconceptions have led to certain mortgage beneficiaries engaging in deliberate default in their loan repayments, since they believed that this was their share of the 'national cake' (Owojiri and Oluwagbuyi, 2011).

According to Okafor, E. (2019) a single secondary mortgage Institution (The Federal Mortgage Bank of Nigeria) for a country of about 180million people is grossly in adequate, this coupled with unrecoverable mortgage loans and under-capitalisation has adversely affected mortgage provision in Nigeria.

The Inability to recover debts owed, or at least realise the securities have led to the winding up of many banks. According to the Nigeria Deposit Insurance corporation (NDIC), the protracted delays in disposing of cases brought before the courts had affected the NDIC in debt recovery in respect of banks in liquidation and other operating banks inability to recover hard-core debts (Nigeria Deposit Insurance Corporation (2020), Debt recovery, available at https://ndic.gov.ng/failureresolution/ accessed June 10, 22.

In Nigeria Oni-Jimoh, T., Liyanager, C. Oyebanji, A, and George, M, (2018) Identified the existence of various channels of awareness in Nigeria on National Orientation Agency; National Broadcasting commission and state Federal and state Ministries of Information, and various local radio station

with reach to rural dwellers. The authors suggested the creating of programs on housing for the awareness and education of the uninformed populace.

A number of studies in the international literature support the employment of awareness campaigns in improving population knowledge relating to mortgage financing. In some settings, it emerged that awareness campaigns were identified as the responsibility of the relevant government agencies saddled with the responsibility for mortgage finance (Krishnakumar and Vijayakumar, 2014; Wang and Shihadeh, 2015). This approach follows Sheir's (2016) earlier stated position that the Government take the lead and full responsibility in processes aimed at enabling access to mortgages for the citizenry. Adopting this approach would therefore ensure that it is sufficiently contextualised to engage marginal groups. It would also be more factual and objective compared to campaigns by mortgage providers (Ivanovic and Collin, 2014; Eagle et al., 2014).

In developing countries however, it is important to consider the availability of resources for undertaking this activity. In this thesis, respondents argued for a PPP model in undertaking this activity. They further suggested that the campaigns be appropriately contextualised and targeted towards addressing access for the most disadvantaged populations. Specific examples given include the use of local languages in rural areas. There is international evidence supporting the adoption of this model. Husain's (2003) review of a collaborative campaign between banks and the government found evidence of improved enlightenment in relation to engaging mortgage finance for home ownership. The additional contextualisation and relevant targeting argued by this thesis makes this PPP model fit for purpose in the Nigerian setting.

8.8 Limitations of the study

In this thesis, a mixed methods approach was employed in undertaking the empirical field work. Here, the quantitative aspect used a structured and survey based methodology to analyse structured data collected in the questionnaire. Additionally, useful data collected in the unstructured sections of the questionnaires, where respondents were requested to provide 'other' comments were also analysed using thematic analysis. Although mixing methods is generally associated with higher quality, as well as more research skills acquisition for those who adopt it, it is also associated with certain weaknesses. Adopting a mixed methods approach has been associated with the expenditure of significantly more resources, compared with using only either

the quantitative, or the qualitative approach alone. This is particularly important in this type of Doctorate study where time and other relevant resources are limited. It is possible that adopting only one methodology would have enabled a more timely presentation of the thesis.

To determine the respondents of the quantitative survey, only respondents that fell within the four previously identified stakeholders groups were considered for the random sampling. While this sampling technique may have enabled sufficient addressing of the hypotheses, it is possible that some other important populations may have been excluded, for instance, stakeholders working in the informal sector. In a similar vein, the data collection sites were located in Abuja and Lagos, which are urban cities. This approach may have inadvertently excluded rural dwellers and those in informal accommodation. It is strongly recommended that further studies which build on results of this thesis ensure the inclusion of all relevant stakeholder groups.

Conclusion and Recommendations

9.1 Conclusion

This section presents the conclusion of document five where the thesis of the entire doctoral study is presented. This thesis commenced by undertaking an updated literature review which ensured that findings from the previous stages of the doctoral study were properly situated within the current body of knowledge in various relevant areas. With this review, the gaps in the extant literature, together with the findings from previous studies, informed the formulation of the research questions and hypotheses.

A mixed methods approach was adopted to govern the data collection and analysis. To collect the data, a cross sectional survey was designed to explore views and experiences in relation to research questions and hypotheses. The data collection tool employed in the study was a validated paper based questionnaire which was used to collect data from respondents from eight locations in two major Nigerian cities. A total of 1200 randomly selected individuals constituted the sample invited to participate in the survey. The data collected were inputted into SPSS and subjected to various relevant statistical analyses. Additionally the textual data extracted from the comments provided by respondents were subjected to thematic analysis, following the qualitative paradigm.

In the thesis, access to mortgage finance emerged as the overarching focus of the interactions between the various identified variables considered in the study. In line with this, the four hypotheses formulated were explored to determine the nature and direction of their influence on how mortgages were accessed in Nigeria. In relation to the first hypothesis, the thesis confirmed a statistically significant relationship between affordability of mortgages and access to mortgage finance. The study further found that improving affordability of mortgages increased access in the system. When compared to other factors, respondents in this thesis perceived Affordability as the most important factor with respect to mortgage access in this setting. Some of the contextual factors identified as influencing Mortgage Affordability in Nigeria include high interest rates, request for deposits, and the lack of flexibility associated with the sector.

Corruption and Transparency also emerged as another influence on how mortgages were accessed in Nigeria. Respondents indicated that a statistically significant relationship existed between the perceived corruption in the system, and the lack of access to mortgages in Nigeria. The thematic analysis of comments provided further indicated that improving transparency in various aspects of the mortgage sector would enable improved effectiveness. The enforcement of relevant regulations was seen as an important factor that could help curb corruption, while the introduction of new technology could improve transparency in various facets of the mortgage finance sector.

Two other hypotheses that were tested in the thesis related to regulation in the sector, and cost of housing associated with mortgage finance. Evidence from this thesis indicated that the weaknesses associated with the relevant regulation limited access to mortgages in Nigeria. The existence of corrupt practices in the system was seen as a major contributor to the systematic weaknesses identified in the way that the industry was regulated. One noteworthy area that emerged was in relation to the current lack of appropriate regulations governing foreclosures and other processes that pertain to loan defaulting in the mortgage process. Respondents in this thesis indicated that the introduction of new innovation in the system could improve effectiveness and enable relevant access in the Nigerian setting. The high cost of housing was also statistically proven to be a barrier to how mortgage was accessed in the Nigerian setting. While poor access to land emerged as one factor contributing to high costs, the adoption of new innovation was seen as one which could help lower costs.

In the quantitative phase, in addition to the four hypotheses tested, structural equation modelling was undertaken to further explore the association between the identified factors on the one hand, and access to mortgages on the other. The findings from the model confirmed these relationships. Further to the qualitative analysis, a thematic analysis following the qualitative paradigm was undertaken on the textual data provided in the comments sections of the questionnaire. This is in line with the mixed methods approach chosen to underpin the thesis. Although five themes emerged from this phase, two (Affordability and Transparency) were related to hypotheses being tested in the quantitative phase, and as such were subsumed in those emergent factors.

Three of the themes which emerged in the study were included in the conceptual framework, due to the empirical nature of their emergence, as well as their unique relevance to the study setting. In one of the themes that emerged, respondents identified specific populations who were systematically disadvantaged with respect to the nature of access that they had to mortgages within the Nigerian setting. These populations include low income earners, rural dwellers and civil servants. People who work in the informal sector may also suffer the same lack of access identified in this study. This grouping represents the first time that these seemingly dissimilar populations who suffer similar disadvantages are considered together.

In the next theme that emerged, it was identified that a lack of efficiency in relevant mortgage processes constituted a limitation in access in this setting. According to the respondents, poor planning and a lack of adherence to timelines and guidelines were identified as factors limiting access to mortgages in this setting. Transparency emerged as a factor that could improve efficiency in the system. The introduction of mortgage brokerage can contribute to improving efficiencies in the Nigerian setting.

In the final theme revealed by this thesis, respondents identified the need to improve awareness with respect to the existence and relevance of the financing model in the Nigerian context. The thesis also identified the need to develop targeted and contextual campaigns which could include partnership models between Government and Private Sector. In the Nigerian setting, such partnerships were seen as innovations that could drive reforms aimed at improving the effectiveness of the system.

The employment of GST in underpinning the conceptual framework represents a fresh and original conceptualisation of how these factors interact and relate with each other to influence access to mortgages within the same system in Nigeria. The level of importance of each variable in relation to enabling access has also been determined. The determination of the level of importance that has been undertaken in this dissertation also represents a new approach in this setting especially since this is the first time these variables are being considered all together within an interrelated system. This can therefore contribute to the formulation of a more robust and comprehensive strategy for addressing the various identified weaknesses, while at the same time, strengthening the noted facilitators.

The new knowledge conceptualised by this dissertation can facilitate a more efficient and effective means of addressing the existing challenges. A good example is the ranking that has been determined in this model, which can be used to prioritise policy interventions, especially in resource scarce settings, such as in the Nigerian context. Another example is the need to integrate regulatory reforms across all the relevant sectors. Using the template provided by the conceptual framework of this work, a more coordinated and robust system wide reform can be facilitated. This will be cheaper and more effective compared to undertaking the improvements separately within the individual sectors.

Although this thesis has provided some new and critical insight into key areas relating to how mortgage is accessed in Nigeria, further studies are still required. The conceptual framework that emerged in this thesis has however provided some novel information and approaches which can underpin interventions in Nigeria, as well as other developing country settings with underdeveloped mortgage finance structures. The study identified not only the key factors that influence effectiveness in the contextual setting, but also the various relevant stakeholders with significant roles in the industry.

While some previous studies have identified the importance of a few of these factors and stakeholders, this is the first time their roles and influence are being considered together within the same context. This comprehensive approach which is underpinned by the General Systems Theory has led to the revelation of critical relationships and connections which exist between these seemingly diverse factors and stakeholders. This approach has now improved the understanding of the intricate workings of an extremely complex system.

The new understanding encapsulated in this thesis can now form the basis of the development of comprehensive, robust and contextual interventions, which can improve the effectiveness of the mortgage sector. Comprehensive and wide ranging omnibus policy and institutional reform can now be undertaken. If underpinned by the conceptual framework that emerged in this thesis, such reforms can be implemented concurrently in all relevant sectors and can also involve and engage all relevant stakeholders. This represents the most efficient way to improve effectiveness in the Nigerian context which will in turn enable access for the citizenry.

9.2 Recommendations

Based on the results and findings of this thesis, the following recommendations have been provided to all the relevant stakeholders involved in, or interested in the mortgage finance sector. The recommendations are valid for the Nigerian setting where the study was undertaken, as well as for other comparable settings such as developing countries with mortgage sectors experiencing similar challenges:

- In the development of policies and interventions for the mortgage sector, a multi sectoral strategy should be adopted to ensure comprehensive engagement with relevant stakeholders and issues.

- Contextual interventions should be formulated to improve affordability of mortgages. These can include lower interest rates for low income earners, and more flexible packages for people who work in the informal sector.

- To improve affordability for the most deprived sections of the population, the Government should provide guarantees to replace deposits required to access mortgages.

- The provision of subsidies can also be considered in developing interventions aimed at improving access. Care must however be taken to embed monitoring and evaluation mechanisms that will ensure that only targeted populations benefit.

- In all reforms, as well as in the development of new interventions and policies, specific anti-corruption measures should be developed and embedded. These measures have to be contextual to all relevant sectors.

- Adopting a multi stakeholder approach in formulating, implementing, monitoring and evaluating interventions and reforms will foster transparency in all relevant sectors.

- Strengthening of reporting mechanisms as well as identifying and outlining penalties will discourage corrupt practices. Reporting mechanisms can be further linked to National policies, such as the whistle blowing policy.

- Engagement with innovative practices and new technology in various relevant processes will curb corruption and enhance transparency. Real time reporting and contextual computer/mobile applications are specific examples.

- Robust and comprehensive legislation review should be undertaken to enable contextual and effective regulation and enforcement in the sector. Again a multi stakeholder approach should be adopted in this review.

- The introduction of mortgage brokerage in the Nigerian setting can improve certain inefficiencies which currently characterise mortgage finance provision in the Country. In addition to quickening timelines and simplifying documentation, brokerage can also enable relevant capacity building and transparent processing.

- Relevant sections of the Land use Act in Nigeria need to be amended to enable better and more affordable access to land, especially in relation to obtaining mortgages.

- Robust and comprehensive legislation review should be undertaken to enable swift and effective foreclosures. In awareness campaigns designed to increase awareness of mortgages in the Country, the citizenry needs to be educated about the need to repay mortgage loans, and the penalties for defaulting.

- Innovative practices should be considered in all relevant sectors that contribute to the determination of cost of mortgage related housing. Specific areas include housing

construction, collaborative special purpose vehicles and the development of sophisticated financial instruments.

- Curriculum review of relevant technical education should be undertaken to improve uptake of international best practices in mortgage related housing construction, as well as to encourage adoption of contextual innovations that can reduce costs.

- Adoption of the Public Private Partnership Model should be considered in various relevant interventions aimed at improving access to mortgages. Specific examples include in the provision of housing for disadvantaged groups, reduction of housing costs, and awareness campaigns

- Awareness campaigns targeted at specific populations should be developed. These populations should include rural dwellers, civil servants and low income earners. Such campaigns should be adequately contextualised, for instance, broadcasting in Pidgin English.

- More research should be designed and initiated to further explore some of the associations and relationships that have emerged in this thesis, particularly with respect to how they hinder or facilitate effectiveness in the sector.

- Based on the findings of this study, larger and more representative studies can be undertaken to increase the external validity of the conceptual framework. In developing the study practical, care should be taken to involve rural populations and workers from the informal sector

9.3 Dissemination Strategy

To ensure the relevant transfer of knowledge to practice, it is important to formulate a strategy to ensure that following the conclusion of the research, relevant stakeholders sufficiently engage with the research output. In relation to the findings of this study therefore, a strategy has been formulated to ensure the relevant targeted dissemination of the thesis' findings.

Following a successful defence of the thesis, a report will be prepared for the various stakeholder groups in the Nigerian setting. This report will present the major findings as well as the recommendations of the study. The findings of this study will also be disseminated through seminars, conferences and professional meetings. One other strategy that will be adopted in disseminating the findings of this study will be by making relevant publications in peer reviewed journals.

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Appendices

11.1 Appendix 1 – Questionnaire

Developing Effective Mortgage Finance System in Nigeria: Challenges and Opportunities

Introduction

This survey aims to explore the views and experiences of stakeholders regarding the various factors that limit the supply of, as well as access to mortgage and housing finance in Nigeria. Findings from this study can improve the effectiveness of mortgage finance processes. Your participation in this study is completely voluntary. Your responses will be confidential and the data collected will be reported anonymously. For enquiries, contact Felix Daniel through felix.daniel2013@my.ntu.ac.uk

Please indicate the correct option by inserting a tick in the relevant box (√), filling the dotted lines, or selecting the choice that corresponds with your level of agreement with the statements.

1   Gender

Male		Female	

2   What was your age at your last birthday?   …….

3   Marital Status

Single		Married		Divorced/Separated	

4   What is your highest educational qualification?

Uneducated		Primary School		Secondary School		University or Polytechnic		Postgraduate	

5   Stakeholder Category

Government Worker		Customer		Banking Sector Worker		Construction and Est. Development	

6   Monthly Income

N7,500 or Less		N7,500 to N12,000		N12,001 to N24,000		N24,001 to N48,000		N48,001 to N100,000		N100,001 to N250,000		**More** than **N250,001**	

7   a. How important are these Factors in improving the effectiveness of the Nigerian Mortgage Sector towards providing safe and affordable housing in the country?

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(Please rank each factor according to their importance. For instance, place 1 in the box next to the most important, 2 in the second most important and so on. **Do not place the same number in more than one box**).

☐ Affordability of Mortgages   ☐   Government Regulation and Bureaucracy

☐ Cost of Mortgage Housing   ☐ Corruption in the System

7 b What other factors do you feel can improve the effectiveness of the Nigerian Mortgage Sector towards providing safe and affordable housing.

………

For the following statements, please give your rating: SA (strongly agree), A (agree), N (neutral/undecided), D (disagree), SD (strongly disagree).

8. Affordability and Access

	Statement	SA	A	N	D	SD
A	Nigerians have adequate access to Mortgage Finance					
B	The National Economy has an impact on Mortgage Affordability					
C	Mortgages in Nigeria should be subsidised					
E	Interest rates are a barrier to accessing Mortgage in Nigeria					
F	Mortgages in Nigeria are affordable					
G	Mortgage administration in Nigeria is flexible					
H	Deposits requested by Banks is a barrier to Mortgage Affordability					

8 I. Other views and experiences I have about mortgage affordability in Nigeria are:

………

9. Corruption in the Mortgage System

	Statement	SA	A	N	D	SD
A	Corruption limits access to Mortgages in Nigeria					
B	New technology can reduce corruption in the Mortgage sector					

		SA	A	N	D	SD
C	Regulations exist to curb corruption in the Mortgage sector					
D	Law enforcement is adequate in Nigerian Mortgage administration					
E	Mortgage administration in Nigeria is technologically advanced					

9   F. Other views I have about transparency and fairness in Nigerian mortgage practices are:

………

10. Cost of Housing associated with Mortgage

	Statement	SA	A	N	D	SD
A	Prices of Mortgage houses in Nigeria are reasonable					
B	Construction in Mortgage housing is adequately regulated					
C	There is sufficient innovation in Nigerian Mortgage construction					
D	Mortgage houses in Nigeria are efficiently designed					
E	Mortgage houses in Nigeria are of good quality					
F	Housing prices are due to inflated charges by Construction Firms					
G	Access to land has a major impact on cost of Mortgage housing					

10 H. Other views I have about cost of housing associated with mortgage are:

………

11. Laws, Regulation and Bureaucracy

	Statement	SA	A	N	D	SD
A	Mortgage administration in Nigeria is technologically advanced					
B	Nigerian Mortgage finance sector is contextually innovative					
C	Laws governing Mortgage finance in Nigeria are fit for purpose					
D	Mortgage finance sector in Nigeria is adequately regulated					
E	There is no corruption in the Nigerian Mortgage finance sector					

F	Laws and regulations governing Mortgage Foreclosure in Nigeria are adequate					

11 G. Other views I have about regulation and bureaucracy in Nigerian mortgage are:

……

12. Other views and suggestions that I have which can influence the effectiveness of the Nigerian Mortgage Sector towards providing safe and affordable housing are:

……

……
……

……

Thank you for completing the questionnaire

11.2 Appendix 2 – GANTT Chart Showing Timeline

11.3 Appendix 3 – Ethics Application Form

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Receive Ethics Approval	▨						
Validation	▨	▨					
Compile Sampling Frame	▨	▨					
Piloting			▨				
Distribute Questionnaires				▨	▨		
Collect Questionnaires						▨	▨
Data Input and Cleaning							▨
Quantitative & Qualitative Data Analysis							
Write-up							
Submission							

Ethical approval checklist:
Form B

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Professional Doctorate Courses
Ethical Approval Checklist – Form B

Form B must signed off by the research student, one member of the supervisory team, and a course leader, to signify that the proposed research conforms with good ethical principles and standards, before commencing any research in preparation for **Documents 5** within any of the professional doctorate courses.

Assurance that all research will conform with good ethical standards is provided by the student when signing this form. Please complete this document following the professional doctorate ethical approval guidelines.

Award title *Delete as appropriate	*Doctor of Business Administration (DBA) *Doctor of Education/ *Doctor of Social Practice/ *Doctor of Legal Practice *Doctor of Fine Art *Doctor of Fashion Industry *Doctor of Digital Media
Cohort	15
Research Student's Name	FELIX DANIEL
Document title	5 THESIS
Supervisors (List Lead supervisor first)	1. DR AHAMMAD FAISAL 2. DR THAO NGUYEN 3.
Date	16/11/16
Identify any questions in the completed form which indicate that approval by PDREC is required.	

At the end of each section it is indicated whether ethical approval must be sought from the Professional Doctorates Research Ethics Committee (PDREC).

_____

[1] Delete as appropriate.

1. Research Student

Section OA I: Familiarisation with policy

Please confirm if you are fully acquainted with policy guiding ethical research:

• NTU research ethics policy, and the procedures for ethical approval on professional doctorates	(Yes)	No
• The guidelines for ethical research promulgated by a professional association, as appropriate	(Yes)	No
• The Regulations for the Use of Computers (see NTU website)	(Yes)	No
• Guidelines for Risk Assessment in Research (Appendix 3)	(Yes)	No

If you answered **NO** to any of these questions, please note that you must study these guidelines and regulations before proceeding to complete the remainder of this form.

Section OA II: External Ethical Review

OB.1 Has a favourable ethical opinion been given for this project by an NHS or social care research ethics committee, or by any other external research ethics committee?	Yes	(No)
OB.2 Will this project be submitted for ethical approval to an NHS or social care committee or to any other external research ethics committee?	Yes	(No)

If you answered **YES** to either of these two questions, please sign the declaration at the end of the form and submit it (together with a letter confirming ethical approval from the external committee) before starting any research.

If you answered **NO** to both questions, please proceed to Section A

Section A: Investigators

	YES	NO
A.1. Have you attended the professional doctorate workshops on research methods or attended other award-bearing or training courses on research methods?	YES	NO
A.2. Are you in regular contact with your supervisory team?	YES	NO
A.3. Can you confirm that you are **NOT** expecting to undertake physically invasive procedures (not covered by a generic protocol) during the course of the research?	YES	NO
A.4 Can you confirm that you will **NOT** be in a position of authority that may compromise the integrity of participants (e.g. a member of academic staff using his/her students, or a manager using subordinates as participants)?	YES	NO

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If you answered **NO** to any of questions A1-A.4, an application for ethical approval needs to be made to the PDREC.

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Section B: Participants & Method/Procedures

B.1 Does the research involve vulnerable participants? If **not**, go to Section C

B.2 If the research does involve vulnerable participants: will participants knowingly be recruited from one or more of the following vulnerable groups?

	Yes	No
• Children under 18 years of age	Yes	No
• People over 65 years of age who are perceived to be vulnerable	Yes	No
• Pregnant women	Yes	No
• People with mental illness	Yes	No
• Prisoners/detained persons	Yes	No
• Other vulnerable group	Yes	No

   • please specify: _____

B.3 Have you been asked to obtain a Criminal Records Bureau (CRB) check as a condition of access to any source of data in the UK for this document? | Yes | No |

B.4 To the best of your knowledge, please indicate whether the proposed study:

	Yes	No
• Involves procedures likely to cause physical, psychological, social or emotional distress to participants	Yes	No
• Is designed to be challenging physically or psychologically in any way (includes any study involving physical exercise)	Yes	No
• Exposes participants to risks or distress greater than those encountered in their normal daily life	Yes	No
• Involves the use of hazardous materials	Yes	No

If you have answered **YES** to any of questions B1-B4, an application for ethical approval needs to be made to the PDREC.

Section C: Observation/Recording

C.1 Does the study involve data collection, or the observation or recording of participants? | Yes | No |

C.2 Will those contributing to the data collected (being observed or being recorded), or the appropriate authority, be informed that the observation and/or recording will take place? | Yes | No |

If you have answered **NO** to question C.1, because you are not undertaking empirical work, proceed to the declaration at the end of this form. If you have answered **NO** to question C.2, an application for ethical approval needs to be made to the PDREC.

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Section D: Consent and Deception

Informed Consent & Data Withdrawal

D.1 Will participants, or the appropriate authority, be fully informed of the objectives, and of all other particulars of the investigation (preferably at the start of the study, but where this would interfere with the study, at the end)?

D.2 Will participants, or the appropriate authority, be fully informed of the use of the data collected (including, where applicable, ownership of any intellectual property arising from the research)?

D.3 For detained persons, members of the armed forces, employees, students and other persons who may not be in a position to give fully independent consent, will care be taken over the gaining of freely informed consent?

D.4 Will participants, or the appropriate authority, be informed of their right to withdraw from the investigation at any time (or before a specific deadline) and to require their own data to be destroyed?

	Yes	No
D.1	(Yes)	No
D.2	(Yes)	No
D.3	(Yes)	No
D.4	(Yes)	No

If you have answered **NO** to any of questions D.1-D.4, an application for ethical approval needs to be made to the PDREC.

D.5 Does the study involve deception of participants (i.e., withholding of information and/or misleading participants) which could potentially harm and/or exploit participants?

Yes	(No)

If you answer **NO** to question D.5, please proceed to section E.

Deception

D.6 Is deception an unavoidable part of the study?

D.7 Will participants, or the appropriate authority, be de-briefed and the true object of the research revealed at the earliest stage upon completion of the study?

D.8 Has consideration been given to the way that participants, or the appropriate authority, will react to the withholding of information or deliberate deception?

	Yes	No
D.6	Yes	No
D.7	Yes	No
D.8	Yes	No

If you have answered **NO** to questions D6-D.8 an application for ethical approval needs to be made to the PDREC.

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Section E: Storage of Data and Confidentiality

Please see University guidance on
https://www.ntu.ac.uk/intranet/policies/legal_services/data_protection/16231gp.html. If you are a member of NT staff you can obtain direct access to this with your staff username and password. If you are not a member of NTU staff, please request of copy from your supervisor or course leader.

		Yes	No
E.1	Will all information on participants be treated as confidential and not identifiable unless agreed otherwise in advance, and subject to the requirements of the law of the relevant jurisdiction?	(Yes)	No
E.2	Will storage of data comply with the Data Protection Act 1998 and the law of any non-UK jurisdiction in which research is carried out??	(Yes)	No
E.3	Will any video/audio recording of participants be kept in a secure place and not released for use by third parties?	(Yes)	No
E.4	Will video/audio recordings be destroyed within six years of the completion of the investigation?	(Yes)	No

If you have answered **NO** to questions E1-E4, an application for ethical approval needs to be made to the PDREC.

Section F: Incentives

	Yes	No
F.1. Have incentives (other than those contractually agreed, salaries or basic expenses) been offered to you by any funder of the research to conduct the investigation?	Yes	(No)
F.2. Will incentives (other than basic expenses) be offered to potential participants, or the appropriate authority, as an inducement to participate in the investigation?	Yes	(No)

If you have answered **YES** to questions F1-F2, an application for ethical approval needs to be made to the PDREC.

	Yes	No
The design of the participant information sheet/consent form and of any research instrument (including questionnaires, sampling and interview schedules) that will be used, have been discussed with my supervisor(s).	(Yes)	No

Compliance with Ethical Principles

Please sign the declaration below, to confirm that this form has been completed to the best of your knowledge and after discussing the answers provided with your supervisor(s). If at any stage you have been asked to submit an application for ethical approval to the PDREC please also complete and submit the appropriate form.

Signature of Research Student *(signature)* Date 16/4/16

Signature of Lead Supervisor .... Date ....

Signature of Course Leader .... Date ....

Professional Doctorates

Professional Doctorates Research Ethics Committee (PDREC)

Application for Ethical Approval – Document 5

Please complete this form if you have been asked to submit an application for ethical approval to the PDREC while completing the Ethical Approval Checklist - Form B.

Please complete this form and attach the following documents:

- Ethical Approval Checklist – Form B
- Project proposal (this can be an extract from your document 1 or a concise account of your proposed research)
- A statement of up to 800 words outlining the ethical issues raised by the project (as highlighted in the Ethical Approval Checklist – Form B), and an explanation of how you intend to deal with these issues for the consideration of the PDREC.

The complete application must be given to the Graduate School Administrator who will monitor the progress of all submission to the PDREC.

Applications must be fully signed before being submitted to the Graduate School Office.

Signature of Research Student .... Date 16/11/16.

Signature of Lead Supervisor .... Date ....

Signature of Course Leader .... Date ....

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11.4 Appendix 4 – FMBN Publication on Mortgage Defaulting in Nigeria.

PUBLIC NOTICE FROM THE FEDERAL MORTGAGE BANK OF NIGERIA FMBN ON RECOVERY OF MORTGAGE LOANS FROM DEFAULTING BENEFICIARIES OF THE NATIONAL HOUSING FUND NHF

The Federal Mortgage Bank of Nigeria (FMBN) in collaboration with Mortgage Banking Association of Nigeria (MBAN) and Real Estate Developers Association of Nigeria (REDAN) has found it imperative to call the attention of the public to a re-occurring trend in the Mortgage Banking Sub-Sector, whereby beneficiaries of mortgage loans under the National Housing Fund (NHF) Scheme are in default which is in total breach of the National Housing Fund (NHF) Scheme Act 3 of 1992.

Consequently, FMBN as the manager & administrator of the Fund, hereby issues a warning and demand notice to all NHF loan beneficiaries who are in default of their monthly repayments, to redeem all outstanding obligations through their Primary Mortgage Banks (PMBs) and regularise their loans status accordingly.

Beneficiaries whose PMBs are no longer in existence either as a result of failure to meet their recapitalisation or have upgraded to Commercial Bank's hence no longer participate in the Mortgage subsector, are advised to contact the nearest FMBN branch nationwide to make repayments.

Where such customers fail to pay and regularise their loans within 90 days, the PMBs are to forward the list of the defaulters to FMBN, after which immediate steps would be taken to publish the **Names of Defaulters** in National Newspapers and also forward same to the Economic and Financial Crimes Commission (EFCC) for prosecution.

Non-repayment of NHF loans denies other Contributors the opportunity of home ownership and impedes the current efforts of the Bank in making refunds to eligible contributors as at when due, thus sabotaging public interest and working against the noble objectives of NHF Scheme to facilitate home ownership for Nigerian workers.

Signed,
Management, Federal Mortgage Bank of Nigeria (FMBN)