ASSESSMENT OF VALUATION ACCURACY IN THE RESIDENTIAL PROPERTY MARKETS IN ABUJA AND MINNA.

BY

DANGANA UMAR SABA

M.TECH/SET/2019/9724

DEPARTMENT OF ESTATE MANAGEMENT AND VALUATION

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

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THESIS SUBMITTED TO THE POST GRADUATE SCHOOL, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGERIA IN PARTIAL FUFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE MASTERS OF TECHNOLOGY IN ESTATE MANAGEMENT AND VALUATION.

SEPTEMBER, 2023

DECLARATION

I hereby declare that this thesis, titled: ''Assessment of Valuation Accuracy in The Residential Property Markets in Abuja and Minna'' is a collection of my original research work and it has not been presented for any other qualification anywhere. Information from other sources (published or unpublished) has been duly acknowledged.

DANGANA UMAR SABA

M.Tech/SET/2019/9724

FEDERAL UNIVERSITY OF TECHNOLOGY

MINNA, NIGERIA

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                                                       SIGNATURE/DATE

CERTIFICATION

The thesis titled: Assessment of Valuation Accuracy in The Residential Property Markets in Abuja and Minna by Dangana Umar Saba (M.Tech/SET/2019/9724) meets the regulations governing the award of the degree of Master of Technology (M.Tech) of the Federal University of Technology, Minna and it is approved for its contribution to scientific knowledge and literary presentation.

Dr. N. B. Udoekanem   _____
Supervisor   Signature & Date

Dr. N. I. Popoola   _____
Head of Department   Signature & Date

Prof. O. A. Kemiki   _____
Dean School of Environmental   Signature & Date

Engr. Prof. O. K. Abubakre   _____
Dean School of Postgraduate   Signature & Date

ACKNOWLEDGEMENT

ABSTRACT

The crash of the property market in Europe in the 1980s kick-started the pursuit for accurate valuation to retain public confidence in the valuation profession and to forestall dire legal consequences. This study assessed valuation accuracy in the residential property markets in Minna and Abuja with a view to ascertaining the level of valuation accuracy in these markets, identifying the factors that significantly cause valuation inaccuracy and measures that could mitigate such causes. Data for the study were collected via structured questionnaire administered to 179 estate surveying and valuation firms in the study area using census sampling technique. Analytical techniques such as median percentage error, mean, standard deviation and bivariate regression analysis were employed in the analysis of data collected for the study. The study found that the ability of valuation to predict actual price is greater in the residential property market in Abuja (93.7%) than in Minna (87.6%), with wrong valuation methodology being the most causative factor of valuation inaccuracy. It is recommended that a national databank for valuations in the country is established as well as strict enforcement of valuation standards and code of ethical conduct by the regulatory authorities in the valuation profession.

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CHAPTER ONE

INTRODUCTION

1.0   Background to the Study

According to International Valuation Standard Council (2020) valuation is the act or process of determining an opinion or conclusion of value of an asset on a stated basis of value at a specified date in compliance with International Valuation standard. It can also be defined as all the processes involved in forming an opinion of the value of real property, usually the market value or the science of estimating the fiscal worth of real property taking into consideration the purpose of valuation and plethora of factors that affect value (Kilpatrick 2007; Olayonwa 2006). To ascribe value, valuers utilize three main approaches: income, market and cost; for a variety of purposes ranging from purchase to sale, insurance, mortgage, compulsory acquisition and taxation (Isaac, 2002).

IVSC (2003) noted that real properties such as residential, commercial and agricultural properties represent a significant percentage of the world's wealth, and its valuation is central to the viability of global property and financial markets; as valuation provides a "proxy or surrogate for transaction prices; a performance index to support financing and investment decisions such as sales and acquisitions, current cost accounting, insurance policies, securitizations, portfolio analysis and management; and analysis of credit and collateral, without necessarily having to take the property to the market for sale." The whole basis of professional property advice therefore rests on the assumption that valuations are good proxies for prices (Babawale, 2012).

According to Crosby *et al.* (2003) valuation accuracy is simply the proximity of valuation conducted to exchange price in the open market. Babawale (2021) put forward that there is a worldwide consensus amongst professionals and scholars in the academia that

inaccuracy in valuation is inevitable. The court of law also agrees as seen in the case of *Singer and Friedlander Limited v. John D Wood & Co (1997) 2 EGLR 84* where the judge held that:

"The valuation of land by a trained, competent and careful professional men is a task, which rarely, if ever admits of precise conclusion. Often beyond certain well-founded facts so many imponderables confront valuers that he is obliged to proceed on the basis of assumptions. Therefore, he cannot be faulted for achieving a result which does not submit to some degree of error. Thus, two able and experienced men, each confronted with same task, might come to different conclusions without any one being justified in saying that either of them has lacked competence and reasonable care, still less integrity in doing his work. Valuations is art, not science. Pinpoint accuracy in the result is not therefore to be expected by he who requested the valuation."

Furthermore, in *UCB Home Loans Corporations Ltd. V. Roger North and Association (1995)*, it was held amongst other things that:

"It is to be emphasized that valuers accepting a commission do not undertake a standard of care, which is higher than what is normal and reasonable to others in their calling. Still less is required of them that they would necessarily hit any target arrived at by a consensus of expert opinion or that they would produce a figure of valuation which comes within a range of any sum subsequently realized by a sale when the property is tested in the market, any more than a surgeon who undertakes treatment or surgery guarantees a cure."

The pursuit for "accurate" valuations was triggered by a handful of factors including the crash of the property and financial markets in the 1980's, the work of Hager and Lord (1985), as well as the 1990 – 1994 recession that led to financial institutions blaming valuers for their inability to sell mortgaged properties at value price. The aforementioned and other contemporary events brought about unnecessary attention from tabloids, the academia and the general public which

negatively affected the public's confidence in both the valuation process and the valuation profession (Babawale, 2021). As a result, researchers across Europe (UK especially), North America and Australia have in the past three decades launched an enquiry into the degree to which valuations provide acceptable predictions of realized price and valuations. These studies include Parker (1999); McAllister (1995); Cannon and Cole (2011); Baum *et al.* (2000); Reinert (2020) and their findings exposed valuation accuracy issues with margin of error exceeding the permissible limit.

Expert valuers within the courts of United Kingdom have also argued that the acceptable margin of error is around ±5% to ±10%. In the case of *Singer and Friedlander Limited v. John D Wood & Co (1997) 2 EGLR 8,* the judge held that:

> *"The permissible margin of error is said by the experts to be generally 10% either side of a figure which can be said to be the right figure. In exceptional circumstances, the permissible margin could be extended to about 15% or a little more, either way."*

To validate this, in the **c**ase of *K/S Lincoln & Ors v. Richard Ellis Hotels Ltd (2010)* the English and Wales High Court Judge held that:

> *'The methodology used by a valuer could have no bearing on the future of any negligence ruling. Instead, what matters is whether the final valuation falls within the accepted margin of error. And since the valuation of the valuer fell within the permitted 15% margin of error, he was not negligent."*

However, in Nigeria, studies conducted have shown valuations having an alarming margin of error of up to ±65%, ±201%, ±71%, ±113%, ±119%, ±25% and ±88%; which are not in alliance with the established and acceptable margin (Effiong and Mendie 2019; Ayedun *et al.* 2010). A plethora of factors were noted as instrumental for the stray of values from the

tolerable margin of error which are: valuation methodology employed, client pressure, inadequate academic training, dearth of market evidence, insufficient experience, property characteristics, complexity of the subject property, inexperience in valuation practice, amongst others (Oduyemi 2016; Ajibola 2010; Aliyu, Sani, Usman, Muhammad, 2018). And if left unchecked as Effiong and Mendie (2019) argued, will lead to upsurge in lawsuits.

Therefore, this study aims to assess valuation accuracy in the residential property markets in Abuja and Minna, identify factors with significant impact on accuracy; and submit solutions towards mitigating valuation inaccuracy.

1.2   Statement of the Problem

Lack of accuracy in valuation is detrimental to the healthy development of the property market as it compromises investors' confidence in the operations of the property market and can lead to individuals and institutions incurring substantial losses when decisions are wrongfully made of such valuations (Babawale, 2013). In mortgage finance, inaccurate valuation in terms of over-valuation, creates credit risks as loan-to-value ratio is overstated and the value of collateral may turn out to be insufficient to cover the credit. In addition, under-valuation reduces the amount of loan facility available to prospective borrowers. Having in mind the possible weighty consequences of inaccurate valuations, stakeholders in the real estate and valuation industry; the academia, professional in the built environment, the justice system and valuation users especially the credit givers – expect valuers to provide valuations that approximate transaction prices as much as possible (Babawale and Abolore, 2013).

Furthermore, allegations of negligence have become rampant and transcends the valuation profession to embrace other professionals in the built and non-built environment. Negligence due to human error especially in the valuation profession could be attributed to inadequate knowledge of market, usage of wrong methods and succumbing to the

influence/pressure of clients (Lavers and Spurge, 2001). While two valuers may not necessarily arrive at the same value after valuation, neither could be held negligent if values attained fall within "the permissible margin of error" which is around ±5% to ±10% as held in the case of *Singer & Friedlander v John D Wood & Co.* Therefore, any value which strays beyond the acceptable margin of error/bracket is guaranteed to shine a spotlight on the competence of the valuer (Hammonds, 2009); and such inaccuracy could lead to loss of job, bankruptcy of investors, loss of incomes and economic slowdown (Yalpir, 2004). It is in the light of all the highlighted problems that this study is carried out to assess valuation accuracy in the residential property markets in Abuja and Minna.

1.3   Aim and Objectives

The aim of this study is to assess valuation accuracy in the residential property markets in Abuja and Minna. The specific objectives are:

i.   to ascertain the level of valuation accuracy in the residential property markets in Abuja and Minna;

ii.   to identify the factors that significantly influence on valuation accuracy in residential properties in Abuja and Minna; and

iii.   to identify measures that could mitigate valuation inaccuracy in the residential property markets in the study areas.

1.4   Research Questions

This study will proffer answers to the following questions:

 i.   What is the level of accuracy of residential property valuations in Abuja and Minna?

 ii.   What are the factors that significantly influence valuation accuracy in the residential property markets in the study areas?

 iii.   What are the possible measures that could mitigate valuation inaccuracy in the residential property markets in the study areas?

1.5   Justification for the Study

Past studies on valuation accuracy both foreign and local have traced the lack of valuation accuracy to a plethora of reasons, some of which include valuation methodology, problem of relevant data, client pressure, effectiveness of regulatory framework and university curriculum amongst others (Oduyemi *et al.*, 2016). The role of heuristics, departure from normative model, sales comparison and client influence has also been noted. However, a critical and in-depth perusal of the studies carried out locally showed that the focus was more on commercial properties with only a handful investigating valuation accuracy in residential properties. A population gap is also highlighted as seen in the dearth of valuation accuracy studies focusing on the property market in Northern Nigeria as most studies were carried out in South-Western Nigeria. Considering these shortcomings, an assessment of valuation accuracy in residential properties in Abuja and Minna has become necessary in view of the fact that residential properties remain an essential need and accounts for 17% of consumer income in Nigeria.

1.6   Significance of the Study

The study will benefit regulators of the Real Estate profession; NIESV and ESVARBON. It will furthermore boost confidence in the valuation profession and property market in general

by users of valuation, as well as lead to the decline in negligent valuation disputes and loss of scarce resources.

1.7   Scope of the Study

This study will cover two property markets in Nigeria. The first being the Minna property market which has been described by Olaleye (2008) as a secondary property market in Nigeria owing to its low rental and low capital value nature. The second being the Abuja property market which is regarded as the second most mature property market in Nigeria resulting from its high rents, high capital value and dynamic nature considering the fact that almost 20% of real estate transactions in Nigeria is conducted in Abuja alone. According to NIESV e-Directory, there is a total of 168 registered firms in Abuja spread across the six area councils while 11 are in Minna. Requisite data on residential properties will be derived from these firms for the assessment of valuation accuracy and factors influencing it.

1.8   Study Area (Abuja)

1.8.1   Geographical Description

The city of Abuja is located at latitude 9.072264 and longitude 7.491302 and roughly at the centre of Nigeria. It has a municipality area of 1,769kmsq and an urban area of 713kmsq. With an elevation of 360m (1,180ft), Abuja is bounded by Niger State in the West, Kaduna State in the North Kogi State in the South-West and Nassarawa State in the South-East. The Geography of Abuja cannot be complete without the mention of Aso Rock, a 401 meter monolith and Zuma Rock a 793 meter monolith.

1.8.2   Historical Development

In 1976, the city of Abuja was sliced out of three North Central Nigerian States (Niger, Nasarawa and Kogi) to become the new capital of Nigeria after the move from Lagos. Being

the capital of Nigeria, it has no elected Governor but its affairs is governed by a Minister appointed by the President.

1.8.3 Administrative Structure

In FCT, there exists a total of six administrative units also known as Area Councils The various councils are administered by various chairmen. The area councils are: Kwali Area Council, Kuje Area Council, Bwari Area Council, Gwagwalada Area Council, Abaji Area Council and Abuja Municipal Area Council. These aforementioned area councils are parallels to a local government as seen in other states of the federation. Hence, are headed by elected chairmen and not appointed. Furthermore, FCT has a total of seven administrative structures also known as secretariats. They include: Education Secretariat, Agriculture and Rural Development Secretariat, Health and Human Service Secretariat, Legal Services Secretariat, Area Council Secretariat.

1.8.4 Economic Base

The economy of Abuja is mainly driven by real estate and investments in this sector have come from a mixture of local and foreign investors. This sector also serves as the main source of employment to people domiciled there. Abuja has an international airport with an average of 4,879,066 passengers annually according to the statistics of 2018. The capital city is linked to various north central cities (Nassarawa, Benue, Lokoja, Minna, and Kaduna) by various Federal Highways and by rail to Kaduna.

1.9 Study Area (Minna)

1.9.1 Historical Development

The town of Minna started as an insignificant Gbagyi settlement located on Paida Hills some 47,000 years ago but later metamorphosed into an important political, economic and administrative centre with the emergence and departure of the British colonialists. In 1957,

Minna emirate was created with an emir empowered as its traditional ruler which further consolidated its political status. The occupants of Minna engaged in hunting, animal husbandry, crafts, farming and mining with Islam being the main religion practiced here (Zakari, 2017).

1.9.2   Geographical Description

Minna is the capital of Niger State and is located at longitude 6.546316 and latitude 9.583555 and occupies the central portion of the Nigerian basement complex. The closest towns and cities to Minna are Bida which is ninety kilometre away, Kaduna which is three hundred kilometre away, Abuja which is one hundred and thirty five kilometre away, Suleija which is one hundred kilometre away, as well as Kontagora which is one hundred and thirty kilometre away. The vegetation cover found in Minna is classified as Guinea Savannah which is branded by the presence of few scattered trees and dense grass cover. Also found is an agglomeration of metasedimentary and meta-igneous rocks which have undergone polyphase deformation and metamorphism (Alabi, 2011).

1.9.3   Administrative Structure

Niger State is divided into three geopolitical zones A, B and C with all the 25 local governments in the state spread across the zones. Zone A comprises 8 local governments; Zone B has 9 local governments while Zone C has 8 local governments. There is a total of three tiers of government in the state: state, local and emirate council and a total of 274 wards all across the state. The executive arm of the government comprises the state governor who is elected to office by ballot. He is assisted by a plethora of others such as the Deputy Governor, an avalanche of appointed Special Advisers, Head of Service, and Commissioners that head various ministries. At the legislative arm of government is the Speaker of the House, the Deputy Speaker of the house, minority and majority leaders of the house, leaders of various parties represented in the house, and members from various local State constituencies in the house. At the judicial level is the chief judge of the state.

1.9.4   Economic Base

Minna is an agriculture driven city with ginger, yam, guinea corn and sorghum being the main agricultural produce of the city. There also exist an ample amount of traditional industries such as metal working, leather work, quarry mining, brick laying and gold mining that provides employment to a plethora of youths in the city. Apart from its fertile and arable land, there are variety of minerals that are found in Minna and in commercial quantity. They include: gold, talc, feldspar, lead, kaolin, casserole, silica, sand, marble, copper, iron, columbite and limestone. Due to its burgeoning population and the increase in trading and commercial activities, Minna is also home to all the commercial banks in Niger State.
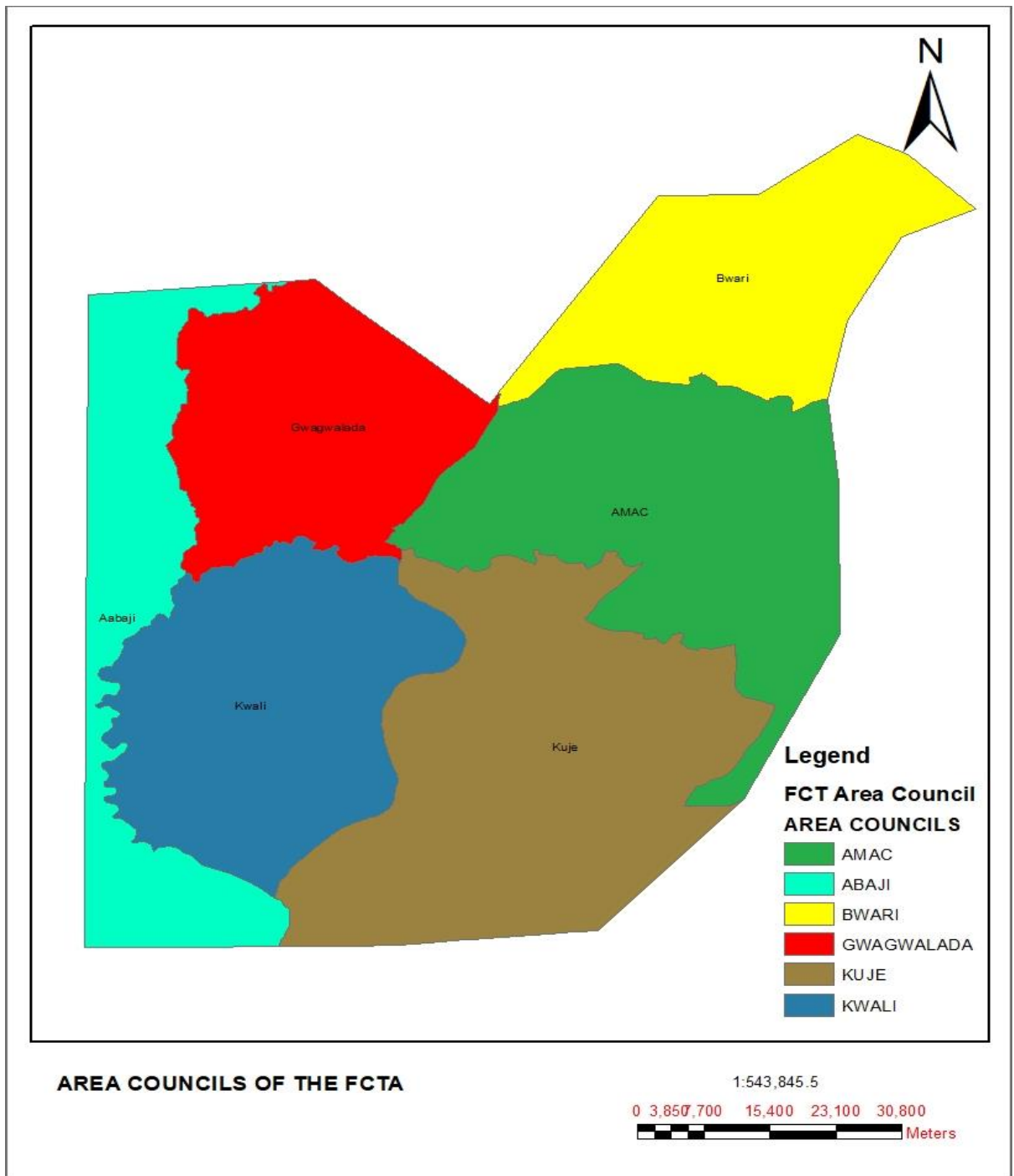
Figure 1.0: Map of Abuja showing the six Area Councils.

Source: Abuja Geographic Information System (AGIS), 2020
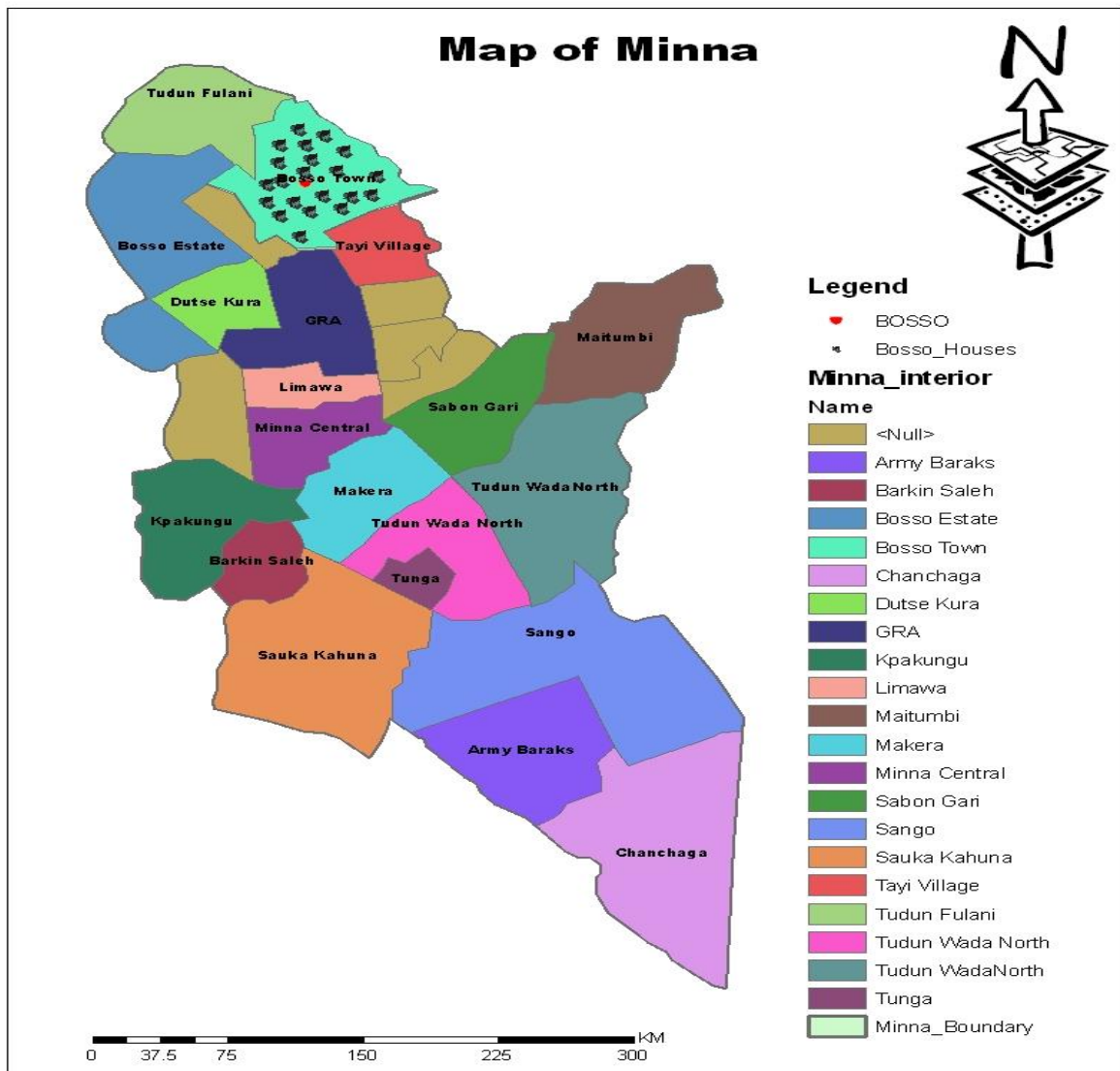
Figure 1.2: Map of Minna showing all the neighbourhoods

Source: Ministry of Lands and Survey (MLS), 2015

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 The Concept of Land

According to United Nations Convention to Combat Desertification (2017), land is the terrestrial bio-productive system that is made up of soil, vegetation, other biota and the ecological and hydrological processes that operate within the system. They also defined land as the: delineable area of the Earths terrestrial surface, encompassing all attributes of the biosphere immediately above or below this surface, including those of the near-surface climate, the soil and terrain forms, the surface hydrology (including shallow lakes, rivers, marshes and swamps), the near-surface sedimentary layers and associated groundwater reserve, the plant and animal populations (biodiversity), the human settlement pattern and physical results of past and present human activity (terracing, water storage or drainage structures, roads, buildings). Barlowe (2007) recognised the concepts of land as follows:

i. **Land as capital:** land is perceived as capital as it commands value. In the property market, it can be leased or sold for a capital sum. For that reason, it is a good source of wealth.

ii. **Land as space**: land is seen as a stretch of area where man can conduct its many activities. It includes swamps, lakes, and mountains. It includes the airspace above and the space underneath containing mineral deposits.

iii. **Land as property:** land is perceived as property which can be exclusively held by individuals and groups of people for their enjoyment. In addition, it has rights which can be acquired, held, conveyed and legally protected from others.

iv. **Land as situation**: land is perceived as an entity that can be felt, seen and described in terms of location. In addition, there is land for each purpose in a particular location.

v. **Land as factor of production**: land is a source of food, energy resources and raw materials. It is used in the production of goods and services when combined with other factors of production such as capital, labour and entrepreneurship.

vi. **Land as nature**: land is a free gift of nature that cannot be altered or destroyed. However, the quality of land varies across location.

vii. **Land as consumption good**: land is a consumption good that can be utilized for several purposes such as residential, commercial, agricultural and industrial use.

2.1.1 Highest and best use

According to The Appraisal Institute (2008) highest and best use is the reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, and financially feasible and that results in the highest value. Similarly, IVSC (2020), defined highest and best use as the use from a participant perspective that would produce the highest value for an asset. In addition, they argued that the concept is mostly applied to non-financial assets as many financial assets do not have alternate uses. Furthermore, there are four set of tests that forms the factors an appraiser is mandated to consider in the determination of the highest and best use of a property. They are:

i. **Legally permissible**: this entails the use of property that is allowed and does not contradict the laws of the land. That is, zoning of the area, town planning, and other inherent land use regulations (IVSC, 2020).

ii. **Physically possible**: this entails putting into consideration the size, shape, topography and accessibility of the property (IVSC, 2020).

iii. **Financially feasible**: this requirement puts into consideration whether another use that is legally permissible and physically possible will still produce sufficient returns to the typical participant (IVSC, 2020).

2.2 The Concept of Property

Property can be defined as real estate of all forms which ownership rights can be exercised upon and which can be sold or transferred. According to Weir (2001), property is a legal relationship where there are three persons in the relationship: the state; the person whom the state recognises as the owner of the property in question; and other third parties whom the state considers alien and not holders of the property.

2.2.1   Kinds of property

According to Acharya (2019) there are two types of property:

1. **Corporeal property**

These are properties that are obvious to the eye and can be felt. They include landed properties, bare land, motorbike, machinery, vehicles. This class of property can be further divided into:

- Movable Property and Immovable Property

- Real Property and Personal Property

- Public and Private Property

2. **Incorporeal property**

This class of property are also regarded as intellectual or conventional property. They are intangible, cannot be perceived using the senses of smell and touch and are protected by law. They are divided into two namely:

- Jura in re propria. e.g. Trademarks, Patents; and Copyrights.

- Jura in re Aliena. e.g.: Servitude, Mortgages, and Lease.

2.2.3 The Property Market

According to Kuye (2008), property market is defined as the channel that engages solely in the trade or exchange of property rights; and unlike assets and shares market that are traded on the stock exchange, property market has no particular dealing. It is also defined as the system of dealings between various stakeholders in the property markets such as land users, landowners and estate agents. The transaction item in the property market is interest such as freehold, leaseholds, easement, license, profits. The functions of the property market are as follows:

i. helps achieve highest and best use by determining the most appropriate use for land resources.

ii. ascertains the manner and level of capital improvements to be embarked upon on land.

iii. utilizes the interaction of forces of supply and demand to establish the monetary value of land resources.

iv. redistributes the existing land resources in accordance with changes in supply and demand.

2.2.4 Characteristics of the Property Market

According Kuye (2008), compared to other markets, the property market appears disorganised. This is because the property market is unique in nature. The property market characteristics responsible for its uniqueness and disorganised nature are as follows:

i. **Localised competition:** one of the prominent characteristics of real property is its fixity or immobility. Hence, it cannot be moved from point A to point B in response to market forces like changes in demand and supply. No two properties are the same as properties are heterogeneous in nature, hence, necessitating the need to be inspected by potential buyers. The aforementioned characteristics, fixity and heterogeneity serves as a barrier and limits competition between properties. As such, value is driven by local demand.

ii. **Stratified demand:** the rise in demand for a particular building in the property market, let's say detached building, will lead to fall in the demand of other building types.

iii. **Decentralised location:** as a result of spread of properties in varying geographical locations, its demand embarking on long journey by interested parties. Furthermore, agreements are drafted with signature appended and payments made in places of convenience.

iv. **Confidential transactions:** property transactions in the property market are discretely done and prices arrived at are not freely dispersed. Only participants of the process are privy to prices which is then used as reference for future transactions.

v. **Relatively uninformed participants:** transacting in the property markets is not a frequent occurrence for most buyers and sellers. As such, they transact with zero to minimal knowledge of the mechanism of the property market. Furthermore, the absence of a price database makes agreed price dependent on the negotiating ability of the parties involved in the transaction.

vi. **Inelasticity of supply in the short run:** supply of properties is fixed over a period of years as development of properties takes several months, sometimes years before completion. Furthermore, financial, physical and legal obstacles also hinder the commensurate expansion of supply in response to increased demand.

2.3   Residential Property Market

According to Kuye (2008), the residential property market includes an assortment of dwellings that are transacted in the property market and which can be grouped as follows:

i. **Single detached houses**: this are houses not structurally attached to any other houses and stand independent. Such houses are mostly on one floor, they are mostly owner occupied and with multiple bedrooms.

ii. **Semi-detached houses**: this houses share a common wall with another house. In other words, they are structurally attached to another house but with separate entrances but same compound in some situations. Both houses have equal number and size of bedrooms as they are a replica of each other.

iii. **Tenement building**: this are blocks of dwellings that share same facilities, conveniences and open spaces and built for multiple tenants.

iv. **Duplex house**: this is an accommodation mostly on two floors. The ground floor comprises the kitchen, sitting room and dining while the bedroom and washrooms are found on the first floor.

v. **Bungalow**: this is a house on one floor which could be detached, semi-detached or a row housing.

vi. **Maisonettes**: this is a flat on two or more storey with each apartment having its on entrance directly off the street.

2.4   The Concepts of Value and Price.

i.   Value

There are two school of thoughts on value, the objective and subjective school of thought. According to the objective school of thought, value can be defined as cost incurred in the production or acquisition of a property. This school of thought addresses value from the item itself with utter disregard of surrounding factors and their effect on value. The subjective school of thought however, takes into consideration the surrounding factors together with all anticipated benefits expected to be derived from the ownership of the said property. It is the relationship between properties and the participants of the property market in terms of money. However, the IVSC (2003) defined "price" as the most likely to be concluded by the buyers and sellers of a good or service that is available for purchase. Value is not a fact, but an estimate

of the likely price to be paid for goods and services at a given time in accordance with a particular definition of value. The economic concept of value reflects a markets view of the benefits that accrue to one who owns the goods or receives the services as of the effective date of valuation."

ii.   **Price**

According to French (2020), price is the estimated amount for which a property did exchange on the date of sale between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without being under compulsion. Hoesli and MacGregor (2000) described price as money exchanged between the buyer and seller as an investment property is exchanged. Unlike other markets where the price of items up for sale is known or stated, properties in the property market are heterogeneous as such requires an estimated value that will serve as a guide. Furthermore, price can be fixed via negotiation through auction. On the other hand, the IVSC (2003) defined price as the amount asked, offered, or paid for a good or service. Sale price is an historical fact, whether it is publicly disclosed or kept in confidential. Because of the financial capabilities, motivations or special interests of a given buyer and/or seller, the price paid for goods or services by others. Price is, however, an indication of a relative value placed upon the goods or services by particular buyer and/or seller under particular circumstances.

2.5   Market Value

According to IVSC (2016), market value is the estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.

i. The estimated amount refers to a price expressed in terms of money payable for the asset in an arm's length market transaction. Market value is the most probable price reasonably obtainable in the market on the valuation date in keeping with the market value definition. It is the best price reasonably obtainable by the seller and the most advantageous price reasonably obtainable by the buyer. This estimate specifically excludes an estimated price inflated or deflated by special terms or circumstances such as a typical financing, sale and leaseback arrangements, special considerations or concessions granted by anyone associated with the sale, or any element of value available only to a specific owner or purchaser,

ii. An asset or liability should exchange refers to the fact that the value of an asset or liability is an estimated amount rather than a predetermined amount or actual sale price. It is the price in a transaction that meets all the elements of the market value definition at the valuation date,

iii. On the valuation date requires that the value is time-specific as of a given date. Because markets and market conditions may change, the estimated value may be incorrect or inappropriate at another time. The valuation amount will reflect the market state and circumstances as at the valuation date, not those at any other date,

iv. Between a willing buyer refers to one who is motivated, but not compelled to buy. This buyer is neither over eager nor determined to buy at any price. This buyer is also one who purchases in accordance with the realities of the current market and with current market expectations, rather than in relation to an imaginary or hypothetical market that cannot be demonstrated or anticipated to exist. The assumed buyer would not pay a higher price than the market requires. The present owner is included among those who constitute "the market"

v.   And a willing seller is neither an over eager nor a forced seller prepared to sell at any price, nor one prepared to hold out for a price not considered reasonable in the current market. The willing seller is motivated to sell the asset at market terms for the best price attainable in the open market after proper marketing, whatever that price may be. The factual circumstances of the actual owner are not a part of this consideration because the willing seller is a hypothetical owner,

vi.   In an arm's length transaction is one between parties who do not have a particular or special relationship, e.g., parent and subsidiary companies or landlord and tenant that may make the price level uncharacteristic of the market or inflated because of an element of special value. The market value transaction is presumed to be between unrelated parties, each acting independently,

vii.   After proper marketing means that the asset would be exposed to the market in the most appropriate manner to effect its disposal at the best price reasonably obtainable in accordance with the market value definition. The method of sale is deemed to be that most appropriate to obtain the best price in the market to which the seller has access. The length of exposure time is not a fixed period but will vary according to the type of asset and market conditions. The only criterion is that there must have been sufficient time to allow the asset to be brought to the attention of an adequate number of market participants. The exposure period occurs prior to the valuation date,

viii. Where the parties had each acted knowledgeably, prudently presumes that both the willing buyer and the willing seller are reasonably informed about the nature and characteristics of the asset, its actual and potential uses, and the state of the market as of the valuation date. Each is further presumed to use that knowledge prudently to seek the price that is most favourable for their respective positions in the transaction. Prudence is assessed by referring to the state of the market at the valuation date, not

with the benefit of hindsight at some later date. For example, it is not necessarily imprudent for a seller to sell assets in a market with falling prices at a price that is lower than previous market levels. In such cases, as is true for other exchanges in markets with changing prices, the prudent buyer or seller will act in accordance with the best market information available at the time, and

ix. And without compulsion establishes that each party is motivated to undertake the transaction, but neither is forced or unduly coerced to complete it.

2.5.1 Basis of Value

According to IVSC (2016), the basis of value are as follows:

i. **Market value:** this is the best price at which an interest in a property might reasonably be expected to be sold by private treaty at the date of valuation, assuming: a willing seller (same as compulsory purchase assumptions); a reasonable period within which to negotiate, taking into account the nature of the property and the state of the market; that values remain static through the period in which b); the property will be freely exposed to the market (i.e. marketed and advertised); no account be taken of any additional bid by a special purchase (e.g. neighbour's bid).

ii. **Going concern value**: This is also known as total value and it is the value of the property to the market or an intending buyer assuming it will remain profitable now and in the foreseeable future. In determining this value the tangible and intangible assets such as goodwill are also considered.

iii. **Forced sale value**: this is the amount receivable from the sale of a property or asset, sold under certain conditions which do not meet all the normal market criteria. Forced sale value benefits the buyer as he buys the property at a rate less than the market value or less than the amount the property would fetch under normal market conditions.

iv. **Salvage value**: this is also known as scrap value and it is the value remaining after the useful life of an asset. In other words, the value remaining after years of being utilized and in a viable venture and after its final collapse.

v. **Equitable value**: this is also known as fair value and is the ''estimated price for the transfer of an asset or liability between identified knowledgeable and willing parties that reflects the respective interests of those parties.''

vi. **Replacement value**: this is the total amount to be expended in the replacement of an asset at the present time for an equivalent performing the same function. This is mostly utilized in insurance valuation in determining the replacement value of an insured asset after it must have been destroyed.

vii. **Assessed, rateable, or taxable value**: this is mostly used in property taxation to determine the appropriate tax to be levied or by a property owner. To achieve this, the market value of the property in question is determined with the assessed value being a percentage of the market value.

viii. **Value in use**: this is the Net Present Value of all cash flows emanating from the asset for the specific use it is subjected to by the owner.

ix. **Liquidation value**: this is the derivable amount from the impromptu sale of an asset in the open market, in so doing, reducing its exposure to potential buyers. This is mostly ascertained when the owners are bankrupt and in dire need of money to pay back debt.

x. **Synergistic value**: this is the value derivable from the merging of two or more assets or interest that results in a value greater than the value of the separate assets.

xi. **Investment value**: investment value is the value of an asset to a specific proprietor or potential proprietor for individual investment or operational objectives.

2.6   Valuation

Valuation as defined by IVSC (2020) is the "act or process of determining an opinion or conclusion of value of an asset on a stated basis of value at a specified date in compliance with IVS." It is also all the processes involved in forming an opinion of the value of real property, usually the market value (Kilpatrick, 2007). It is the assessment of value for a specific purpose to be better informed whilst taking a decision on sale or value of ownership rights (Zrobek, 2009).

2.6.1   Valuation Process

Despite the distinctiveness and variation in property characteristics, The Appraisal Institute (2008) submitted that all appraisal problems can be solved via the systematic application of the valuation process. This process entails identifying the problem, planning the works vital in solving the problem, collection of relevant data, verifying, analysing and forming an opinion of value. The valuation process involves following a specific and outlined steps, the number of which depends on the available market data and the nature of the valuation instruction. In all cases, however, the valuation process provides the model to be followed in performing market research and data analysis, in applying appraisal techniques and in integrating the results of these analytic activities into an opinion of value. The Appraisal Institute (2008) outlined the steps as follows:

i.   **Identification of the problem**

This is the first step in the valuation process and the appraiser is expected to not only identify the problem, but to also establish parameters and abolish all ambiguities surrounding the assignment. The appraiser goes further to establish both the users of the appraisal and the intended use, the purpose, effective date of assignment, effective date of opinion, the characteristics of the property and the assignment conditions.

ii. Scope of work determination

This involves determining the quantity and type of information researched and the analyses applied in the assignment. This comes after the problem have been identified in the preceding step and the scope of work must be neatly disclosed in the valuation report.

iii. Data collection and property description

In this step, the duty of the appraisal involves gathering all necessary specific data on the subject property and comparable properties. This is vital in understanding the economic climate of the area in which the property is located and the forces that triggers the upward and downward movement of values.

iv. Data analysis

In this step, two sets of data are analysed: the general data and the specific data. The former has to do with analysis of the demand and supply data so as to understand the "competitive position of the property in its market." The latter has to do with analysis of comparable properties which gives the appraiser an understanding of the sales price, rental terms, incomes and expenses, rate of return on investment, construction costs, economic life estimates and rates of depreciation. All this are essential in the determination of the opinion of value of the property under consideration.

In addition, highest and best use plays a vital role in the determination of a market value opinion. The appraiser is expected to consider the use of land as though it were vacant and the use of property as it is improved. For qualification as the highest and best use, a use is expected to be maximally productive, physically possible, legally permissible and financially feasible. Finally, the highest and best use is selected from a plethora of alternative uses.

v. **Site value opinion**

This is arrived at via the application of valuation methods. The sales comparison approach is the most dependable method in determining the value of a land. It involves analysing and comparing the subject land to similar ones. And in a situation where there is dearth of data for comparison, or the value opinion indicated by sales need substantiation, extraction, allocation, land residual technique, ground rent capitalization and subdivision analysis are other procedures available for the appraiser.

vi. **Application of the approaches to value.**

An opinion of value is ascertained using one or more approaches depending on the number and quality of available data for comparison, the type of property and the use of the valuation.

vii. **Reconciliation of value indications and opinion of value**

In this step, a final opinion of value is ascertained from two or more indications of value. This comes after the appraiser have reviewed the entire appraisal process. In reconciliation, the appraiser attempts to resolve the differences in the indications of value arising from the usage of multiple valuation approaches. He does this by using his experience, expertise and professional knowledge. Ascertaining the opinion of value accomplishes the objective of the valuation process. However, the valuation assignment is further from being complete until the conclusion and finding have been stated and communicated to the client.

viii. **Report of defined value**

Contingent on the requirements of the client and the scope of the work, the content, length, type and format of the valuation report may vary. In addition, a client may inform an appraiser orally the needlessness in the preparation of a valuation report. According to The Uniform

Standard of Professional Appraisal Practice, a valuation report may be presented in the following formats:

- **Self-contained reports:** this report elucidates on the data and analyses utilized in the appraisal assignment in full.

- **Restricted-use reports:** this type of report is brief and outlines the conclusions of the appraisal. It is mostly utilized when the client is the sole consumer of the report.

- **Summary reports:** this report makes a summary of the data and analyses employed in the valuation assignment.

Identification of the Problem

| Client and intended user | Intended use | Purpose of the assignment (type of value) | Effective date of the opinion | Relevant characteristics of the property | Assignment Conditions Extraordinary assumptions | Hypothetical conditions |

Scope of Work Determination

Data Collection and Property Description

Market Area Data
General characteristics of region, city, and neighborhood

Subject Property Data
Specific characteristics of land and improvements, personal property, business assets, etc.

Comparable Property Data
Sales, listings, offerings, vacancies, cost and depreciation, income and expenses, capitalization rates, etc.

Data Analysis

Market Analysis
Demand studies
Supply studies
Marketing Studies

Highest and Best Use Analysis
Site as though vacant
Ideal improvement
Property as improved

Site Value Opinion

Application of the Approaches to Value

Cost   Sales Comparison   Income Capitalization

Reconciliation of Value Indications and Final Opinion of Value

Report of Defined Value

Figure 2.1: Diagram showing the valuation process

Adapted from The Appraisal Institute, (2008).

2.6.1 Methods of Valuation

   1) **Traditional Methods of Valuation**

   a) **The investment method**

This method is also known as the income method. It is utilized to ascertain a hint of value by converting future cash flows to present value (IVSC, 2020). This method is applied to income producing properties such as shopping complexes, apartments, warehouses and offices. It is utilized to ascertain the market value of properties based on their accruing income. It discounts the future cash flows (rents/income) of a property to a present value that then serves as the market value (Pryce 2016). According to IVSC (2020), this method should be used under the following circumstances:

- the income-producing ability of the asset is the critical element affecting value from a participant perspective, and/or

- reasonable projections of the amount and timing of future income are available for the subject asset, but there are few, if any, relevant market comparables.

   b) **The contractors method**

This method is also known as cost method. It provides a hint of value by determining the cost implication in order to obtain a similar property of equal utility after calculating the replacement cost and making all necessary deductions for obsolescence and physical deterioration (IVSC, 2020). This method is based on the cost of erecting a similar building after making deductions for depreciation and obsolescence plus cost of site. The resultant figure becomes the value of the new building. This method is particularly employed in the valuation of rare properties and where there is absence of comparable market evidence. It is mostly used for properties such as hospitals, churches, schools and power stations (Isaac, 2002). According to IVSC (2020), this method should be used under the following circumstances:

- the asset is not directly income-generating and the unique nature of the asset makes using an income approach or market approach unfeasible, and/or

- the basis of value being used is fundamentally based on replacement cost, such as replacement value.

c) **The profits method**

This method relies on the profit emanating from the business premises especially in the absence of comparable rental or sale evidence. After the gross profit of the venture is ascertained, with the exception of all rental payments made, all other working expenses are deducted which gives the divisible balance. This method is most appropriate in the valuation of restaurants, malls, guest inns, excetra (Isaac, 2002).

d) **The comparison method**

This method is also known as guideline transaction method and it relies on transaction evidence of properties/assets that are similar to the one being appraised/valued (IVSC, 2020). This method is employed for most properties such as shops, houses, offices and involves reliance on comparable property evidence in the same locality or properties with similar attributes to the property being appraised (Pryce, 2016). This method employs a plethora of comparable transactions also referred to as units of comparison which forms the basis of the comparison. In situations where only few transactions have actually taken place, the appraiser should consider the value of similar properties that are offered for sale as far as they are relevant, thoroughly analysed and documented. It is often times denoted as comparable listings method and it is important that it is utilised by the valuer as the sole indication of value. Instead, it should be used in combination with other methods. A subset of the comparable transactions method is matrix pricing, which is principally used to value some types of financial instruments, such as debt securities, without relying exclusively on quoted prices for the

specific securities, but rather relying on the securities' relationship to other benchmark quoted securities and their attributes (IVSC, 2020).

e) **The residual method**

This method is employed to value a bare or vacant land or a property with development potential or plots of site. The resultant amount is what a developer is willing to pay after considering the development potential of the bare land. Whilst employing this method, the Gross Development Value minus Cost of Development and Profit will give the Existing Use Value. This method is however infamous for being inaccurate (Pryce, 2016). There are three principal purposes for the use of residual method. They are:

- to determine the best price for a development site based on the highest and best use.

- to determine profit likely to emanate from the venture given the purchase price and cost of development.

- Given the profit level and land cost, to ascertain the construction cost ceiling.

2) **Advanced Valuation Methods**

a) **Hedonic Pricing Method**

This contemporary model is also known as hedonic regression. This model takes into account the properties of real estate separately and estimate prices based on the assumption that these properties could be separated into characteristics such as attributes of the spatial unit (size of plot, number of bedrooms, bathrooms, toilet), infrastructure and locational attributes (including distance to city centre, natural environment, social environment , ecology, quality of design and architecture. (Herath and Maier, 2010). The hedonic approach to measuring changes in residential property prices views the total price paid for the property as constituting a sum of the implicit prices of that property's attributes including location, neighbourhood, floor area,

age, and condition. The approach involves identifying the relationship between the value relevant attributes and the sale price. This relationship is first tested for each attribute separately and then a multi-dimensional statistical model is developed to mimic the interactive effect of all the attributes on sale price.

b) **Spatial analysis method**

This method is mostly applied in the appraisal of land. The various land valuation factors (landscape, access to water, availability of basic services, distance from nuisances, access to highway, topography, distance to recreational facilities, soil condition) that determine the value of land are expressed mathematically so that the effect of each valuation factor can be determined for the complete land parcel using GIS (Yomralioglu and Nisanci, 2004).

c) **Fuzzy logic**

This contemporary technique utilizes raw data in line with the principles of Boolean Logic. It uses integrated expert knowledge which represents a structure close to the spoken language of fuzzy logic controllers and is described by linguistic variables and fuzzy sets. To attain the desired goal which is the appraisal of property, the following structures are adopted (Zrobek *et al.,* 2020).

- Fuzzification unit
- Base of fuzzy logic rules
- Units of decision making
- Defuzzification unit

2.7 Valuation Accuracy

According to Crosby (2000), valuation accuracy is the propensity of a valuation to accurately hit the target. If the valuation basis is market value, it is the ability of the appraiser to identify the sale price of the property (or rent on letting if market rental value). In accuracy studies, this target is usually taken as a subsequent sale price transacted in the marketplace. Boyd and Irons (2002) in their own view explained valuation accuracy is the measure of the difference between a value determination, or group of value determinations, in relation to a subsequently realised sale price. Finally, Parker (1998) defined valuation accuracy as the nearness of a valuation (or forecast of the most likely selling price, often being an expectational assessment) to market price (or the known amount paid for a property at a given time).

Furthermore, it is imperative a clear distinction is made between inaccuracy, inconsistency and incompetence. Whilst inaccuracy manifests when valuation does not correspond to market price, incompetence occurs when there is mismatch between valuation and market price with a margin of error so wide that it shows failure of the valuer to take due professional care. Inconsistency on the other hand, manifests when two valuer employs divergent information emphases but the resulting valuation matches the market price. In addition, inconsistency is unlikely to lead to problems of the same extent as inaccuracy. Incompetence however, can trigger problems of high magnitude such as claims of professional negligence, indemnities, amongst others (Parker, 1998).

2.8. Factors affecting Valuation Accuracy.

The Property's Characteristics

i.   Complex nature of subject property

The Valuation Process

i.   Valuation methodology
ii.   Client pressure
iii.   Inadequate time for property inspection and valuation
iv.   Usage of multiple valuation methods

Valuation Accuracy

The Valuation Environment

i.   Problem of relevant data.
ii.   Nature of property market.
iii.   Effectiveness of the regulatory framework.
iv.   Absence/non-adherence to valuation standard.

Individual Characteristics of Valuers and Valuation Firms

i.   Valuer's familiarity with property market.
ii.   Limited number of valuation undertaken by valuer
iii.   Integrity of the valuer
iv.   Skill, expertise and judgement of the valuer

Figure 2.2: Diagram showing the factors affecting valuation accuracy

Source: Babawale (2008)

i. **Valuation methodology**

Aluko (1998) opined that the use of valuation practices that were apt for stable economic conditions during unstable capital markets, inflation, rise in cost of building materials, amongst others, is prone to producing results that are inaccurate. Furthermore, not all valuation methods are acceptable universally as pointed out by Harvard (2001a), and difference in methods will ultimately impact on choice of parameters as well as the analysis of transaction evidence which will have profound consequence on the reliability of valuation. In addition, Babawale (2021) argued that certain valuation methods are more susceptible to errors than others with experts and professionals in the academia criticising the conventional methods of valuation for being irrational and illogical. There should be consciousness in choosing the appropriate methods by weighing their strengths and weaknesses, as poor methods will result in misrepresentative results and conclusions (Halle 2021; McAllister, 1995). In Greenwell (1976), it was alleged that the simplistic nature of valuation methods makes valuations excessively high while Ogunba and Ajayi (1998) observed that bankers and accountants feel "conventional methods are shrouded in mystery and indefensible and valuers seem to be averse to statistical and probabilistic concepts which are more in demand by contemporary valuation."

ii. **Problems of relevant data**

Babawale (2021) submitted that comparing properties being valued with other similar ones is worldwide accepted strategy. However, there tend to be issues with valuation accuracy especially when subject property and comparable property differ or when the property market is inactive and/or sluggish which limits the availability of relevant data and the valuer is ultimately left with no other option than to rely on secondary evidences that are most times less comparable. The scarcity of up-to-date data and/or quality of data utilized in valuation have a tendency to impact on the accuracy and dependability of the appraisal estimates (Ajibola and

Ogungbemi, 2011). In situations where valuers are faced with dearth of data, it has been noticed that transaction data is collected from newspapers and other virtual medium (Chin and Chau, 2003). Royal Institute of Chartered Surveyors (RICS) further opined that "real estate markets worldwide lack transparency and data on comparable transactions, from any source, should not be taken at face value. It is essential that data comparable evidence, and especially those comparables that contribute most significantly to the opinion of value, are examined carefully for accuracy and to ensure that all relevant details behind the transaction concerned are fully taken into account. Comparables that appear to be inconsistent with the other evidence will require particular scrutiny".

iii. **Client pressure**

Amidu and Aluko (2007) observed that clients influence valuation accuracy in so many ways amongst which are "shopping for valuer" that will apportion the desired value to the appraisal; threatening to withhold payment and shut the door on future patronage. Several studies conducted (Effiong and Mendie, 2019; Ayedun, Ogunba and Oloyede 2010) have proven the existence of client pressure and how it corrodes the objectivity of valuers as they upwardly adjust values to suit their client. Babawale (2021) highlighted the plethora of tactics employed by client as they exert pressure to include: withdrawal of instruction, assurance of more jobs in the future, refusal to pay fees, cash incentives, threat of legal action, and assurance of retainership, amongst others. Furthermore, valuations for purposes such as rent review, purchase and sale of properties, probate, mortgage and compensation, that are crucial to the interest of clients, have high tendencies of pressure emanating from clients.

iv. **Effectiveness of Regulatory Framework**

The role of effective regulatory framework in ensuring that there is conformity by valuers to established valuation standards in methodology, approach and reporting cannot be overemphasized (Babawale, 2021). IVSC (2001) noted that: on the account of weak or absence

of regulation of valuation matters by supervisors of the capital and financial markets and of the valuation profession itself, valuers are sometimes subject to undue and/or excessive pressure from interested parties to value other than in accordance with generally accepted valuation principles.

In light of this, to encourage valuer's independence whilst also deterring clients pressure, additional regulations have become salient. The practice of real estate in Nigeria is controlled by the Nigerian Institution of Estate Surveyors and Valuers (NIESV) and the Estate Surveyors and Valuers Registration Board of Nigeria (ESVARBON). Ineffective regulation and supervision by regulatory bodies makes valuers more prone to client pressure and in the long run, the inaccuracy of valuation (Kinnard *et al.,* 1997; Wyatt 2003).

v. **Inadequate time for inspection and valuation**

In the case of *Aura Financial Services Canada Ltd. v Jakubiec,* the judge held that the valuer was negligent for failure to familiarise self with the subject property being appraised, the neighbourhood the said property is located it, for not conducting any form of market survey and for relying on the owners opinion on the likely resale price without doing due diligence as a valuer. In addition, in the case of *Perry v Sidney and Son (1982)*, the judge held that the valuer was negligent and refused to consider the lack of time argument put forward by the valuer as defence. Furthermore, in the case of *Indian Head Credit Ltd v Hosie A. (1994)*, the judge held the valuer negligent for spending a meagre 3000 seconds to inspect a building with structural defects which subsequently affected the valuation of said property negatively.

vi. **Absence/non-adherence to valuation standards**

Valuation Standards are books of guidance enumerating mandatory and non-mandatory guidelines to be applied by members in their valuation activities. According to Babawale (2021) the objective is to "build confidence and public trust in the valuation process by creating

a framework for the delivery of credible valuation opinion by suitably trained valuation professionals acting in an ethical manner." Its worthy of note that the absence of valuation standard practice will automatically translate to complacency, abuse, inconsistency and mediocrity in valuation approach as well as valuation reporting. Hence, valuers are to abide by the set standards wilfully or by requirement placed upon them by law or regulation (Babawale, 2021). Furthermore, Gambo (2015) opined that appraisal is an imprecise science principally driven by the appraiser's expertise, training and judgement; necessitating the need for valuation standards that will aid the appraiser in arriving at a more accurate valuation.

vii.   Nature of property market

The imperfect nature of the property market is another leading cause of valuation inaccuracy. This is because of the opaque nature of transactions conducted in the market where market values are inaccessible as opposed to other markets like the capital markets where market values of securities are openly traded and published. Giving all this, it would be "unreasonable to expect valuers to predict price either precisely or exactly accurate" (Bowles *et al.,* 2001).

vii.   Integrity of the valuer and/or firm

Levy and Shuck (1999) observed that most valuers tend to behave unethically due to the stiff and competitive nature of the valuation market as well as cash incentives given to them by clients. Hence, "ethical decisions rests mainly on the hands of the valuers and to a lesser degree the ethical culture of the firms they work for." Furthermore, the Nigerian Institution of Estate Surveyors and Valuers, at some point, and within a span of 12 months, attended to 14 different ethics related cases (NIESV, 2004).

viii.   Complex nature of subject property

According to Rushmore (1993) the intricate nature of a property being appraised can be a source of valuation inaccuracy owing to the number of variables that needs to be considered.

Babawale (2021) affirmed it to be true saying in situations where the said property is built with sophisticated materials and/or a complex design, like properties owned by multinational corporations in Nigeria, valuation of such properties are susceptible to inaccuracy as degree of comparability is limited.

ix. **Valuation in unacquainted property market**

According to IVSC (2020): *"because valuation requires the exercise of skill and judgement, it is a fundamental expectation that valuations are prepared by an individual firm having the appropriate skill, experience and knowledge of the subject of the valuation, the market in which it trades and the purpose of the valuation."* Furthermore, it was submitted that in situations where the valuer lacks requisite knowledge and skill needed for the valuation, it is imperative he seeks assistance from colleagues and professionals in the built environment. However, due to the dearth of valuation instructions, most valuers in Nigeria, embark on valuations for all category of property interests, all purposes and in property markets that are alien to them (Babawale, 2021).

x. **Imprecise definition of value**

The inability of valuers to determine true market value is one of the sources of inaccuracy in valuations (Babawale, 2021). As such, market value is utilized as proxy for true market value which is defined as: the estimated amount i.e a price expressed in terms of money payable for the asset in an arm's length market transaction. Market value is the most probable price reasonably obtainable in the market on the valuation date in keeping with the market value definition. It is the best price reasonably obtainable by the seller and the most advantageous price reasonably obtainable by the buyer. This estimate specifically excludes an estimated price inflated or deflated by special terms or circumstances such as a typical financing, sale and leaseback arrangements, special considerations or concessions granted by anyone

associated with the sale, or any element of value available only to a specific owner or purchase (IVSC, 2020).

Valuation inaccuracy is inevitable regardless of the approximation of true value to market price owing largely to the heterogeneity of property and peculiar characteristics of the property market (Babawale, 2021). In addition, in the case of *Singer and Friedlander Ltd v. John D. Wood & Co: (1977),* the judge submitted that: *"because valuation is based in part on assumptions, the valuer, no matter how competent and careful may not be expected to produce a value that matches subsequent price precisely."*

xi.   **Skill, experience and judgement of the valuer**

Babawale (2008) noted that the skills, experience and judgement of valuers are part of the cause of variance in valuation. Ogunba and Ajayi (1998) further added that to some extent, valuers have poor understanding and apply wrong methods. Furthermore, increasing cases of credibility problems have been traced to inadequate training and lack of professionalism amongst valuers (NIESV, 1998).

xii.   **Limited number of valuations undertaken by the valuer**

Babawale (2008) in a study on valuation accuracy in residential properties in Lagos metropolis observed that out of 250 valuers, 165 had not done more than 5 valuations in a month. According to the researcher, "the limited scope of valuation engagements ordinarily impacts negatively on skill acquisition, efficiency and ability of Nigerian valuers to value accurately, compete globally, or respond to the demand of globalization. Frequent exposure to valuation of property assets of different compositions, types, magnitude and complexities and for various purposes is a prerequisite for the development of a broad-based experience and expertise required to bring the local practice to international standards." Babawale and Omirin (2011) in a study conducted in Lagos noted that skill and experience of the valuer were the most significant cause of inaccuracy in valuation. By skill and experience, it is meant ''duration,

scope and depth of valuers practice which have direct implication on skill acquisition and expertise.''

2.8.1 Measuring Valuation Accuracy

1. **Error Metric Techniques**

According to McAllister (1995) this technique has three other sub-techniques as follows:

i. **Total Variance Test (Percentage Difference)**

Total Variance Test is used to ascertain the difference between valuation and transaction price; this difference is quantitatively expressed as a percentage.

$$Total\ Variance = \frac{Transaction\ Price - Valuation\ Estimate}{Transcation\ Price}\ x\ 100$$

ii. **Average Error (AVE)**

The Average Error measure bias towards over valuation or under valuation. It can be determined using the formula:

$$Average\ Error\ (AVE) = \left(\frac{1}{n}\right)\sum(Transaction\ Price - Valuation)$$

iii. **Mean Absolute Error (MABE)**

The Mean Absolute Error is used to determine the average difference. The sign of difference is however ignored. It is ascertained using the formula:

$$Mean\ Absolute\ Error = \left(\frac{1}{n}\right)\sum(Transaction\ Price - Valuation)$$

2. **Econometric Technique**

Regression analysis is the main statistical tool utilized in the measurement of the relationship between two or more variables. The regression equation is:

$$Y = a + \beta X + e$$

where Y is a dependent variable; a is a constant term; beta (p) is a measure of the unit change in X per unit change in Y; X is the independent variable; and e is the error term.

2.8.2 Margin of Error Principle

The margin of error principle is a quantitative measure of valuation accuracy utilized by courts whilst attending to cases of valuation negligence whereby valuation accuracy is measured by reference to the margin of error. In *Singer and Friedlander v John D Wood & Co [1977]*, the judge submitted that:

"*any situation falling outside of what I shall call the "bracket" bring into question the competence of the valuer and the sort of care he gave to the task of valuation. There is, as I have said, a permissible margin of error, the "bracket" as I have called it. What can be probably expected from a competent valuer using reasonable skill and care that his valuation falls within this bracket.*"

2.8.3 Acceptable Margin of Error.

There have been divergent opinions in the court of law about the appropriate margin of error. According to RICS (2021), the permitted margin of error is considered in the following:

S/N	Cases	Court rulings on acceptable margin of error.
1	*K/S Lincoln v CB Goldsmith Ellis Hotels Ltd [2010] TCC*	"*For a standard residential property: +/- 5%*"; "*For a valuation of a one-off property: +/- 10%*"; "*If there are exceptional features of the property in question: +/- 15%, or even higher in an appropriate case.*"
2	*Axa Equity and Law Home Loans Ltd v Goldsack & Freeman [1994] QBD*	A bracket of plus or minus 5% was regarded appropriate by the court.

3	*Bank of Ireland v Patterson [2014] NIQBD*	A margin of +/- 15% was allowed.
4	*Blemain Finance Ltd v E.Surv Ltd [2012] TCC:*	A margin of +/- 10% was held to be appropriate.
5	*Preferred Mortgages Ltd v Countrywide Surveyors Ltd [2005] Ch*	A margin of tolerance of 15% was considered appropriate
6	*Webb Resolutions v E.Surv [2012] TCC*	A 5% bracket was agreed as appropriate on standard residential property
7	*AMC Ltd and Countrywide Surveyors [2011] Ch*	A margin of 8% was found to be appropriate.
8	*Capita Alternative Fund Services (Guernsey) v Drivers Jonas [2012] CA*	A margin of +/- 15% was deemed appropriate.
9	*Titan Europe plc v Colliers International plc [2015] CA*	The margin was set at +/- 15%.
10	*Redstone Mortgages v Countrywide Surveyors (2011) Ch, unreported.*	The allowable margin was set at 10% and could be extended to 15% in exceptional cases.

2.9   Behavioural Research in Valuation

Behavioural Research in valuation is mainly concerned with the behavioural characteristics of valuers and how the valuation process and result is affected by it. Diaz (2002) noted that it was pioneered by a study conducted by Newell and Simon (1972) which became the forefather of real property behaviourism, and where the human mind was described as a "serial information processor that because of limited capacities, must seek efficiency when solving problems." According to Diaz (2002) the behavioural approach to valuation simply encapsulates understanding valuation behaviour before valuation improvement can be made.

Findings from behavioural research in valuation have been categorized as follows:

   i.   Heuristics

   ii.   Comparable sales selection

   iii. Overall methods of valuation

   iv.   Feedback and client influences

   i.   **Heuristics**

According to Dale (2015), heuristics is a "mental shortcut that helps us make decisions and judgments quickly without having to spend a lot of time researching and analysing information. It is an approach to problem solving that takes one's personal experience into account. Heuristics provide strategies to scrutinise a limited number of signals and/or alternative choices in decision making. Heuristics diminish the work of retrieving and storing information in memory; streamlining the decision making process by reducing the amount of integrated information necessary in making the choice or passing judgment. However, while heuristics can speed up our problem and decision-making process, they can introduce errors and biased

judgments." Heuristic behaviour leads to systematic error which makes it important to real estate investors, managers and lenders in their quest for accurate and unbiased estimates of market value of their assets (Hansz and Diaz, 2001).

Types of Heuristics

Tversky & Kahneman (1974) outlined the three main types of heuristics as follows:

i. Representativeness

ii. Availability

iii. Anchoring and Adjustment

i. **Representativeness**

In representative heuristics, probabilities are gauged by the extent to which they are representative of one another. This approach to judgement of probability as argued by Tversky and Kahneman (1974), leads to immense errors for the reason that similarity or representativeness is not swayed by several factors that should affects judgements of probability. Diaz (2002) noted that valuers have the propensity to use this heuristic when selecting comparable sales.

ii. **Availability**

In availability heuristics, frequency or probability is assessed by recalling past or similar instances that easily comes to mind. Tversky and Kahneman (1974), argued that it leads to predictable biases.

iii. **Anchoring and adjustment**

In anchoring and adjustment heuristics, estimates are made from a value which serves as the starting point, which is subsequently adjusted to arrive at a final value (Tversky and Kahneman, 1974). In addition, Diaz (2002) noted that "inappropriate reference points, such as the value opinions of clients, and inadequate adjustments can be sources of bias."

ii.   **Comparable sales selection.**

Diaz (2002) explained the two approaches employed by valuers in the US in residential valuation. Of the two approaches, one was favoured by experts as it was more efficient and less mentally demanding. The second approach which is favoured by students entails gathering and examining multiple sales records before determining the most comparable sales. Experts on the other hand, considered only few comparable sales. The procedure employed by experts involves the careful examination of the first few candidate comparable sales in an attempt to determine the 'best' sales. Subsequently, "other candidate sales were compared to these criterion sales on the basis of about two characteristics, usually location and an important physical characteristic. If a candidate sale compared favourably to the best standard, it was kept, otherwise it was rejected, and the next candidate was screened. If a more comparable sale was discovered, it became the new standard. Once a certain number of sales had been accepted as comparable, the expert terminated the search and started the valuation analysis. The number of comparable sales required to terminate the search varied among individual experts but ranged between three and six."
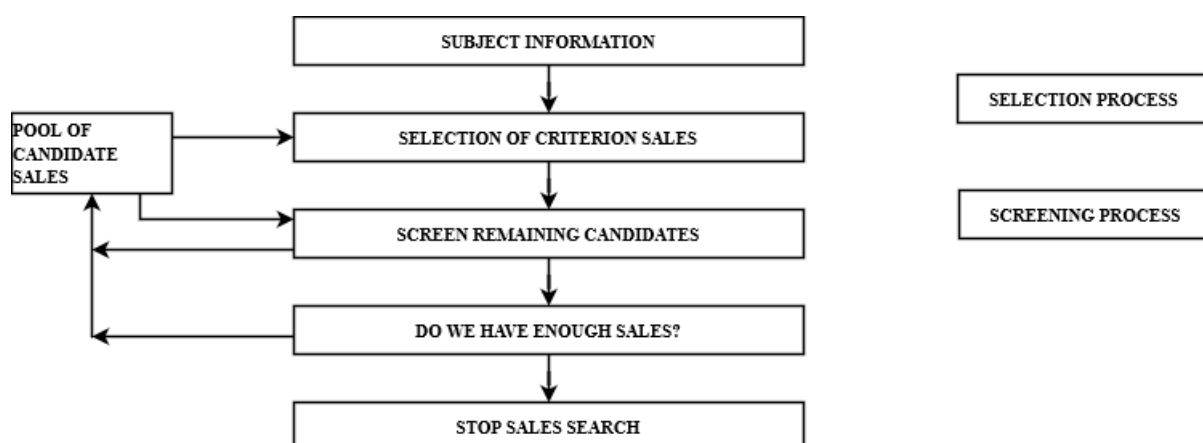
Figure 2.3: Diagram showing how experts select comparable sales

Adapted from Diaz (2002)

iii.   **Overall method of valuation**

According to The Appraisal Institute (2008), the valuation of property is a step-by-step process which is embedded in the training of valuers, or appraisers as most commonly termed in the US. Diaz (2002) opined that subsequent to defining the appraisal problem by identifying the location property, the inherent property rights, the date of valuation, the valuation basis, and the appropriate definition of value to be estimated, it is expected of the appraiser to put into consideration other factors with likely impact on the property value. There is a handful of these factors ranging from community to city, county, regional, national and international factors. The appraiser is expected to use the three approaches to value and the step-by-step appraisal process.
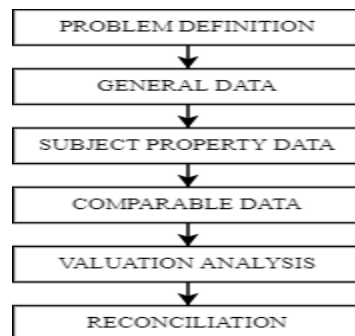
Figure 2.4: Diagram showing the normative model of valuation
Adapted from Diaz (2002)

However, Diaz (2002) noted that researches have shown that appraisers do not adhere to the appraisal process, often called the normative model, probably due to the "cognitive effort needed to perform the demanding normative appraisal process, but that they would find, probably subconsciously, short cuts." Six steps was noticed to being used by the residential appraisers in the US which is identical to those used by appraisers in New Zealand as shown in Figure 2.5 below. They are: problem definition, specific data collection, general data

collection (optional), comparable data gathering, valuation analysis and final judgement. Although related, this process is distinct from the normative model.
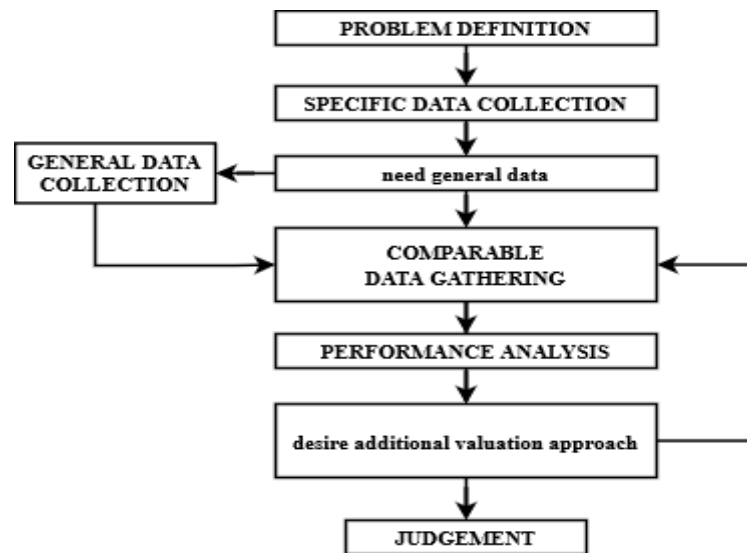
Figure 2.5: Diagram showing the valuation process employed by appraisers in the United States.
Adapted from Diaz (2002)

Respectively, the steps employed by valuers in the UK deviates from the standard normative model although similar. The steps are: problem definition, comparable data gathering, analysis, and final judgment as shown in figure 2.6 below. The appraisers in the UK go straight to gathering comparable data after problem definition. Furthermore, while seeking problem definition, the appraisers in the UK do not distinguish between information about the assignment, those about the general market and those about the subject property. The reason for the difference in the processes employed by valuers in both the UK, US and New Zealand is that appraisers in the US and New Zealand tend to involuntarily modify the normative model in search for greater efficiency while appraisers in the UK were trained with more emphasis on physical inspection than valuation techniques.
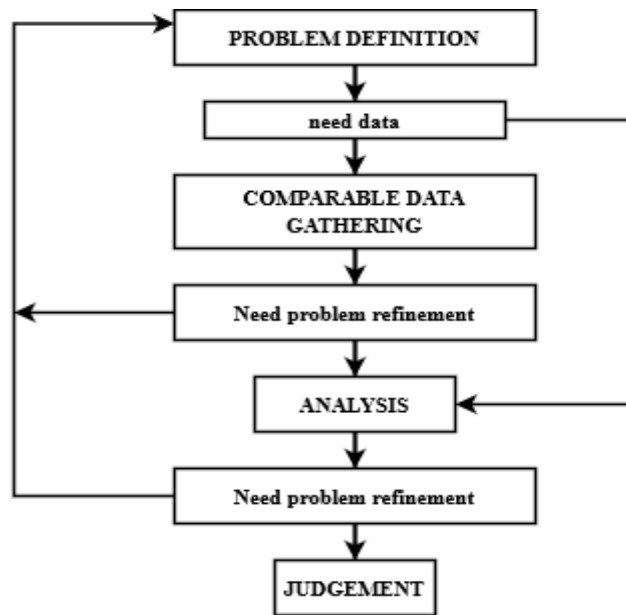
Figure 2.6: Diagram showing the valuation process employed by appraisers in the United Kingdom.
Adapted from Diaz (2002)

iv.   **Feedback and client influences**

According to Diaz (2002), client influence tend to be more profound amongst small and upcoming valuation firms "often under financial hardship and serving unsophisticated clients." In addition, valuations for purposes such as rent review, purchase and sale of properties, probate, mortgage and compensation, that are crucial to the interest of clients, have high tendencies of pressure emanating from clients. Client pressure was also observed to be a function of client sophistication. While sophisticated clients will emphasize on the positive attributes of the property, in an attempt to sway the value, unsophisticated clients on the other hand employ tactics such as threatening to withhold fee and future instructions. Levy and Schuck (1999) opined that valuers respond to client influence by making adjustments to their opinion of value or reported figures. Additionally, "when opinions are not changed, but reported figures are altered, valuers may rationalize their decision by claiming estimation error

due to a lack of market data, the notion of a range of defensible values and issues of client

satisfaction."

Review of Empirical Studies

A plethora of studies both internal and local were reviewed and they are as thus:

Diaz *et al.* (2002) investigated residential valuation behaviour in the United States, the United Kingdom and New Zealand. Valuers from all three countries were part of an experiment that assessed valuation behaviour when valuers are in a familiar and unfamiliar property setting. The study revealed that switching from a familiar to unfamiliar property setting had no bearing on valuation behaviour as it was consistently non-normative. It also revealed a similarity in the valuation process employed by valuers in the United States and New Zealand, but different from that employed by valuers in the United Kingdom.

Harvard (1999) investigated the propensity of valuers to adjust previous valuation downward or upward. 30 student valuers that participated on the experiment were divided into two groups and asked to value an industrial investment property located in Warrington, England with all necessary data supplied. The study revealed that the propensity of student valuers to adjust a previous valuation upward is far greater than downwards. The study argued that while experimental results conducted by students may not be applicable in practice as expert valuers may not be influenced in the same manner, absolute certainty of this cannot be inferred.

Gallimore (1996) investigated confirmation bias in property valuations by examining the relationship between precipitance and search limitations. A sum total of 400 questionnaires were administered for practicing surveyors drawn from the list of members of Royal Institution of Chartered Surveyors. The study revealed that there is little to null evidence to confirm the existence of confirmation bias in the valuation process of valuers.

Crosby *et al.* (2003) investigated timing in valuation and sales data. The study utilized transaction records of properties in the IPD UK Monthly Index for properties sold in the year 2000. This records contained a plethora of information including the type and location of

property, the sale price and completion date, as well as the previous valuations for those properties. The study showed that substantial movement in the valuations took place in the month before the transaction was completed but not earlier.

Blundell and Ward (2008) investigated the relationship between valuations and subsequent sales price in using sales data of 700 properties sold from 1974to 1990. The results from the study revealed that sales price within the period under study was above the valuation by 7%. The study recommended that valuers reduce bias in their valuations by being more sensitive to recent market reports and behaviour. In addition, it was revealed that using a date prior to the completion date decreases valuation accuracy.

Stevenson and Young (2004) investigated the relationship inherent between guide and sales price for residential properties in Greater Dublin, Ireland. The study utilized data from CRER database of 1,993 residential properties sales in Greater Dublin and employed econometric analysis. Of the sampled properties, 1,694 were sold via auction while 299 were sold via private treaties. The study revealed 957 of the sampled residential properties falling within a margin error of ±20%.

Bretten and Wyatt (2001) examined the magnitude and likely causes of valuation variance in commercial property valuations for lending purposes. A sum total of 220 questionnaires was distributed to valuers, lenders, finance brokers and investors. The study revealed that valuation variance can come at any stage from the point when the instruction letters was issued to the point when fees are negotiated to external pressure being exerted on the valuer when finalising the valuation figure. Furthermore, respondent's confidence in margin of error as a fair and reasonable test for negligence with 40% stating that a margin of error of ±10% is most fitting.

Newell and Kishore (1998) examined the accuracy and dependability of commercial property valuations as effective proxy for commercial property transactions in Australia. The study utilized sales of 218 commercial properties which comprise of 117 retail properties and 101 offices. The average sales price of the properties were $49M and $97M respectively. Regression analysis was utilized in the analysis of sales price against valuation. Findings from the study revealed that valuations are on average an effective proxy for sales.

Dou *et al.* (2020) examined valuation accuracy in vacant industrial lands in China. This study employed correlational analysis to investigate the dynamics between transaction price and land benchmark price appraisal estimates set by the government. The study revealed a margin of error within ±20% which is an acceptable margin.

Bowles *et al.* (2001) examined the effect of valuation error in obtaining precision in the measurement of investment performance of property assets. The study utilized sampling theory to measure portfolio valuation error. It finalized that property investment measures will include some uncertainty and thus the property fund manager should be sceptical of the implied precision in reported measures of return.

McAllister (1995) examined the issue of methodology and lag period as they relate to valuation accuracy; and also examined was previous empirical research on valuation accuracy. The study considered 57 transactions of which 30 were sold by private treaty and 27 by informal tender. Using regression analysis, it was revealed that there is valuation error but there is little evidence to suggest that valuation bias occurs.

Parker (1999) investigated valuation accuracy in seven commercial, retail and industrial properties along the eastern seaboard of Australia sold by tender. The subject properties were valued by a national firm and offers received at close off tenders. The study revealed a high level of accuracy with valuations not exceeding the established 15% margin benchmark even

though they could not exactly predict market price. As recommendation, the study proposed that further research be made into changes necessary for accuracy, training of valuers and provision of guidance notes.

Dapaah (2001) examined valuation accuracy in Singapore. 2441 valuations comprising of private apartments, detached, semi-detached and terraced houses, formed part of the study. Since ESV Firms in Singapore could not provide all the sales data, the Singapore Institute of Surveyors and Valuers (SISV) Realink database was also consulted.

Cannon and Cole (2011) evaluated the accuracy of commercial real-estate appraisals conducted in a 26 years' time frame (1984-2010). The study revealed that valuations done were more than 10% above, or below, subsequent sales prices. To measure accuracy, the difference in the appraised value and the subsequent transaction price was calculated.

Baum *et al.* (2000) examined the influence of valuers and their corresponding valuations on commercial property investment market in the United Kingdom. A sum total of 20 fund managers were interviewed for 45-90 minutes. Another round of 11 interviews were conducted and its target audience were heads of ESV Firms. The study revealed that different methodologies are employed to arrive at estimated price and there is client influence on valuation.

Reinert (2021) examined valuation accuracy between internal and external property valuations in Germany. Internal valuation is described as valuations conducted by a valuer for their employer while external valuation is one conducted by a valuer for a third party. The study utilized a data set of 4,805 commercial properties in Germany between 1995 – 2013. The study revealed that external valuations were more accurate compared to internal valuations. Overall, 79% of external and 65% of internal valuations fell within the acceptable margin of valuation error of ±15%.

Reinert (2020) made a comparison of valuation accuracy across eight real estate markets in Europe. Requisite data was retrieved from Investment Property Databank and the results from this comparison revealed that valuations were on average below fitted prices in all countries except the Netherlands, indicating a possible overvaluation problem of held properties held in Europe.

Abidoye and Chan (2018) examined the suitability of different data sources that are reliable for estimating accurate property values. This study utilized data from online listing prices of residential properties and sale prices from firms. Data obtained was then fitted into artificial neural network (ANN) model, which was used to predict the remaining property prices. The study revealed listing prices possessed a margin of error that is well within the industry acceptable standard of ±0 and ±10 compared with the predicted sale prices. Furthermore, a higher valuation accuracy was noticed in properties with low values.

Amidu *et al.* (2008) examined client feedback pressure and the role of Estate Surveyors and Valuers. A sum total of 228 questionnaires were self-administered to practicing Estate Surveyors and Valuers in Lagos metropolis. The data obtained was analysed using descriptive tools and it revealed a departure from the normative model of property valuation and alteration of opinion of value by valuers. As recommendation, the study proposed that there should be regulation of valuation practice in Nigeria.

Ayedun *et al.* (2010) sought to ascertain if valuations conducted by valuers were done in an authentic and uniform manner. The study utilized data from 131 Federal Government Privatized properties that were valued by Estate Surveyors and Valuers before their eventual sale. After careful analysis of data by Regression Analysis and Mean Deviation, it was shown that they do not meet the standard of reliability. A recommendation of the study is that the Valuation Standard should spell out a maximum acceptable margin of error of $\pm13.6\%$ and

ensure a methodical training of valuers to diminish the occurrence of valuation inaccuracy in the nation.

Ayedun *et al*. (2018) examined the causes of valuation inaccuracy in Lagos. Questionnaires were administered to 200 practising ESV Firms and data obtained was analysed using descriptive method of percentage and mean ranking. The results from the study revealed that the causes of inaccuracy include: the dearth of data, ineffective regulation, and lack of compliance to valuation manual amongst others. The study recommended the study the establishment of a data bank.

Atilola *et al.* (2019) examined the causes of variance in statutory valuations. A sum total of 33 questionnaires was administered to 33 practising ESV Firms and data obtained was analysed using Relative Importance Index (RII). The study revealed that experience in rating valuation, comprehensiveness of the law, unrealistic valuation assumptions and availability of market indices for the input variables. Other significant factors are explicitness of the law, integrity of the valuer, valuer's negligence, absence of quality control and training in rating valuation. As a recommendation, the study proposed that these causes be wholesomely addressed as it would enhance confidence and patronage.

Ajibola (2010) set out to ascertain the causes of inaccuracy in valuation. 150 questionnaires were administered and analysed via descriptive statistics. Results derived showed that absence of market data, outdated approach and influence of client are the leading causes of inaccuracy.

Babawale and Omirin (2011) examined the predictive and relative importance of individual characteristics of valuers/valuation firms on inaccuracy in residential property valuation in Lagos. A sum total of 250 questionnaires were administered to 250 ESV Firms in Lagos. Data obtained was analysed via descriptive and inferential statistics. It was revealed

that the main causes of valuation inaccuracy are; professional status of valuers; valuers familiarity with relevant markets; and gender. As recommendation, the study proposed that there should be regulation of valuation practice in Nigeria.

Babawale and Ajayi (2011) examined variance in residential property valuations in Lagos, Nigeria. A sum total of 250 questionnaires were administered to ESV Firms in Lagos. Secondary data utilized in the study was gotten from seminar papers, online materials, journals and textbooks. Data obtained was analysed using error metric and econometric statistical techniques. The study revealed valuation inaccuracy in residential property valuations in Lagos. As recommendation, the study proposed a review of the curriculum of Estate Management and an improvement in the oversight functions of regulatory bodies.

Bello and Oludele (2015) investigated variance in commercial properties in Lagos. A sum total of 166 questionnaires were administered to ESV Firms and data obtained were analysed with analysis of variance (ANOVA) to test the significance of difference in opinion. The results from the study showed that opinion of value lies within +5% to 11% in Lagos. It was recommended that property data bank should be established by the Nigerian Institution of Estate Surveyors and Valuers (NIESV) that will serve the purpose of providing valuation data across Lagos.

Effiong (2015) made a comparison of level of valuation variance and inaccuracy. A sum total of 50 questionnaires was administered to practising ESV Firms in Uyo and Calabar and data retrieved was analysed via Statistical Packages for Social Sciences (SPSS). From the study, it was gathered that valuation variance and inaccuracy exists in the Nigerian practice of valuation and it makes valuers prone to lawsuit.

Effiong and Mendie (2019) made an analysis and comparison of valuation estimates and sales price of residential properties in the metropolis of Calabar. Data was retrieved from

a total number of fourteen ESV Firms that were found to be active in the area. Descriptive statistics was used in the analysis of data where it was revealed that there is variation from valuation estimate when compared to later sales price.

Oduyemi *et al.* (2016) examined causes of inaccuracy in commercial office buildings. A sum total of 91 questionnaires were administered to practicing ESV Firms and data derived was analysed using mean ranking, factor and regression analysis. The study revealed that skill, type of property, experience and judgement of the valuer, integrity of the valuer and the absence of valuation standard manual were the four causes with statistically unique contribution to valuation accuracy.

Omolade *et al.* (2013) examined the main causes of error or variance in valuations. A total of 130 questionnaires were administered to practicing ESV Firms in Lagos and data obtained was analysed using weighted arithmetic mean. The study revealed that variance can be attributed to the adoption of different yields by Estate Surveyors and Valuers and the dearth of adequate market information.

Ogunba (2004) examined the accuracy of freehold valuations of investment properties in Nigeria. Questionnaires were administered to 200 ESV Firms in South Western Nigeria comprising Lagos, Ogun, Ondo, Ekiti, Oyo and Osun States. Data retrieved was analysed using ANOVA, mean deviation, interquartile range and regression analysis. The result obtained revealed valuation inaccuracy which means they cannot be relied on for property investment decision. The causes of the said inaccuracy was attributed to disparity in education and practice of the profession. The study recommended regular update of databank and publication of a valuation practice standard handbook in Nigeria.

Aliyu *et al.* (2018) investigated the causative factors of mortgage valuation inaccuracy in Kaduna metropolis. 57 questionnaires were administered to registered ESV Firms in Kaduna

City. Data obtained was analysed using Relative Importance Index (RII) and it showed that the most causative factors are inadequacy of data, expertise of the valuer, client pressure and valuation methodology.

Nwosu (2019) made an enquiry into the effect of valuation inaccuracy on the investment performance of commercial properties in Akure, Nigeria. The nineteen questionnaires retrieved as analysed using descriptive analysis while regression analysis was utilized to examine the implication of inaccuracy on investment performance. It was revealed that ±11-15% is the level of inaccuracy in Akure and there exist a negative effect at, at β=-.800, t=3.873, p>.05 on the investment performance of the commercial properties. The study recommended that there should be an in-depth understanding of the market conditions by considering adequately the market indices that influence the property market before the values of the properties are determined.

Oyeyoade (2012) investigated the influence of valuer's heuristic behaviour on valuation accuracy of commercial property in the familiar market environment. A total of 54 questionnaires was administered to practicing Estate Surveyors and Valuers in Ibadan metropolis. In addition, 10 surveyors were randomly chosen for participation in a structured interview. Data obtained was analysed using tables, mean and standard deviation, where anchoring and adjustment was revealed to be the most adopted heuristics by valuers.

<p style="text-align:center">**CHAPTER THREE**</p>

3.0   **RESEARCH METHODOLOGY**

3.1 Population of the Study

The population for this study comprises of all registered Estate Surveying and Valuation Firms in Abuja and Minna. It also includes residential properties sold in the last 36 months including the amount they were initially valued for. The breakdown of the population is shown below:

Table 3.1 Population

S/N	Location	No. of Registered ESV Firms
1	Minna	11
2	Abuja	168
	Total	179

Source: NIESV Online Directory (2022)

3.2 Sample Size

The entirety of the population is adopted for the study owing to the fact that they are meagre and to narrow down the number of possible unreturned questionnaires. Hence, all category of firms in the study area were reached irrespective of their years of practice and size. This will further enhance the reliability of the outcome.

3.3 Sampling Technique

Census sampling technique was adopted which entails the enumeration of all the members of the population under study.

3.4 Method of Data Collection

Data were collected via primary sources. This entails administering of questionnaires with questions reflective of the objectives of the study.

Table 3.2: Questionnaire Administration

S/N	Location	Questionnaire Administered	Questionnaire Returned	Percentage of Questionnaire Returned
1	Abuja	168	110	65
2	Minna	11	10	90

3.5 Data Requirements

Information derived from the respondents are in four categories:

i. Information on the valuers academic and professional qualifications; and years of experience.

ii. Information on residential property transactions conducted including valuation estimate and transaction price to check for valuation accuracy and/or margin of error.

iii. Information on factors that hinder valuation accuracy.

iv. Information on strategies to mitigate valuation inaccuracy.

3.6 Method of Data Presentation

Data obtained is be analysed via descriptive and inferential techniques. That is, using tables and percentages. This is be most suitable for data on academic and professional qualifications. For the first objective, Total variance test is then utilized to determine valuation accuracy and/or margin of error.

$$Total\ Variance = \frac{Transaction\ Price - Valuation\ Estimate}{Transcation\ Price}\ x\ 100$$

In the determination of factors that significantly influence valuation accuracy, relative importance index is used to rank the factors while bivariate regression is employed to examine how one variable is able to explain and/or predict the other.

$$Relative\ Importance\ Index\ RII\ = \frac{5n5 + 4n4 + 3n3 + 2n2 + 1n1}{5n}$$

Where n1 denotes the number of respondents that are strongly dissatisfied

n2 denotes the number of respondents that are dissatisfied

n3 denotes the number of respondents that are undecided

n4 denotes the number of respondents that agree

n5 denotes the number of respondents that strongly agree

4.0   **RESULTS AND DISCUSSION**

4.1 Results

In this chapter, data acquired from both study areas (Abuja and Minna) are tabulated and discussed. Beginning with Abuja, the data are showcased in this manner; data of estate surveyor and valuer respondents, data of estate firms, level of accuracy in the residential property market, a bivariate regression showing the interaction between the independent and dependent variable, and an analysis of factors that cause inaccuracy in valuation and measures to mitigate it using relative importance index.

4.1.1 Analysis of Personal and Firm Data of Respondents in the Study Areas

Percentages were employed to analyse personal and firm data of the respondent Estate Surveyors. This include data such as gender, academic qualifications, professional qualification of principal partners amongst others.

Table 4.1: Data of Estate Surveyor and Valuer Respondents

	Minna	Abuja
Variable		
Sex		
Male	9 (90.0%)	95 (86%)
Female	1 (10.0%)	15 (14%)
Academic Qualifications		
OND		3 (2%)
HND	5 (50.0%)	48 (44%)
BSC	3 (30.0%)	45 (41%)
MSC	2 (20.0%)	13 (12%)
PHD		1 (1%)
Professional Qualifications		
ANIVS	6 (60.0%)	67 (61%)
FNIVS	4 (40.0%)	8 (7%)
Others		35 (32%)
Position		
Principal Partner	2 (20.0%)	14 (13%)
Managing Partner	1 (10.0%)	10 (9%)
Partner	1 (10.0%)	11 (10%)
Associate	1 (10.0%)	29 (26%)
Head of Department	5 (50.0%)	4 (4%)
Senior Surveyor		16 (14%)
Surveyor		23 (21%)

Others		3 (3%)
Valuations per month		
0-3	7 (70.0%)	27 (24%)
4-5	1 (10.0%)	55 (50%)
6-10	2 (20.0%)	19 (17%)
10-20		6 (6%)
20-30		1 (1%)
30 and above		2 (2%)
Attend MCPD, seminars and lectures?		
Yes	10 (100%)	110 (100%)
No	0 (0%)	0 (0%)
MCPD/seminars attended over the last 24 months		
1-2	4 (40.0%)	46 (42%)
3-5	2 (20.0%)	50 (45%)
6-10	4 (40.0%)	10 (9%)
10 and above		4 (4%)

Source: Authors Field Data (2022)

Table 4.1 above shows that in Abuja, 86% of the respondents are male while HND is the highest academic qualification obtained followed by BSC both having a percentage of 44% and 41% respectively. In addition, the table shows 61% of the respondents are ANIVS and 50% carryout at least 3 to 5 valuations in a month. Furthermore, the table shows that 42% of the respondents have at least attended 1 to 2 MCPD seminar in the last 24 months and 14% were sponsored by their firms to attend said seminar. In conclusion, it can be deduced from the table that respondents are educated, experienced with valuation and have all attended at least 1 retraining seminar. For Minna, it shows that 90% of the respondents are males and HND accounts for the highest academic qualification with 50%. Majority of the respondents are registered estate surveyors and valuers with a percentage of 60; with 70% of the respondents carrying out at least 0-3 valuations in a month. In addition, it shows that they have all attended MPCD and 30% have attended 3-5 MCPD in the last 24 months. From the above data can be inferred that the respondents are knowledgeable and active practitioners of the estate profession. Furthermore, 90% of the respondents sponsored their self for the MCPD they attended, this shows willingness to develop and abreast self with skills and industry standards.

Table 4.2: Firm Data and Characteristics

S/N	Variable	Minna	Abuja
1	**Age of Firm**		
	0-3	1 (10%)	8 (7%)
	3-5	1 (10%)	10 (9%)
	5-10	1 (10%)	46 (42%)
	15 years above	7 (70%)	46 (42%)
2	**Professional status of Principal Partner**		
	Fellow	4 (40%)	29 (26%)
	Associate	6 (60%)	79 (72%)
	Others		2 (2%)
3	**Availability of a distinct Valuation Department**		
	Yes	2 (20%)	39 (36%)
	No	8 (80%)	71 (64%)
4	**Professional status of Head of Valuation Department**		
	Fellow	1 (1%)	15 (14%)
	Associate	9 (90%)	90 (82%)
	Probationer		5 (4%)
5	**Valuation received per month**		
	0-3	5 (50%)	31 (28%)
	4-5	3 (30%)	34 (31%)
	6-10	1 (10%)	36 (33%)
	10-20	1 (10%)	8 (7%)
	20-30		1 (1%)
6	**Undertake valuation jobs outside Primary Market**		
	Yes	9 (90%)	76 (69%)
	No	1 (10%)	34 (31%)
7	**Valuations outside property market area carried out directly or contacted**		
	Yes	3 (30%)	52 (68%)
	No	7 (70%)	24 (32%)
8	**Is 100% accuracy achievable**		
	Yes	2 (20%)	40 (36%)
	No	8 (80%)	70 (64%)
	Necessity of valuation standard manual for accuracy in valuation		
	Certainly	6 (60%)	70 (64%)
	Not quite	4 (40%)	31 (28%)
	Not at all		9 (8%)
	TOTAL	**10**	**110**

Source: Authors Field Data (2022)

The above table showcases the firm data and characteristics. In Abuja, it can be seen that 42% of the respondent firms have been in existence and/or operation for more than 15 years with 26% having principal partners that are fellows. Furthermore, it can be perceived that 33% conduct an aggregate of 6 to 10 valuations in a month and 69% undertake valuations outside of their primary market area. Valuation outside of a familiar market has been attributed to be one of the numerous causes of inaccuracy in valuation, as such, it is pertinent that valuations are carried out by skilled firms in the property markets they are acquainted with (IVS, 2020). The deviation from this however, as pointed out by Babawale (2021) can be attributed to the paucity of valuation instructions which serves as enticement for valuers to conduction valuations in property markets alien to them. In conclusion, respondent opinions shows that 64% believe 100% accuracy in valuation is not achievable while a meagre 8% are of the opinion that valuation standard manual are not at all necessary for valuation accuracy. In Minna, it is seen that 70% of the respondent firms have been in operation and/or existence for more than 15 years with only 40% having fellows as principal partners. It also shows that a meagre 20% have a distinct valuation department in their firm while 50% conducts a minimum of 0-3 valuation per month. The valuers in Minna also undertake valuations outside their primary market, at least 90% of them – with only 70% contracting it out. With regards to achievability of 100% accuracy in valuation, 80% of the respondents are of the opinion that it is not achievable while 60% agrees that valuation standard manual are necessary for accuracy in valuation.

4.3 Analysis of Valuation Accuracy in the Residential Property Market of Abuja

Total Variance Test and Median Percentage Error was employed to determine valuation accuracy of all property transactions conducted in the study area in the last 36 months.

Table 4.3: Level of valuation accuracy in the Residential Property Market in Abuja

S/N	Description of Property	Location	Actual Sale Price (₦)'m	Valuers Valuation Opinion (₦)'m	Margin of Error (%)	Median Percentage Error (%)
1	2 bedroom	Kubwa	7.5	10	33	16
	3 bedroom duplex	Kubwa	40	35	12	
	5 bedroom bungalow on 2000sqm plot	Kubwa	720	650	9	
	5 bedroom duplex	Kubwa	217	200	7	
	6 bedroom duplex	Kubwa	60	45	25	
	3 bedroom flat	Kubwa	120	80	33	
	6 unit 2 bedroom	Kubwa	150	120	20	
	5 bedroom detached	Kubwa	15	12	20	
	2 bedroom flat	Kubwa	87	90	3	
	10 bedroom duplex	Kubwa	38	39	2	
2	3 bedroom	Guzape	130	150	15	12
	5 bedroom detached	Guzape	90	110	22	
	4 bedroom duplex	Guzape	92	85	7	
	5 bedroom detached	Guzape	210	250	19	
	5 bedroom apartment	Guzape	165	140	15	
	5 bedroom duplex	Guzape	100	110	10	
	2 bedroom apartment	Guzape	37	30	18	
	4 bedroom duplex	Guzape	265	280	5	
	4 bedroom duplex	Guzape	185	150	18	
	5 bedroom mansion	Guzape	300	320	6	
	5 bedroom duplex	Guzape	95	100	5	
	5 bedroom duplex	Guzape	286	300	4	
	5 bedroom semi detached	Guzape	140	160	14	
	4 bedroom duplex	Guzape	124	130	4	
3	4 bedroom semi-detached	Lifecamp	112	110	1	12
	3 bedroom flat	Lifecamp	24	18	25	
	3 bedroom apartment	Lifecamp	27	30	11	
	4 bedroom duplex	Lifecamp	195	170	12	
	5 bedroom duplex	Lifecamp	250	200	20	
	5 bedroom	Lifecamp	100	80	20	
	3 bedroom bungalow	Lifecamp	47	45	4	
	5 bedroom duplex	Lifecamp	192	200	4	
4	4 bedroom semi detached	Gudu	43	45	4	4

5	2 bedroom flat	Karsana	5	4.5	10	10
	5 bedroom duplex	Karsana	20	18.3	8	
	5 bedroom duplex	Karsana	200	200	0	
	5 bedroom duplex	Karsana	112	130	16	
	5 bedroom detached	Karsana	127	145	14	
6	7 bedroom duplex	Katampe	100	91	9	14
	4 bedroom + BQ	Katampe	53	60	33	
	6 bedroom maisonette	Katampe	835	800	4	
	3 bedroom + BQ	Katampe	90	70	22	
	5 bedroom duplex	Katampe	130	150	15	
	12 unit 3 bedroom	Katampe	720	800	11	
	4 bedroom duplex	Katampe	400	350	12	
	4 bedroom	Katampe	100	80	20	
7	3 bedroom flat + BQ	Wuye	45	43	4	10
	3 bedroom	Wuye	19	18	5	
	5 bedroom duplex	Wuye	230	235	2	
	4 bedroom detached	Wuye	170	150	11	
	5 bedroom duplex	Wuye	185	170	8	
	3 bedroom apartment	Wuye	85	60	29	
	5 bedroom terrace	Wuye	150	170	13	
	6 bedroom	Wuye	220	180	18	
8	5 bedroom duplex	Maitama	480	550	14	4
	3 units 3 bedroom	Maitama	600	625	4	
	7 bedroom duplex	Maitama	923	950	2	
9	3 bedroom	Jahi	49	45	8	8
	4 bedroom apartment	Jahi	40	45	12	
	4 bedroom duplex	Jahi	255	250	1	
10	3 bedroom	Garki	39	35	10	10
	4 bedroom duplex	Garki	235	200	14	
	4 bedroom twin duplex	Garki	410	400	2	
11	4 bedroom duplex	Galadimawa	115	130	13	11
	5 bedroom flat	Galadimawa	109	100	1	
	5 bedroom	Galadimawa	45	50	11	
	4 bedroom	Galadimawa	147	130	11	
	3 bedroom duplex	Galadimawa	55	45	18	
	5 bedroom	Galadimawa	50	45	10	
12	5 bedroom	Mabushi	400	420	5	5
	4 bedroom terrace	Mabushi	405	420	3	
	5 bedroom + BQ	Mabushi	445	420	5	
	4 bedroom	Mabushi	137	130	5	
13	3 bedroom	Gwarinpa	63	55	12	10
	3 bedroom	Gwarinpa	32	35	9	
	5 bedroom semi-detached	Gwarinpa	243	230	5	
	3 bedroom bungalow	Gwarinpa	63	60	4	
	7 bedroom duplex	Gwarinpa	75	100	33	
	6 units 2 bedroom	Gwarinpa	227	250	10	
	4 bedroom bungalow	Gwarinpa	90	55	38	
	3 bedroom bungalow	Gwarinpa	69	65	4	

14	3 bedroom	Kuje	22	18	18	10
	3 bedroom	Kuje	30	33	10	
	5 be4droom	Kuje	59	55	5	
15	2 bedroom	Lugbe	20	22	10	
	3 bedroom bungalow	Lugbe	47	30	36	
	2 bedroom + BQ	Lugbe	37	30	18	
	3 bedroom bungalow	Lugbe	45	40	11	
	2 bedroom bungalow	Lugbe	30	25	16	
	3 bedroom bungalow detached	Lugbe	33	35	6	
16	5 bedroom duplex + BQ	Lokogoma	60	90	50	50
17	4 bedroom	Gaduwa	27	30	11	11
18	4 bedroom terrace	Jabi	65	75	11	32
	4 bedroom apartment	Jabi	69	87	26	
	3 bedroom	Jabi	47	65	38	
	3 bedroom	Jabi	40	55	37	
19	4 bedroom semi detached	Apo	34	40	17	15
	4 bedroom duplex	Apo	100	85	15	
	2 bedroom bungalow	Apo	37	45	21	
	9 bedroom duplex	Apo	500	450	10	
	3 bedroom duplex	Apo	105	110	4	
20	3 bedroom duplex	Asokoro	165	120	27	8
	4 bedroom flat	Asokoro	400	370	7	
	7 bedroom duplex	Asokoro	490	600	22	
	7 bedroom duplex	Asokoro	900	940	4	
	6 bedroom duplex	Asokoro	900	900	0	
	3 bedroom duplex	Asokoro	110	120	9	
21	4 bedroom semi detached	Wuse	427	400	6	4
	4 unit 3 bedroom flat on 2 floors	Wuse	170	165	2	
22	17 unit 2 bedroom	Gwagwalada	215	200	6	6
23	3 bedroom bungalow	Kaura	83	60	28	28
24	3 bedroom bungalow	Karu	50	60	20	20
25	3 bedroom bungalow	Dakwo	27	24	11	11
26	6 unit 2 bedroom	Dawaki	60	70	16	10
	5 bedroom duplex	Dawaki	335	320	4	

Source: Authors Field Data (2022)

Table 4.3 is an enumeration of 117 residential property transactions conducted in Abuja in the last 36 month. The data is divided into 26 sub-markets showing the description and location of the property, sale price and valuer's valuation opinion, as well as the margin of error and median percentage error for each sub-market. Using a margin of error of 10% which is the acceptable level of variation per RICS and the court of law in the case of *Singer and*

Friedlander Limited v. John D Wood & Co (1997) 2 EGLR, the table shows valuation inaccuracy of extreme proportions varying to 50%, 38%, 37% and 33%. Summarily, 52% of the 117 transactions exceeded the acceptable margin of error. It was also observed that valuations were inaccurate in certain sub-markets compared to others. They include; Kubwa, Galadimawa, Lifecamp, Katampe, Guzape, Kaura Karu, Dakwo, Apo, Jabi and Lokogoma.

4.4 Analysis of Level of Valuation Accuracy in the Residential Property Market of Minna

Total Variance Test and Median Percentage Error was employed to determine valuation accuracy of all property transactions conducted in the study area in the last 36 months.

Table 4.4: Level of valuation accuracy in the Residential Property Market in Minna

S/N	Description of Property	Location	Actual Sale Price (₦)'m	Valuers Valuation Opinion (₦)'m	Margin of Error (%)	Median Percentage Error (%)
1	5 bedroom detached bungalow	Mandela Road	7.8	8	3	3
2	2 unit 2 bedroom	Morris	3.5	3.8	9	55
	3 bedroom apartment	Morris	3.5	7	100	
3	5 bedroom apartment	Bosso	18	29	61	38
	3 bedroom flat	Bosso	6.5	9	38	
	3 bedroom flat	Bosso	12	9	25	
5	Tenement	Maitumbi	6	8	33	28
	4 bedroom and BQ	Maitumbi	18	22	22	
6	5 bedroom flat	London street	23	28	21	21
7	2 bedroom apartment	Tunga	7	8.5	21	21
	2 bedroom apartment	Tunga	5.5	6	9	
	2 bedroom apartment	Tunga	6	8.5	42	
8	2 bedroom flat	Barkin Sale	3.5	5	43	43
9	3 bedroom	Sauka	18	17	6	9
	2 bedroom	Kahuta Sauka Kahuta	4.5	5	11	

Source: Authors Field Data (2022)

The table itemizes the 15 residential property transactions conducted in Minna in the last 36 months. The data is divided into 9 sub-markets showing the description and location of the

property, sale price and valuer's valuation opinion, as well as the margin of error and median

percentage error for each sub-market. Using a margin of error of 10% which is the acceptable

level of variation per RICS and the court of law in the case of *Singer and Friedlander Limited*

v. John D Wood & Co (1997) 2 EGLR, the table shows valuation inaccuracy of extreme

proportions varying to 100%, 61%, 43% and 42%. Summarily, only 27% of the 15 property

transactions were within the acceptable margin of error making the remaining 73% inaccurate.

An observation of the median percentage error shows that valuations was within the acceptable

margins in Mandela Road and Sauk Kahuta sub-market.

4.4.1 Analysis of Independent and Dependent Variables Using Bivariate Regression

Bivariate regression is employed to see how one variable is able to predict and/or explain

variation in the other variable. In this instance, the independent variable is the valuer's

valuation opinion while the dependent variable is the actual sale price of all residential property

transactions in the study areas and the result is presented in Table 5.

Table 4.5: Result of the Regression Analysis

Residential Property Market	Model	Unstandardised Coefficients		Standardised Coefficients	T	R^2	Adjusted R^2	Sig
		B	Std Error	B				
Minna	(Constant)	1003636.524	1079871.461		.929	.876	.867	.370
	Valuation	.735	.077	.936	9.597			.000
Abuja	(Constant)	8166628.174	6212457.756		1.315	.937	.937	.191
	Valuation	.938	.023	.968	41.148			.000

Source: *Field Survey (2022)*

The regression equation for ascertaining the sale price from valuation opinion in the residential

property market in Minna is

$$y = 1003636.52 + 0.735x + e \qquad (1)$$

In addition, the r squared for this equation is 0.876 which means 87.6% of the variance in sale

price was predicted from valuation opinion with the remaining 12.4% being a result of chance

or other factors as indicated in Table 7. For the residential property market in Abuja, the regression equation is

$$y = 81166628.20 + 0.938x + e \qquad (2)$$

Also, the r squared for this equation is 0.937. This implies that 93.7% of the variance in sale price was predicted from valuation opinion with the remaining 6.3% attributed to other factors. From the regression results, valuations are better proxies for actual prices in the residential property market in Abuja than Minna.

4.5 Analysis of Causes of Valuation Inaccuracy in the Residential Property Market of the Study Areas

Factors known to professionals to be instrumental to valuation inaccuracy are analysed via mean and standard deviation and subsequently ranked.

Table 4.6: Factors that cause valuation inaccuracy in the Residential Property Markets in the Study Areas

Perceived Causes	Minna				Abuja			
	Sum	Mean	Std Dev.	Rank	Sum	Mean	Std Dev.	Rank
Complex nature of subject property	42	4.2	1.03280	4th	390	3.55	1.17025	13th
Wrong valuation methodology	44	4.4	0.51640	3rd	443	4.02	0.96152	1st
Client pressure	42	4.2	0.91894	4th	425	3.86	1.16112	4th
Inadequate time for proper inspection and valuation	47	4.7	0.67495	1st	404	3.67	1.10137	11th
Usage of multiple valuation methods	45	4.5	0.84984	2nd	369	3.35	1.19315	16th
Inadequacy of relevant data	42	4.2	0.78881	4th	417	3.79	1.05878	7th
Imperfect nature of the property market	40	4.0	1.05409	5th	414	3.76	1.06596	8th
Ineffective regulatory framework	45	4.5	0.52705	2nd	383	3.48	1.16313	14th
Non- adherence to valuation standards	42	4.2	0.78881	4th	402	3.65	1.05305	12th
Valuers' poor familiarity with property market	44	4.4	0.96609	3rd	404	3.67	1.11790	10th

	Sum	Mean	Std Dev.	Rank	Sum	Mean	Std Dev.	Rank
Limited number of similar valuations undertaken	40	4.0	0.81650	5th	382	3.47	1.11462	15th
Valuers' poor compliance with ethical standards in valuation	39	3.9	1.10050	6th	421	3.83	1.04801	6th
Poor expertise and experience of the valuer	39	3.9	1.19722	6th	435	3.95	0.96152	2nd
Uncertainty in the national economy	40	4.0	0.94281	5th	411	3.74	1.05515	9th
Wrong measurement of subject property	42	4.2	0.63246	4th	422	3.84	1.11312	5th
Mis-description of the subject property	39	3.9	0.99443	6th	431	3.92	1.09320	3rd

SA=Strongly Disagree, D=Disagree, U=Undecided, A=Agree, SA= Strongly Agree

Source: Authors Field Data (2022)

The above table ranks valuers opinions on the causes of valuation inaccuracy in both study areas. In Abuja, wrong valuation methodology is perceived as the leading cause of valuation inaccuracy. In Minna, inadequate time for proper inspection and valuation is ranked as the leading factor that causes variance. This is followed by ineffective regulatory framework and followed by usage of multiple valuation method and wrong valuation methodology. With a Cronbach Alpha of 0.890 and 0.768 respectively, these perceptions are reliable and acceptable.

4.6   Analysis of Possible Measures to Valuation Inaccuracy in the Residential Property Market of Both Study Areas

Measures likely to solve or substantially resolve valuation inaccuracy are analysed via mean and standard deviation and subsequently ranked.

Table 4.7: Suggested measures to valuation inaccuracy in the Residential Property Markets in the Study Areas

Suggested Measures	Minna				Abuja			
	Sum	Mean	Std Dev.	Rank	Sum	Mean	Std Dev.	Rank
Componentisation of property valuation	33	3.3	1.41814	8th	438	3.9818	0.91853	9th
Improved valuation education in tertiary institutions	41	4.1	0.87560	7th	473	4.30	0.73634	2nd

Compulsory attendance of CPD	43	4.3	0.67495	6th	441	4.00	0.98144	8th
Improved IT and pupillage training	45	4.5	0.52705	3rd	453	4.11	0.90596	7th
Improved syllabus and curriculum	44	4.4	0.51640	4th	459	4.17	0.86586	5th
Stricter enforcement of NIESV code of conduct	45	4.5	0.52705	2nd	430	3.9091	1.02756	10th
Compliance with valuation standards and guideline manual	46	4.6	0.51640	1st	467	4.24	0.85870	4th
Specialization within the valuation profession	44	4.4	0.84327	5th	416	3.7818	1.07841	11th
Refresher courses for practicing valuers	44	4.4	0.69921	4th	455	4.14	0.95281	6th
Creation of databank for valuation	45	4.5	0.52705	2nd	475	4.31	0.84519	1st
Improved valuation techniques	43	4.3	0.82327	6th	470	4.27	0.77707	3rd

SA=Strongly Disagree, D=Disagree, U=Undecided, A=Agree, SA= Strongly Agree

Source: Authors Field Data (2022)

The above table ranks valuers opinions on the possible measures to valuation inaccuracy. In Abuja, ranked first is the creation of databank for valuation. This entails collation of a property transaction of various types that is digitized and that can serve as a guide to valuers, especially those in alien property markets. Ranked second, third and fourth is improved valuation education in tertiary education in tertiary institutions, improved valuation techniques and compliance with valuation standards and guideline manual. Specialization within the valuation profession is ranked eleventh. With a Cronbach alpha of 0.760, these perceptions are reliable and acceptable. In Minna, ranked first is compliance with valuation standards and guideline manual which is closely followed by stricter enforcement of NIESV code of conduct. The code of conduct play the role of a lighthouse to estate surveyors in their professional practice. Also ranked second is the creation of a databank for valuation which is in consonance with the ranking of respondents in Abuja property market. This followed by improved IT pupillage and

improved valuation education in tertiary institutions in third and fourth places respectively. With a Cronbach Alpha of 0.776, these perceptions are reliable and acceptable.

CHAPTER FIVE
CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This research was an enquiry into the accuracy of the residential property markets in Abuja and Minna. The intent is determine the margin of error and ultimately help understand the factors responsible for inaccuracy and measure that could help mitigate it. Summarily, the findings are as follows:

1. The Estate Management and Valuation profession is a male driven with most surveyor having HND as their highest academic qualification. An average firm has a minimum of two people as staff – saddled with all the affairs of the firm, while only a handful of firms sponsor their staffs for seminar training/ MCPD.

2. There is a handful of newly registered firms combined with firms that have been in operation for over a decade. Majority of the principal partners of these firms are Associates while a meagre amount are in the fellowship cadre of NIESV. In addition, due to the high level of competitiveness of the market and the paucity of instructions, valuers are ever willing to undertake valuations outside of their primary market, often times, carrying out such valuations directly and not contracting it out. Furthermore, only a handful of firms have a separate valuation departments which is mostly headed by the principal partner.

3. On the achievability 100% accuracy in valuation, majority of the respondents believe it to be unlikely, however, they agree that having a valuation standard manual will make valuations more accurate. Direct comparison and income capitalization was also seen as the most employed valuation methods.

4. The top 5 causes of valuation inaccuracy in the study areas are: wrong valuation methodology, poor expertise and experience of the valuer, client pressure, mis-description of the property and inadequate time for proper inspection and valuation.

5.2 Conclusion

Enquiry into valuation inaccuracy started in 1985 with the works of Hager & Lord and this study shows that it persisted and is yet to be overcomed. Akin to valuation inaccuracy detected by a plethora of studies conducted in Nigeria; margin of errors exceeded permissible limit in the markets studied. In Bosso and Lokogoma sub-markets for example, the margin of error rose to a staggering 38% and 50% respectively. With 20% of real estate transactions in Nigeria done in Abuja alone, this study has shown the need for instant enforcement of measures likely to mitigate valuation inaccuracy so as to safeguard the profession and retain public trust and confidence in valuers. For further research, enquiry should centre on the sub-market of the CBD's in Abuja. The role of lag period in valuation accuracy can as well be looked into.

5.3 Recommendations

With allegations of negligence becoming rampant in the valuation profession to embrace other professionals in the built and non-built environment due to wide range of factors such as inadequate knowledge of market, usage of wrong methods and succumbing to the influence/pressure of clients, the following recommendations are pertinent:

1. **Improved syllabus and curriculum**: it is pertinent that estate departments periodically revaluate their curricula and ensure it captures issues in professional practice. Social and behavioural skills needs to be inculcated into the programme of estate management and valuation students as it will equip and ready them when dealing with individuals from varying backgrounds upon commencement of professional practice. These skills include: crisis management, critical thinking, mathematical and problem solving, leadership and

communication skills. In addition, the valuation course should be made to become more of practical than of theory and specialization of students in valuation encouraged.

2. **Refresher courses and attendance of MCPD**: to survive the highly competitive nature of property market, it is imperative valuers train and retrain so as to abreast themselves with new developments in the field and enhance their expertise. Firms should encourage, advocate and cushion the expenses involved in participating in these seminars for their staffs. The regulatory bodies should at intervals make these seminars free so valuers have no excuse not to attend.

3. **Integrity**: It is important valuers stand their ground and refuse to alter valuation from what it realistically is – even when not doing so has the potential of costing them that client and future patronage. Their integrity should never be uncompromised as the implications are dire.

4. **Research**: upon receipt of instruction, it is important valuers conduct un-exhaustive research on the property and the property market. Thorough consultations should be made from professional colleagues on the valuation method to be employed and how to go about a complex subject property

5. **Regulatory Framework**: NIESV and ESVARBON should commence and annual evaluation of firms where activities and transactions done for the entirety of the years are submitted and evaluate to ensure they are in alliance with the set standards. This will ensure carefreeness and greatly elevate public confidence in the profession.

5.4 Contribution to Knowledge

Past studies on valuation accuracy both foreign and local have traced the lack of valuation accuracy to a plethora of reasons some of which include valuation methodology, problem of relevant data, client pressure, effectiveness of regulatory framework and university curriculum amongst others (Oduyemi *et al.,* 2016). The role of heuristics, departure from normative model, sales comparison and client influence has also been noted.

However, a critical and in-depth perusal of the studies carried out locally showed that the focus was more on commercial properties with only a handful investigating valuation accuracy in residential properties. A population gap is also highlighted as seen in the dearth of valuation accuracy studies focusing on the Property Market in Northern Nigeria as most studies were carried out in South-Western Nigeria (Ogunba 2004; Ajibola 2010; Oduyemi *et al.,* 2016). These gaps created the need for this study.

This study found that the ability of valuation to to predict actual price is greater in the residential property market in Abuja (93.7%) than in Minna (87.6%). In addition, the top 5 causes of inaccuracy in the study areas are wrong valuation methodology, poor expertise, client pressure, mis-description of the property and inadequate time for inspection. Lastly, due to paucity of instructions, valuers are ever willing to undertake valuation outside of their primary market, often times, carrying out such valuations directly and not contracting it out.

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APPENDIX

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

DEPARTMENT OF ESTATE MANAGEMENT AND VALUATION

Dear Sir/Ma,

<u>RESEARCH QUESTIONNAIRE</u>

This questionnaire is designed to assess valuation accuracy in the residential property markets in Abuja and Minna. This study is solely intended for academic purposes and the result will be useful to all stakeholders in the property market. Your participation in this data collection process will therefore be highly appreciated. Confidentiality of your response is assured and your anonymity is guaranteed.

Thank you.

DANGANA UMAR SABA

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This part seeks information on professional estate surveyors and valuers; valuation firms; and practice of real estate valuation in Nigeria.

SECTION A   <u>PERSONAL DATA OF RESPONDENTS</u>

1. **Name (optional):** ……………………………………………………………………………
2. **Sex:** Male [ ], Female [ ]
3. **Academic qualifications:** OND [ ], HND [ ], B.SC [ ], M.SC [ ], Ph.D [ ]
4. **Professional qualifications:** ANIVS [ ], FNIVS [ ], MRICS [ ] FRICS [ ], Others [ ]
5. Work experience:
   - Pupil estate surveyor and valuer: from ………. to ………….
   - Associate member of NIESV: from………. to……………
   - Fellow of NIESV: from ……....to……………
6. **How long have you been in real estate practice?**...........................
7. **What position do you occupy in your present employment?**...................................

   Principal Partner [   ], Managing Partner [ ], Partner [ ], Associate [ ], Head of Department [ ], Senior Surveyor [ ], Surveyor [ ]. Others please specify……………………………………………………………………………

8. **How many valuations do you carryout in a month?** 0 – 3 [ ], 4 – 5 [ ], 6 – 10 [ ], 10 – 20 [ ], 20 – 30 [ ], 30 and above [ ].
9. **Do you attend seminars, lectures, in-house training and Mandatory Continuous Professional development (MCPD)** Yes [ ], No [ ].
10. **If no, why?** You may tick more than one as appropriate.

Not interested/important [ ], Not in my priority activities [ ], Not beneficial [ ], Lack of time [ ], Inability to pay fees [ ], Difficulty obtaining permission from work place [ ]. Others specify…………………………………………………………………………

11. **If yes, how many have you attended over the last 24 months?**
1 – 2 [ ], 3 – 5 [ ], 6 – 10 [ ], above 10 [ ].

12. **Who sponsored you to the seminar/training/ MCPD?**
Myself   [   ],   My   firm   [   ],   Others   specify
…………………………………………………………………………..

SECTION B   FIRM'S DATA

1. **Name and address of firm…………………………………………………………………**
2. **Age of the firm?** 0 – 3yrs [ ], 3 – 5yrs[ ], 5 – 10yrs[ ], 15yrs above [ ]
3. **What is the professional status of your principal partner/officer?** Fellow [   ], Associate [ ]. Others specify……………………………….
4. **What are your areas of job specialization?** You may tick more than one as appropriate:
Valuation [   ], Development Appraisal [   ], Agency/Management [   ], Property Development/Project   Management   [   ].   Others specify…………………………………………………………...
5. **Do you have a distinct valuation department/unit/section?** Yes [ ], No [ ].
6. **How many valuers are in your valuation department/unit/section?**..........................
7. **What is the professional status of the head of your valuation department/unit/section?** Fellow [ ], Associate [ ], Probationer [ ], Student Member [ ].
8. **How many valuation instructions does your firm receive in a month?**
0 – 3 [ ], 4 – 5 [ ], 6 – 10 [ ], 10 – 20 [ ], 20 – 30 [ ], 30 and above [ ].
9. **Do you undertake valuation jobs outside your primary market?** Yes [ ], No [ ].
10. **When you have instructions to value properties outside your primary market area, does your firm carry out the valuations directly or do you contract it out to valuers operating in the locality concerned?** Yes [ ], No [ ].
11. **What quality control measure do you have in place in your firm to ensure accurate valuation?** You may tick more than one as appropriate:
- Valuers work closely with staff of agency department for market data [ ]
- We have our standard approach and reporting [ ]
- We use valuation standard manual (Red Book,/Blue Book/White Book) [ ]
- Internal review by other valuers and the HOD [ ]
- Review at departmental meeting [ ]
- Others specify…………………………………………………………………………
-

SECTION C   VALUATION ACCURACY

1. **In your opinion, is 100% accuracy achievable in valuation?** Yes [ ], No [ ].
2. **Do Nigerian valuers require valuation standard manual to achieve more accurate valuation?** Certainly [ ], Not quite [ ], Not at all [ ].

3. **Do you make use of any of the following valuation standard manual for your valuation works?** You may tick more than one as appropriate:

The Red Book of RICS [ ], The Blue Book of TEGOVA [ ], The White Book of IVSC [ ]. Others specify…………………………………………………………………………

4. **Rate the following as the most reliable method of valuation under the existing valuation environment in Nigeria today.**

S//N	Method of Valuation	Always 3	Sometimes 2	Rarely 1	Not at all 0
1	Direct comparison				
2	Income capitalization				
3	Residual				
4	DRC				

5. **Assess the following causes of inaccurate valuation of residential properties in your locality.** Tick as many as possible.

SD – Strongly disagree / D – Disagree / U – Undecided / A – Agree / SA – Strongly Agree

S/N	Property Characteristics	SD 1	D 2	U 3	A 4	SA 5
1	Complex nature of subject property					
2	Wrong valuation methodology					
3	Client pressure					
4	Inadequate time for proper inspection and valuation					
5	Usage of multiple valuation methods					
6	Inadequacy of relevant data					
7	Imperfect nature of the property market					
8	Ineffective regulatory framework					
9	Non-adherence to valuation standards					
10	Valuers poor familiarity with property market					
11	Limited number of similar valuations undertaken					
12	Valuers poor compliance with ethical standards in valuation					
13	Poor expertise and experience of the valuer					
14	Uncertainty in the national economy					
15	Wrong measurement of the subject property					

| 16 | Mis-description of the subject property | | | | | |

6. Rate the following solutions to valuation inaccuracy. Tick as many as possible.
SD – Strongly disagree / D – Disagree / U – Undecided / A – Agree / SA – Strongly Agree

S/N	Solutions	SD 1	D 2	U 3	A 4	SA 5
1	Componentisation of property valuation					
2	Improved valuation education in tertiary institutions					
3	Compulsory attendance of CPD					
4	Improved IT and pupillage training					
5	Improved syllabus and curriculum					
6	Stricter enforcement of NIESV code of conduct					
7	Compliance with valuation standards and guideline manual					
8	Specialization within the valuation profession					
9	Refresher courses for practicing valuers					
10	Creation of databank for valuation					
11	Improved valuation techniques					

7. **What do you consider the most significant danger of valuation inaccuracy?** Please tick **ONLY** one.
   - Valuation profession ill lose credibility [ ]
   - Wrong signals to property investors [ ]
   - Expose valuers to negligence liability [ ]
   - Valuation jobs will go to other professional like accountants, engineers [ ]
   - The future of valuation profession is in danger [ ]
   - Others specify…………………………………………………………………….

SECTION D   PROPERTY / SALE DATA

1. Please complete this table with the details of residential properties valued and sold by your firm in the last 36 months.

S/N	Description of Property	Location	Date of Valuation	Date of Sale	Owner's Asking Price (₦)	Valuer's Valuation Opinion (₦)	Actual Sale Price (₦)

Thank you.