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Development of property databank in Nigeria property market: issues, challenges, and way forward

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Abstract

Property valuation and investment analysis depend on access to property data which are scarce in practice but can be improved through the creation of a property databank. It is in this regard that the paper examines issues relating to the development of property databank in the Nigeria property market. These are with a view to provide information that will improve valuation practice in Nigeria.The paper adopts a desktop analysis of results from previous studies carried out on the subject and a synthesis of personal experience of the author in private practice at the firm of Messers Biodun Olapade & Co (Estate Surveyors & Valuers). The paper explores the option of creating a databank of concluded transactions by examining major considerations in designing such databank. A practical experience of the development of centralised databank is also presented. The paper concludes that there is a need for close collaboration among stakeholders if the development of the databank will be effected.

Keywords: *Property database; Nigeria property market; valuation practice; investment analysis; real estate*

Introduction

In 1985, Udo-Akagha, while writing the foreword to Guidance Notes on Property Valuation noted that "there ought to be no reason why two or more valuers valuing the same interest in a property for the same purpose and at the same time should not arrive at the same or similar results if they make use of the same data and follow the same valuation approach". Comments of this nature have reinforced the importance of property data in valuation and investment analysis. This is because dealings in the property market hinges on accessing of adequate property data to assist in making the necessary decision. It is therefore not a myth that property data are referred as the driving force that fuel valuation and the "holy grail" of valuation profession (Olapade, 2014). When property data are easily accessible, the valuers will have at their disposal necessary market information for preparation of an objective and

evidenced-based valuation report. Again, the functioning and transparency rating of the property market could also be enhanced by the availability and accessibility of property data. This is because property market transparency rating depends on data accessibility. Non-accessibility of property therefore has the implication of discouraging investment in the property market.

Meanwhile, unlike the stock market where data on current market price of share can easily be accessed by consulting the financial pages of newspapers, property data are difficult to access. Information concerning a property sales price, lease terms, and any other data in a transaction are usually not available to those that are not parties to the transactions (Fisher and Martin, 2007), except such are made available to the public.

The problem of data inaccessibility in Nigeria is more reinforced as a result of no centralised databank of concluded transactions in the country. Apart from this, only about five percent (5%) of the entire property in the country is registered in the local Land Registries (Adeniyi, 2012) which supposed to serve as a repository of transactions in the market. Meanwhile for the few properties that are registered in the Lands registry, the transaction data cannot be relied upon as actual concluded transaction prices because such prices are usually understated to reduce tax burden (Olapade and Olaleye, 2017a). Considering the forgoing, the solution suggested in literature (RICS, 1994; Olaleye, 2004; 2017; Olapade and Olaleye, 2018) to solve the data debacle is by the provision of a centralised databank which will make available property data. In Nigeria, the Nigerian Institution of Estate Surveyors and Valuers has been in the vanguard of creation of a centralised databank since the early 90s with the inauguration of many committees in this regard but, unfortunately, it has not yielded much fruit. Considering the foregoing, this paper examines issues relating to the development of property databank in the Nigeria property market. The paper is divided into six sections including the introduction. The second section examines the meaning and importance of property databank while the third section examines means of accessing property data and factors affecting data accessibility. The fourth section considers the need for property databank and consideration for its designs while the fifth section examines a case study for development of a property databank. The sixth section examines challenges at accessing property data while the seventh section concludes.

Meaning and Importance of Property Databank

Databank or database is the collection of data arranged for ease and speed of search and retrieval (Boyce *et al*., 2006; Gordon, 2007). Property databank relates to a collection of property transactional data stored manually or in a web-based computer application and arranged for ease and speed of search and retrieval.

Importance of Property Databank

The following are some of the importance of property databank as provided by (Rowley et.

al., 1998; Olapade & Olaleye, 2018)

- Increase the availability of comparable evidence which can used in valuation analysis
- Improve the ease of having access to property data in concluded property transactions
- Improve the efficiency of collection of comparable evidence data
- Reduce valuation variance and inaccuracy
- Allows the use of automated computer assisted valuation such neutral network, multiple regression analysis (MRA)
- Promote co-operation among valuers
- Improve the quality of service to clients
- Useful in construction of property price indices
- Allows improved transparency and maturity rating of the property market
- Useful to financial institutions to gauge the risk of real estate investment
- Allows prediction of property prices

Considering the importance of property databank, it is therefore not surprising that there is great support for creation of property databank in Nigeria property market. For instance, Olapade and Olaleye (2018) discovered that majority of the practitioners in Lagos, Nigeria property market were in support of creation of a central databank.

Property Databank in Developed Property Markets

Recent studies in developed property market of Europe revealed that property practitioners now make use of central databank for data acquisition and data storage. For instance, in Lithuania, all property data are registered in one integral digital Real Property Central Database managed by the State Enterprise Centre of Registers (Tomson, 2016). Similarly, in Sweden, property data is stored through a web-based central databank referred as DATSCHA which collect raw real estate/property data from many sources and make it available to real estate professional by payment of annual subscription (Tomson, 2016). According to Peltola (2013), a GIS-databank for real estate data was available in Finland. The GIS-databank referred as 'JAKO-system'' collects and provides information on cadaster data, topographical data and purchase price online. Similarly, in Iceland, a web-databased databank wherein information such as monthly/quarterly rent and price index and also information on property listing amongst other information are recorded was available (Tomson, 2016). In Germany and France, a centralised databank is also employed.

In the UK, Rowley (1998) reported the assemblage of transactional data of Surveyors in the United Kingdom in an online platform known as National Valuation Evidence Database. Again, Onwunayi (2020) reported that there was no centralised property database in the UK, US and Northern Ireland since those countries do not have centralised registration. The author provided the example of the United Kingdom where the Royal Institute of Chartered

Surveyors serve as a private source of data while the Inland Revenue serve as a public source by providing online tabulation of property transaction. The corollary of the foregoing is that the development of databank in different property markets differs and were according to their individual peculiarities and needs.

Development of Property Databank in Nigeria: Past Efforts and Issues Arising

Past efforts to develop property databank in Nigeria has been championed by the Nigerian Institution of Estate Surveyors and Valuers (NIESV). Efforts by past leaderships of the Institution has been through the use of ad-hoc technical committee which usually coordinate such activities. Such activities have been able to generate various reports on property data. For instance, the popular report, Igboko (1992) provided information on the Years Purchase (YP) on different categories of properties in different locations in Nigeria. Similarly, in NIESV (2013), the average selling prices of different categories of properties in Lagos State were provided. The Lagos State followed the approach of NIESV (2013) and published the fair market value of land in different location in Lagos State (Lagos State Government, 2014). While all these efforts have increased the market referencing for decision making, the approach adopted has been criticised by scholars. For instance, Olapade (2014) questioned the methodology for the collection of the data. The author argued that the collection of property data using the perception of surveyors to determine the average selling price do not provide the market evidence that could be regarded as comparable. Other efforts employed by NIESV such as collation of historic data of concluded sales and letting transactions thereby deriving yield for various categories of properties is also commendable. However, we should be reminded that the purchase price is a figure at which the market is in equilibrium at the moment that a transaction is completed, and a snapshot in a dynamic market. The price paid today might not be a representative of market conditions tomorrow as the market is ever changing. This account for while the yield recommended by Igboko (1992) might not be applicable today. This is the reason that a system of property level recording pitched at individual property data like the case of NVED appear more appropriate.

Apart from the challenge of non-usage of appropriate methodology in the efforts of developing property databank by NIESV, there are others issues impeding the creation of appropriate property databank. One of the major challenges is the lack of continuity in NIESV efforts at creating the databank. Each of the past four leadership of NIESV had made efforts in the past to create databank but most of the efforts have not achieved the desired results because of lack of continuity in such effort. It is necessary to note that creation of databank is not a one-off affair. Even when a databank is in place, there is need for constant collection, collation and sorting of data in the databank. The use of ad-hoc committee to coordinate databank creation might not be able achieve the desired continuity such exercise required.

Apart from the identified challenges plaguing creation of property databank in the Nigeria

property market, the study of Olapade and Olaleye (2018) identified nineteen (19) other factors affecting pooling of property data and development of databank. The factors which include confidentiality attached to property data were grouped into four, namely, legal, economic, attitudinal, and methodological factors.

Considerations in the Design of Property Database

Creation of property databank involves gathering of data on concluded transactions, sorting out of data to remove outliers, designing a mechanism for storage and updating of data, storage of cleaned gathered data in storage mechanism, and, data manipulation for various uses. In many countries that are yet to develop a centralised databank, efforts and underway in their development. For instance, in Ghana, Anim-Odame (2018) provided information on the development of a property database in Ghana for valuation. The desktop database which is not web-based records the descriptions of properties, and other information such as size, sale and rent data. The databank could also be used to search for comparable data and employed for automated valuation.

Olapade, Ekemode and Olaleye (2019) examined the perception of Estate Surveyors and Valuers on the consideration for the design of property databank. The results revealed that the databank should be a centralised web-based databank with uniform recording standard for data into the databank. Other criteria included a user-friendly interface, availability of security features in the databank, use of query search using address of property and/or other criteria, recording of data on factors influencing value of property, and metadata. Again, the study discovered that the respondents were of the views that NIESV manages the databank when it is created.

Onwunayi (2020) however was against the creation of a centralised databank. The author argued that a centralised databank predisposes toward bureaucracy and suggested decentralised databanks for each locale. While this suggestion might be useful if the proposed property databank will rely on property data in the local land registry and will be managed by a particular government office. This is however not the case; the proposed databank will rely on data of concluded transaction whether recorded in the land registry or not and will not be managed by the government and its agencies. Again, the relative ease of accessing and storing information on a web-based databank will not make a decentralised databank to have any additional advantage.

Case Study: Experience at development of databank for Concluded Transactions at Biodun Olapade & Co

A web-based databank referred as NIGRED (Nigeria Real Estate Databank) was developed for the Critical Analysis submitted to The Nigerian Institution of Estate Surveyors and Valuers in partial fulfilment of the Test of Professional Competence for Admission into The Associate Membership of the Institution. The concluded sales transactions of the firm of Messers Biodun Olapade & Co (Estate Surveyors and Valuers) were stored into the

databank. Activities involved at the various stage of the development of the databank are discussed hereunder:

(a) Gathering of Data on Concluded Transactions

All the files of concluded sales transaction of Biodun Olapade Olapade & Co. were retrieved from the company's archive of closed files. Information retrieved from the files included the description of the property, address of the property, title, size of land, price and date of sale. A copy of the template used for collection of the data is attached as appendix I

(b) Sorting out of Data to Remove Outliers

Since the aim of the exercise was to store all the concluded sales transactions of the firm into the databank, there was therefore no need to sort out the data. All the concluded transactions of the company documented in company files were stored in the databank. This stage might however be necessary for a centralised databank.

(c) Designing the Mechanism for Storage and Updating of Property Data

A software architect was employed to design a web-based databank (NIGRED). NIGRED is a web-based computer application (internet enabled) databank that provide an online national comparable evidence database into which details of concluded market transaction of sales and letting can be recorded, stored, analysed and retrieved through the internet. The following were the major considerations in the design of NGRED:

(i) Software Platform

A Web-based application was used in the design of NIGRED. A Web-based application is a three-layered application comprising a web browser, the content generation technology tool and, the company database. The Web browser makes the initial request to the middle layer, which, in turn, accesses the database to perform the requested task, either by retrieving information from the databank, or by updating it. The reasons for using a web-based application is because it could be easily accessible through an internet enabled phone or other smart devices like IPAD and Android devices. In the design of NIGRED, the following applications were employed; PHP (PHP: Hypertext Preprocessor), MySQL, Ajax (Asynchronous JavaScript and XML) and jQuery among others.

(ii) Comprehensive data

The databank was designed to allow comprehensive recording of factors influencing value of property such as interest in the property, address of the property and price consideration and date of sale.

(iii) Uniform recording

Standardised data entry was provided in NIGRED through a combination of standard data

entry lists and detailed data recording standards. The standard lists are presented in the form of drop down menu's which contain all common entries to the data field thereby reducing typing.

(iv) Query searches

Query search is part of the features in design for NIGRED. This is needed to be able to search for comparable records that match certain criteria relating to the information required. The application is designed to permits query searches using location and type of property.

(v) Metadata

The application is designed in such a way that allows the user to obtain additional information about the dates of recording, data recorder and data accuracy checks.

(d) How to use the web-based databank (NIGRED)

The procedure of using the web-based databank (NIGRED) designed purposely for the purpose of this critical analysis is described step by step below:

- Log on to www.nigred.com on your computer, or internet enabled devices like Ipad, Java phones or Android devices to access the home page. See Figure 1

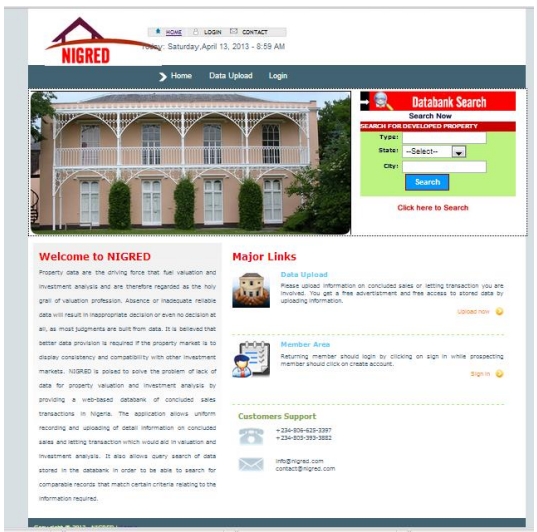

Figure 1: Screen-shot of NIGRED's Homepage

- To create an account in order to be able to access store data or record / upload data on concluded transaction, click on the create account icon. Members who have account can login in by signing in with their username and password on the member

login icon on the home page. See Figure 2 and 3.

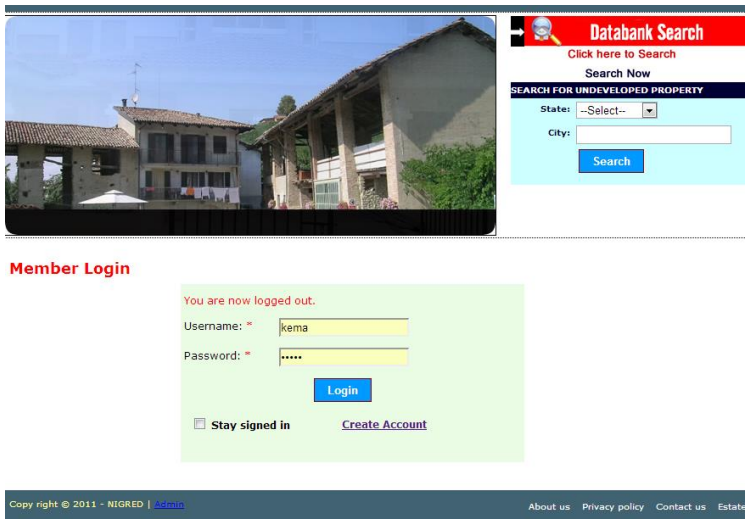

Figure 2: Screen-shot of NIGRED's Member login page

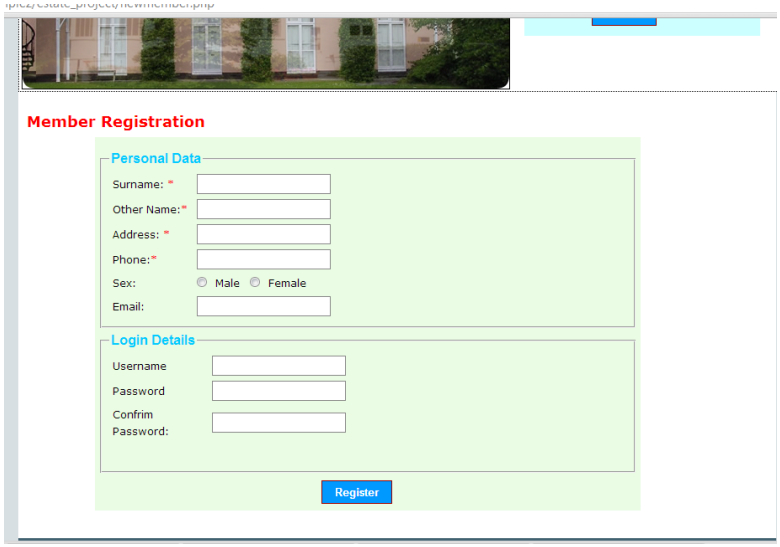

Figure 3: Screen-shot of NIGRED's Member Registration page

- To search / retrieve stored data in the databank; click on the search icon on the home page. There is a separate search icon for developed and undeveloped property.

Click on the applicable one and fill in the search query. See Figure 4

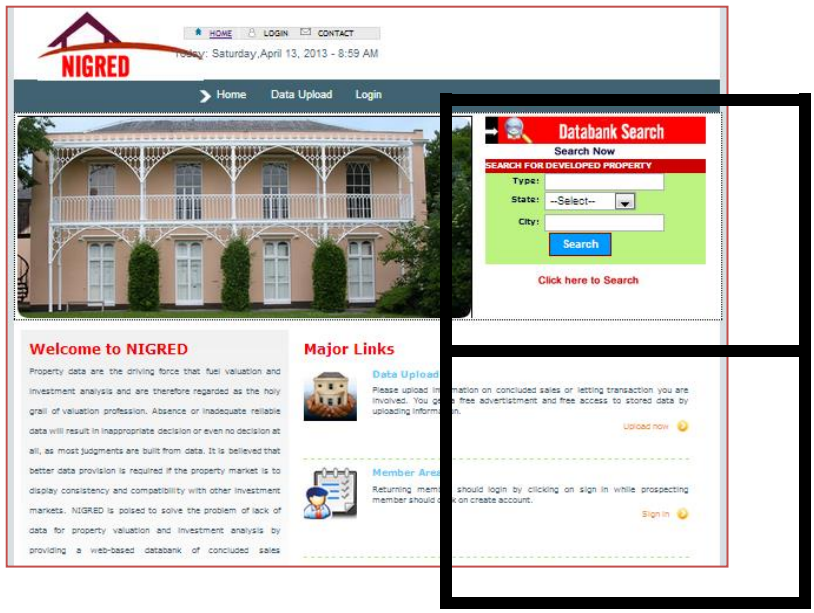

Figure 4: Screen-shot of NIGRED Databank search page

- To store / upload data on concluded sales or letting transaction: click on upload property icon. There are separate icon to upload data on bare land / undeveloped property and developed property. Then complete the data field form that would be display thereafter. See Figures 5 and 6.

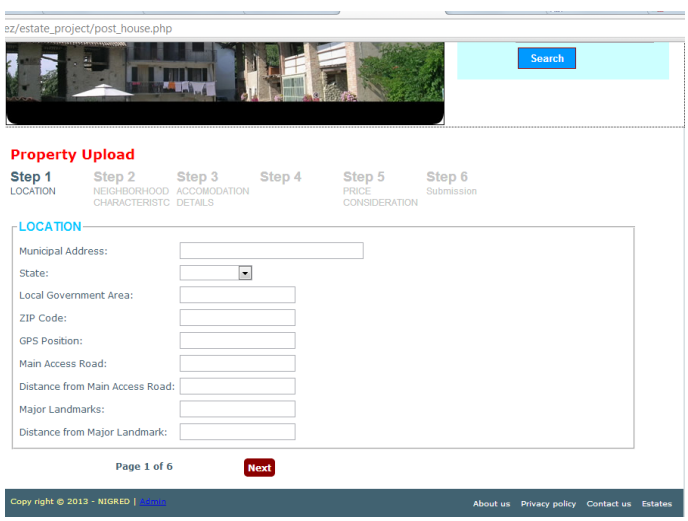

Figure 5: Screen-shot of NIGRED's developed property upload page

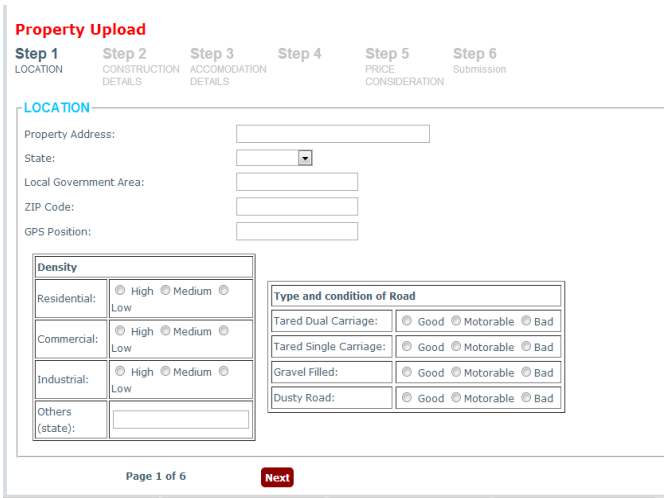

Figure 6: Screen-shot of NIGRED's undeveloped property upload page

(e) Storage of Gleaned /gathered Data on the Web-Based Databank (NIGRED)

Details of concluded sales transaction extracted from the files of Biodun Olapade Olapade & Co. were stored on NIGRED and was made available to anyone that that log on to the website of NIGRED.

(f) Data Manipulation for Various Uses

The data stored in NIGRED were not manipulated to any other forms but there is possibility of transforming the data to other forms such as indices.

(g) Challenges of NIGRED

The operation of the NIGRED encountered some challenges which include the following:

- Since it is a web-based databank it requires to be domiciled within a website protocol. After the initial payment of hosting the website for NIGRED; subsequent annual payments were not made thereby making the domain inactive
- Access to good internet is needed to upload property data on NIGRED

Recommendations and Conclusion

Accurate and reliable valuations and investment analysis depend upon access to good quality data which are scarce in practice. This paper examines issues relating to the development of property databank in the Nigeria property databank. It is discovered from the synthesis of literature and the case study that the creation of a centralised databank will be most suitable for the Nigerian property market. In this regard, it is recommended that a

web-based centralised databank should be created. Meanwhile, the design of the property databank should consider the preferences of the potential users of the databank- the practitioners. The design considerations in Olapade et. al. (2019) such as the databank being a web-based databank could be considered.

Apart from the designing of computerised mechanism for storage of property data in the databank, there is the crucial challenge of gathering of data on concluded transactions which will be stored on the databank. Three different options that can be employed for data collections is hereby recommended. Firstly, there is the option of engagement of private consultant to collect data from NIESV members in major cities in each of the geopolitical zones of the country. The consultants can be selected through a competitive selection using request for proposal (RFP) of technical and financial bid. While this approach appears efficient because of engagement of private consultant, the willingness of NIESV members to cooperate with the consultants can be a challenge. There is also the challenge of high financial implication of this option.

The second approach is to institute Committee for data collection in each of the NIESV state branches which will organize their members to submit details of their concluded transactions. It could also be extended to Association of Estate Agents under NIESV. A template for collection of such properties details could be designed and distributed to practising members. While this approach appears to be good since the practitioners would be more willing to release data to their professional colleague than to outsider. This is because practitioners presently share data among themselves informally for comparable. It is also cost effective as this will attract little or no cost to NIESV. The approach however might be difficult to enforce since such service is on *prono bono* and practitioners are known to be reluctant in recording data (Rowley, 1998; Olapade, 2014).

The third option is to avail research grants to tertiary institutions offering estate management to carry out the data collection. This could be through selection of a University / Polytechnic in each of the Geo-political region of the country through request for proposal (RFP) of technical and financial bid. The advantage with this approach is that the involvement of academia in the data collection will ensure credibility of the exercise and allows a robust undertaking. The option might also be plague by the willingness of practitioners to release details of their concluded transaction.

Irrespective of the approach selected, the challenges plaguing releasing of property data by practitioners might still cloud the exercise. Factor such as the implied confidentiality clause in property transaction which prevents practitioners from disclosing information about their clients could be a barrier. This could however be resolved in future dealings by incorporating a caveat in a letter of contract that data on the transaction would be released to a central databank and also assurance that sensitive data about the client would not be disclosed. There is also the need for proper advocacy, enlightenment and encouragement of members to support releasing their data. In addition to this, it should be acknowledged that property data are asset to organisation that own them, therefore there should be a form of

reward for firms that release their data. This could by way of free advertisement, earning of credit points that can be converted to pay for NIESV event, meritorious award, and a prerequisite to become a fellow of the Institution

It should also be noted that data assemblage and creation of databank is not a one-off affair but a continuous process. Even when the centralised databank is in place, there is need for constant collection, collation and sorting of data in the databank. The use of ad-hoc committee to coordinate creation of centralise databank might not be able to achieve the desired continuity such exercise required; there is therefore need for creation of an office for data assemblage and research to address this issue. A greater nexus between practitioners and academics than what is currently obtained presently is necessary in this regard.

References

Ajibola M. (2010). Valuation Inaccuracy: An examination of causes in Lagos Metropolis. *Journal of Sustainable Development,* 3(4): 187 – 193.

Aluko B.T. (2004). Market Data for Better Valuation/Pricing: The Holy Grail of the Valuation Profession. *The Estate Surveyor and Valuer*, 27(1): 54-63.

Berloco, A. and Spremulli, A. (2013), "A database for the Italian residential real estate market", *Aestimum*, pp. 293-301, doi: 10.13128/Aestimum-13141.

Boyce, D. Judson, B. and Hall, S. (2006). Data Sharing – A case of shared databases and community use of on-line GIS support systems. *Environmental Monitoring and Assessment* (2006) 113: 385–394.

Estrin, S. and Laidler, D. (1995). *Introduction to Microeconomics*. 4th ed., Prentice Hall/Harvester Wheatsheaf, Hertfordshire.

Fisher, J. and Martin, R. (2007). *Income Property Valuation*, 3rd ed., Dearbon Financial, Chicago, IL.

Gordon, K. (2007). *Principles of Data Management: Facilitating Information Sharing*. Scotland. The British Computer Society.

Igboko, N. (1992). *Research report on valuation methods in Nigeria with special reference to YP*. The Nigerian Institution of Estate Surveyors and Valuers.

NIESV (2013). *Investment Property Databank*. The Nigeria Institution of Estate Surveyors and Valuers. Abuja.

Ogunba, O.A. (1997). A study of valuation and pricing practices in the market for residential property in Lagos Metropolis. M.Sc. Dissertation submitted to the Department of Estate Management, Obafemi Awolowo University.

Olaleye, A. (2004). A case for property databank in the Nigerian property market: an empirical study, *The Estate Surveyor & Valuer*, 27(1): 34-40.

Olaleye, A. (2008). "Property market nature and choice of property portfolio diversification strategies: The Nigeria experience", *International Journal of Strategic Management,* 12: 35-51.

Olaleye, A., Ekemode, B. G. and Olapade, D. T. (2015). Predictive capacity of asking price on property sales price in emerging market: Evidence from Lagos, Nigeria. In: Karam, A., Gavu, K (eds.). *Proceedings of 15th African Real Estate Society (AfRES) 2015 Conference held at Kumasi, Ghana,* 31stAugust to 3rd September, 2015. Pp.258-268

Olapade, D.T. (2014). Data management in the Lagos property market. M.Sc. dissertation submitted to the Department of Estate Management, Obafemi Awolowo University, Ile-Ife.

Olapade, D. T., and Olaleye, A. (2018). Resolving the data debacle in commercial property: Are property practitioners in opaque market ready for data sharing and assemblage. *Journal of Property Investment and Finance*, 36(3): 295-304.

Olapade, D. T., and Olaleye, A. (2019). Factor affecting property data accessibility in an opaque market. *Property Management*, 37 (1): 82-96.

Olapade, D. T., Ekemode, B. G. and Olaleye, A (2019). Considerations for the design and management of property database in opaque markets. *Journal of Property Investment & Finance*, 37(5): 445-454.

Olapade, D. T., Shiyanbola, R. E., Ayorinde, I. O and Olaleye, A. (2019). Property data management practice in an emerging property market: Experience from Lagos, Nigeria. *Journal of Property Research & Construction*, 3(1): 59-66.

Onwunayi, N. (2020). A review of the property data challenge in Nigeria. *Journal of African Real Estate Research*, 5(2): 15-40.

Peltola, R. (2013). Real estate price data accessibility in Finland. Paper prepared for presentation at the Baltic Valuation Congress held at Reykjavik on 20th September, 2013.

Peto, R. (1997). Market information management for better valuations- data availability and application. *Journal of property valuation & Investment*, 15(5): 411- 422.

RICS (1994) *The Mallinson report: report of the President's working party on commercial property valuations*. Royal Institution of Chartered Surveyors, London.

RICS (2012). *Comparable Evidence in Property Valuation*. RICS Professional Guidance, 1st Edition.

Rowley, S. (1998). *A National Valuation Database: The Future of Valuation Data Provision*. Ph.D. Dissertation submitted to the University of Northumbria at Newcastle. UK.

Tomson, A. (2016). Property sales register as a tool to improve the quality of valuation and market research: lessons learned from selected countries. Paper prepared for presentation at the 2016 World Bank Conference on Land and Poverty, The World Bank, Washington, DC, 14–18 March.