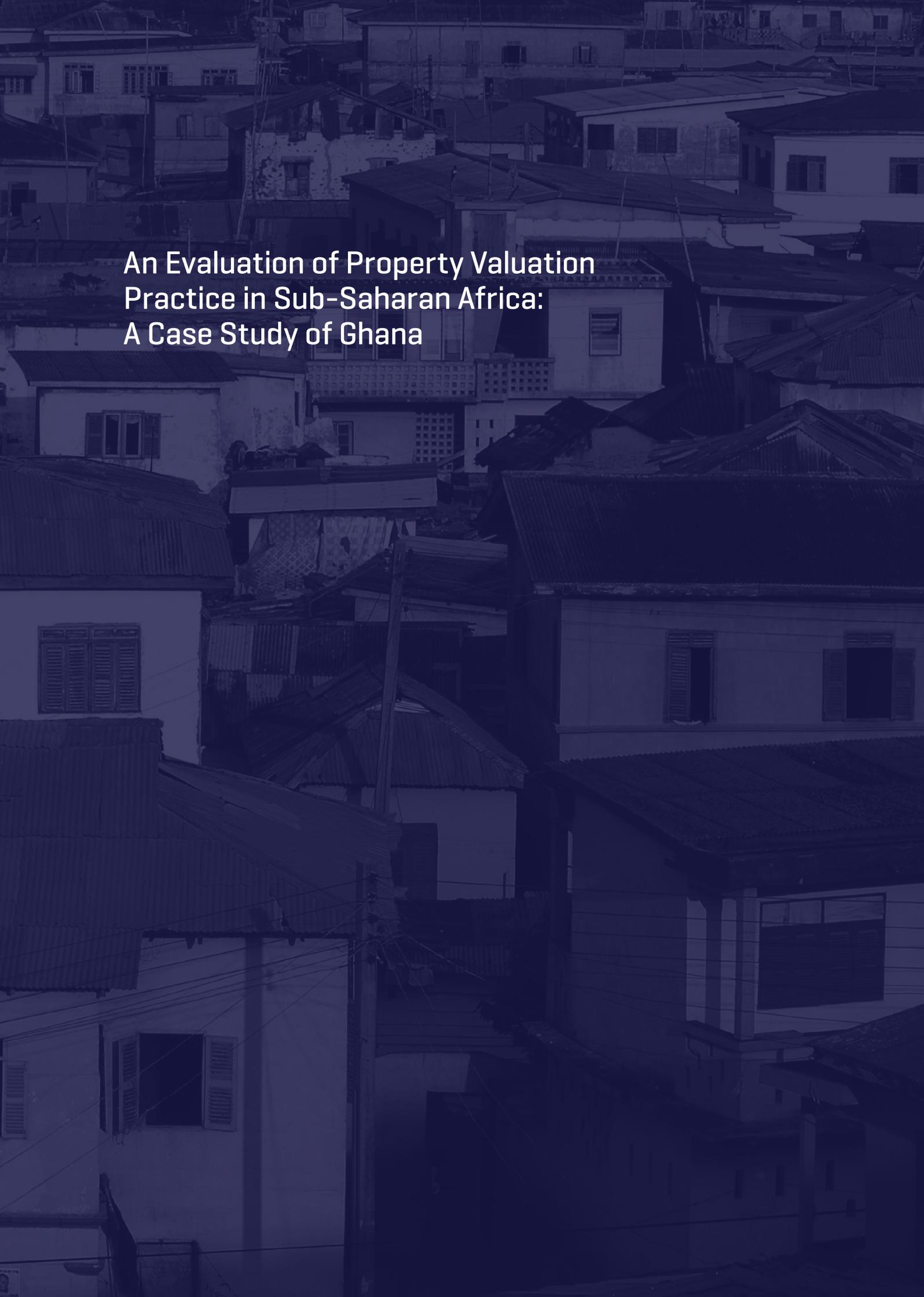




February 2016

An Evaluation of Property Valuation Practice in Sub-Saharan Africa: A Case Study of Ghana





An Evaluation of Property Valuation
Practice in Sub-Saharan Africa:
A Case Study of Ghana

Report for Royal Institution of Chartered Surveyors

Report written by:

Kwasi Gyau Baffour Awuah BSc, PGCAP, MA, PhD, FHEA, MGHIS, MRICS
Faculty of Environment & Technology
University of the West of England, Bristol
Kwasi.Baffourawuah@uwe.ac.uk
Baffour09@live.com

David Proverbs BSc, PG Cert, PhD, FHEA, FCIQB, FRICS
School of Computing, Engineering & the Built Environment
Birmingham City University

Jessica Lamond BSc, MSc, PhD
Faculty of Environment & Technology
University of the West of England, Bristol

Frank Gyamfi-Yeboah BSc, MPhil, PhD, MGHIS
Department of Land Economy
Kwame Nkrumah University of Science & Technology, Kumasi, Ghana

RICS Research team

Dr. Clare Eriksson FRICS
Director of Global Research & Policy
ceriksson@rics.org

Amanprit Arnold
Global Research and Policy Manager
aarnold@rics.org

Published by the Royal Institution of Chartered Surveyors (RICS)

RICS, Parliament Square, London SW1P 3AD

www.rics.org

The views expressed by the authors are not necessarily those of RICS nor any body connected with RICS. Neither the authors, nor RICS accept any liability arising from the use of this publication.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

Copyright RICS 2016

Study sponsored by :



The RICS Research Trust, a registered charity established by RICS in 1955 to support research and education in the field of surveying.

Contents

List of abbreviations	6
Executive Summary	7
1.0 Introduction	9
1.1 Aim & Objectives	10
2.0 Real Estate Markets & Valuation Practice in Ghana	11
2.1 Real Estate Markets in Ghana	11
2.1.1 Real Estate Markets since the 1980s.....	12
2.1.2 Market Challenges and Prospects.....	12
2.2 Property Valuation Practice in Ghana	13
2.2.1 Valuation Errors.....	13
2.2.2 Origins of Valuation Practice in Ghana	13
2.2.3 Valuation Service Delivery & Challenges	14
2.2.4 The Property Market Data Question	15
3.0 Methodology	16
3.1 Literature Evaluation	17
3.2 Stakeholder Workshop	17
3.3 Data Collection	17
3.3.1 Examination of Institutional Valuation Databases	17
3.3.2 Questionnaire Survey.....	18
3.4 Data Analysis	19
4.0 Research Findings	21
4.1 Outcome from Stakeholder Workshop.....	21
4.1.1 Existence of Valuation Errors.....	21
4.1.2 Variation in Valuations.....	21
4.1.3 Property Market Data	22
4.1.4 Property Market Data Collection Template.....	22
4.1.5 Research & Knowledge Gaps.....	22
4.2 Results from Analyses of the Archival Data.....	23
4.2.1 Extent of Variation in Valuations.....	23
4.3 Results from Questionnaire Survey of Real Estate Valuers	26
4.3.1 Extent of Variation in Valuations.....	27
4.3.2 Property Market Data Sources	28
4.3.3 Significance of Property Market Data Collection Template & the Content.....	28
4.3.4 Development of Property Market Data Collection Template & Guidelines for Effective Property Market Data Collection	28

5.0	Discussions & Implications	33
5.1	Knowledge of the Extent of Variation in Valuations	33
5.2	Identification of Property Market Data Sources	33
5.3	Property Market Data Collection Template & Guidelines for Effective Data Collection	33
5.4	Implications for Valuers/Valuation Surveyors	33
5.5	Further Research	34
6.0	Conclusions & Recommendations	35
6.1	Recommendations	36
7.0	References	37
8.0	Appendix	39
9.0	Acknowledgements	42

List of Tables

Table 2.1	Number of VES Members & Firms in Good Standing	14
Table 4.1	Summary Statistics of the Coefficient of Variations [CoV]	24
Table 4.2	Analysis of Variance of Co-efficient of Variations Based on Property Type	24
Table 4.3	Multiple Comparisons of Coefficient of Variations by Property Type Based on Tukey HSD	24
Table 4.4	Summary Statistics of the Reported Market Value Estimates	27
Table 4.5	Percentage Mean & Median Variation in Valuations	27
Table 4.6	Extent of Use of Property Market Data Sources	29
Table 4.7	Reliability of Property Market Data Sources	29
Table 4.8	Significance of Property Market Data Collection Template	29
Table 4.9	Relative Importance of Information/Field that a Property Market Data Collection Template Should Contain	30

List of Figures

Figure 3.1	Methodology	16
Figure 4.1	Respondents' Years of Experience	26
Figure 4.2	Nature of Respondents' Professional Practice	26
Figure 4.3	Guidelines for Effective Property Market Data for Valuation Practice	32

List of Abbreviations

AESL	Architectural & Engineering Services Limited
AGM	Annual General Meeting
CASLE	Commonwealth Association of Surveying & Land Economy
CPD	Continuous Professional Development
GDP	Gross Domestic Product
GhIS	Ghana Institution of Surveyors
GIPC	Ghana Investment Promotion Centre
IPMSC	International Property Measurement Standards Coalition
KNUST	Kwame Nkrumah University of Science & Technology, Kumasi, Ghana
LAP	Land Administration Project
LVD	Land Valuation Division
MMDAs	Metropolitan, Municipal & District Assemblies
PWD	Public Works Department
RICS	Royal Institution of Chartered Surveyors
SHC	State Housing Company Limited
SIC	State Insurance Corporation
SSA	Sub Saharan Africa
SSNIT	Social Security & National Insurance Trust
TDC	Tema Development Corporation
UWE	University of the West of England, Bristol
VES	Valuation & Estate Surveying Division
VRA	Volta River Authority

Executive Summary

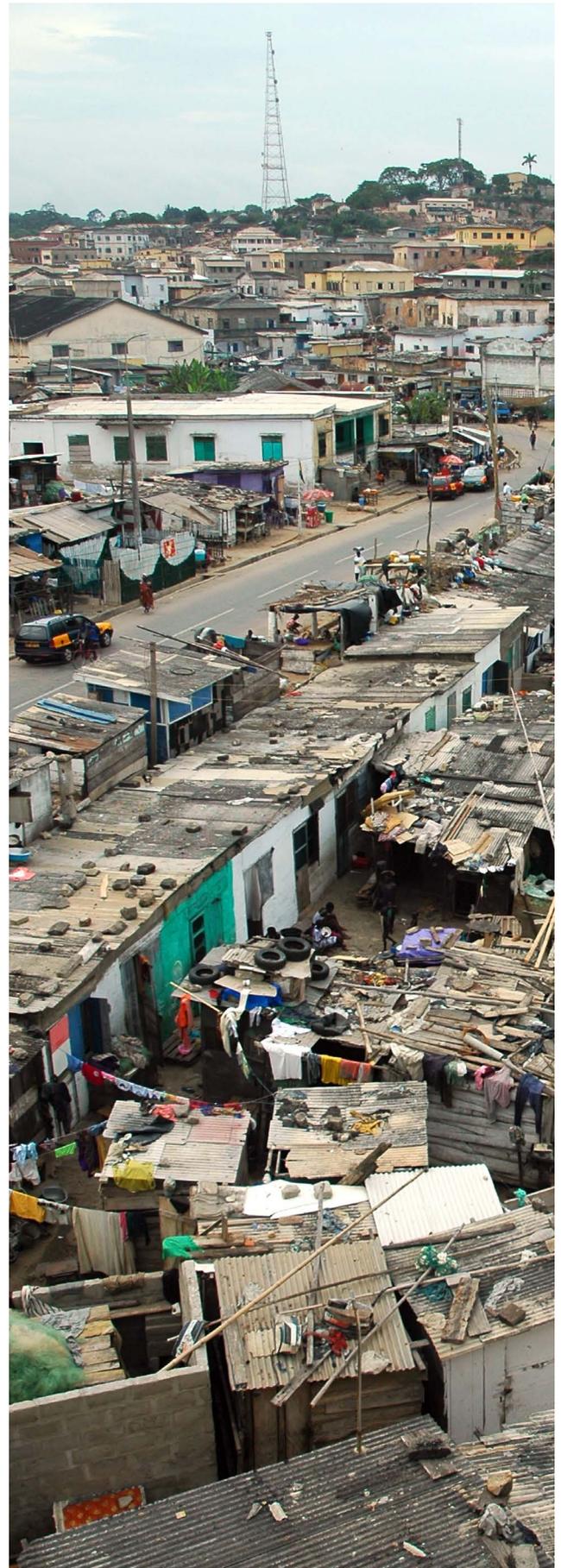
Real estate markets in Sub-Saharan Africa (SSA) are beginning to mature partly due to increased business and investment activities in the last decade and partly due to initiatives to improve transparency in market operations. Professional and ethical property valuation services are vital to the sustenance of the current real estate business and investment activities in the region as they promote transparency and support efficient operation of property markets. However, there are serious concerns over the standard of property valuations produced in the region. These concerns relate to valuation errors, in particular, wide variation in valuations. Ghana is one country in the region where real estate business and investment activities continue to increase, and there are growing concerns over high variation in valuations expressed both among real estate valuers/valuation surveyors and within the wider real estate sector. Like the rest of the SSA region, these concerns are largely based on anecdotal evidence, and speculation that paucity of property market data is one of the main causes.

Using empirical evidence from Accra, Ghana as a case study, the aim of the research was to evaluate property valuation practice in SSA. It sought specifically to:

- Estimate the extent of variations in valuations undertaken by Ghanaian valuers/valuation surveyors;
- Identify appropriate property market data sources in Ghana;
- Develop a property data collection template to support property market data collection for valuations; and
- Outline guidelines for effective property market data collection to improve valuation practice.

Systematic identification and evaluation of the relevant literature were initially undertaken drawing on both academic and industrial sources. The literature evaluation was complemented by a stakeholder workshop in Accra organised with the assistance of the RICS, GhIS and the CASLE. Both the literature evaluation and the stakeholder workshop enabled further contextualisation of the research, and informed the type of data to be collected as well as the choice of data collection approaches, including sampling strategies and design of data collection instruments.

Empirical data was obtained through examination of the archival database of the LVD and a questionnaire survey of real estate valuers/valuation surveyors in Accra. The archival data were set(s) of compensation valuations conducted by the LVD and private valuation practitioners on the same properties at or around the same period of time. The questionnaire survey requested sampled real estate valuers/valuation surveyors to conduct a market valuation of a hypothetical residential property as at a particular date based on the same set of instructions.



The survey also elicited the views of the respondents on property market data sources and proposals for a data collection template. Identification of property market data sources was based on the literature evaluation and the outcome of the stakeholder workshop. The extent of variations in valuations was estimated by appropriate statistical analyses of the questionnaire survey data. Guidelines for effective property market data collection including the development of a property market data collection template were developed based on the overall findings from the research.

Findings from the literature evaluation show that although there are concerns over valuation practices in Ghana, there exists a dearth of empirical research and evidence into their impact and causes. This study found higher levels of variation in valuations compared to international evidence in the literature. Analyses of the archival data showed a variation in valuations of 33.6% compared to 63% established from the survey data. These variations were also high relative to the margin of error of ($\pm 5\%$), which was suggested at the stakeholder workshop for valuation practice in Ghana. Further, it was found that property type has a substantial influence on the extent of variation and that, variations in valuations on fuel service stations and residential properties were more pronounced relative to those of office/retail properties and mixed land utilisations. These findings provide new insight, and make the quest for future improvements even more important. Regulators such as the GhIS, RICS and other stakeholders like CASLE, the IPMSC, government and financial institutions should continue to attempt to improve valuation practice.

A number of probable causes for the high variability in the valuations were identified including paucity of property market data, lack of standardisation in the application of valuation methods and complexity of properties. Paucity of property market data was identified by the vast majority of valuers as a challenge to valuation practice in Ghana. Nevertheless, there are a number of property market data sources, which valuers rely on to obtain data. However, they identified several shortcomings with these sources, which affect access to good quality property market data.

There is a need for the development of a systematic approach to property market data collection, which requires practitioners to demonstrate care, consciousness and a set of data collection skills to implement the approach. The further refinement of the property market data collection template could help standardise and guide meaningful property market data collection for valuation purposes. The need to promote standardisation in valuation practice in Ghana is essential to reduce variation in valuations and other errors, and improvement of valuation practice in the country.

Provision of improved property market data will not address all the probable causes of variation identified by this study. Further research to identify the causes of variation in valuations, the impact of variation in valuation on client confidence, the valuation profession, and practical and sustainable solutions to address excessive variation in valuations problem is central to efforts to improve valuation practice in Ghana and the SSA region.

The creation of property market data bank to support property valuation practice in Ghana is essential. The GhIS with the support of its members is in a strong position to take the initiative in doing so. The Institution could also encourage private sector investment in property market data collection and management. Further, the need for the institution to begin to institute programmes to promote discussions and collaborations among all the stakeholders in the property market data industry such as valuation practitioners, public institutions, financial institutions, estate developers, estate agents and property owners to address the property market data challenges is critical. The discussions and collaborations should focus on the need to build a robust property market data base in the country to support real estate business and market activities, how to undertake and harmonise effective data collection, and establish standards for and access to good quality property market data.

The need for a systematic approach to property market data collection will require real estate valuers/valuation surveyors to undergo regular relevant training to develop and enhance their knowledge, skills and capabilities to collect good quality property market data and produce high standard valuations.

Further research is recommended to generate additional and complementary insights to inform regulators such as RICS and GhIS initiatives and CPD programmes to improve valuation practice in Ghana and SSA.

1.0 Introduction

Sub-Saharan Africa (SSA) is increasingly becoming a destination of global investment (JLL, 2014; FTSE Global Markets, 2015). This is in spite of challenges such as inadequate infrastructure, trade barriers, skills shortage, low productivity and diseases (PWC, 2012; IMF, 2015). This recent upsurge in global investment interest in the region is partly credited to good economic performance, rapid urbanisation, increase in middle-class population and consumerism, and improved transparency in market operations (JLL, 2014; Baffour Awuah et al., 2014; IMF, 2015). Real estate is one sector where investment interest continues to soar (JLL, 2014; FTSE Global Markets, 2015). Apart from housing, growth in other sectors in constituent SSA economies such as telecommunication, manufacturing, retailing, outsourcing, finance and hospitality has resulted in increase in demand for commercial real estate (JLL, 2014; Viruly and Hopkins, 2014).

In addition to enormous financial resources invested into SSA real estate sector in the last decade or more, FTSE Global Markets (2015) reports that Momentum GIM in collaboration with Eris Property Group recently raised the first portion of its African Real Estate \$250 million Fund with \$50 million of institutional, family office and HNW investor capital. The fund is earmarked for the development of retail, commercial and light industrial real estate in SSA outside South Africa. Already arrangements are being made to launch and invest part of the fund in

countries such as Ghana, Mozambique, Rwanda, Nigeria and Tanzania. Similarly, Actis, a private investment equity firm recently raised and invested \$500 million in real estate markets including those of Nigeria, Zambia and Mozambique (FTSE Global Markets, 2015). SSA real estate markets are, therefore, beginning to mature and require high calibre property services to support them. Also, although transparency in real estate market operations in SSA like other markets has improved, there are still huge challenges that need to be addressed to sustain and improve current market operations (JLL, 2014).

Professional and ethical property valuation services are vital to real estate business and market operations (Lorenz and Lützkendorf, 2008). Reliable valuations could constitute important tools for good governance and transparent business activities. Valuations are, therefore, of immense importance to individuals, institutions and corporations, local and central governments, businesses and investors in SSA. For example, individual property purchasers and sellers require valuations to make informed decisions as to the best price to purchase properties or sell their properties so do landlords and prospective tenants require advice on market rents to aid rent negotiations for lettings. Banks and other financial institutions in the region require valuations of properties used as collateral to assess loan-to-value ratio to determine the quantum of loans to be granted to businesses. Further, corporations and other businesses



require periodic market valuations of their assets for accounting and estate management purposes. Also, insurance companies need valuations to enable them determine premiums payable by policy holders as well as re-instatement values for their policy holders. For local and central governments, valuations are required for the operation of a number of tax regimes such as stamp duty, property rates and capital gains tax, and others such as compensation payable for compulsory acquisitions and divestiture programmes. Similarly, real estate business and investors in SSA require regular estimates of the market values of their property portfolios to make suitable judgments as to the balance between property and securities in their overall mixed-asset portfolios.

The survival of the current real estate investment drive and the maturity of property markets in SSA are therefore, in part, dependent on the standard of valuations produced in the region. Nonetheless, there are growing concerns over the standard of valuations produced by valuers/valuation surveyors in SSA (African Centre for Cities, 2015). These concerns relate to valuation errors – valuation inaccuracies, variations and bias (Obeng-Odoom and Ameyaw, 2011; Babawale and Ajayi, 2011; PWC, 2012). PWC (2012), reports that, lack of consensus on valuations is one of the main reasons for the failure of transactions that enter formal due diligence in developing economies such as those of SSA. Lack of property/market data is often cited as a major reason for the concerns over the standard of valuations (Babawale and Ajayi, 2011; PWC, 2012). For example, as part of the resolution for its 2010 annual divisional seminar, the VES Division of the GhIS acknowledged that, lack of adequate reliable property market data in Ghana is a major challenge to valuation practice in the country.

Although a few studies such as Babawale and Ajayi (2011) have been conducted in some constituent economies, the growing concerns with the standard of valuations in SSA particularly variations in valuations and their extent are largely based on anecdotal evidence. Further, the existing studies do not offer practical and sustainable solutions to the problem. Baffour Awuah and Booth (forthcoming) among others have made recommendations for rigorous studies to be undertaken into the extent of variation in valuations to generate more data and insights to inform policy and practice. It is envisaged that tangible evidence will assist regulators to design programmes to improve valuation service to support the maturity of SSA property markets.

Using empirical evidence from Accra, Ghana as a case study, best practice in the developed world and through working in collaboration with the RICS, GhIS and CASLE, the research sought to evaluate property valuation practice in SSA by investigating the extent of variations in valuations and how property market data collection could be improved to support efficient valuation practice.

Ghana is experiencing growth in real estate business and investment activities (JLL, 2013). At the same time

there are growing concerns over standard of valuations particularly variation in valuations in the country (Obeng-Odoom and Ameyaw, 2011). The RICS and GhIS, therefore, continue to explore initiatives to improve valuation practice in the country, and also equip and empower surveyors to deliver quality valuation services. For example, it could be inferred that the recent collaboration between the GhIS and the RICS to share best practices (The Estate Surveyor, 2014) is among other things to improve surveying practice in the country, which includes valuation practice. Ghana was, thus, a suitable location to undertake this research. This was further accentuated by the lack of relevant studies in the country.

1.1 Aim and Objectives

The overall aim of the research was to evaluate property valuation practice in SSA using Ghana as a case study, and develop guidelines to improve property market data collection that could help to enhance the standard of valuation practice in the region.

To address the aim, the research sought to achieve the objectives below:

- Estimate the extent of variations in valuations undertaken by Ghanaian valuers/valuation surveyors;
- Identify property market data sources in Ghana;
- Develop a property market data collection template to support property market data collection for valuations; and
- Outline guidelines for effective property market data collection to improve valuation practice.

Apart from extending the existing knowledge on valuation practice in SSA, the research aim and objectives are designed to provide useful output to inform initiatives by regulators such as the GhIS and RICS to improve valuation practice to support the effective and efficient operation of SSA property markets. Further, it could assist in the efforts to formulate the international property measurement standards by the IPMSC (RICS, 2015). It could also be a useful input to the current land reform programme in Ghana under Land Administration Project (LAP), which aims among other things to improve valuation practice in the country (Government of Ghana, 2003). Additionally, the development of a new property market data collection template and guidelines for effective data collection will assist valuers/valuation surveyors in Ghana to identify how and where to collect reliable data, and how to design suitable databases based on their data requirements to improve valuation practice.

The report is organised into six sections. Following this introduction, the next section evaluates the relevant literature after which the methodology for the research is outlined. Findings from the empirical research, their discussions and implications, and conclusions and recommendations are then presented.

2.0 Real Estate Markets and Valuation Practice in Ghana



Image source: Anton_Ivanov – Shutterstock.com

Ghana is a Sub-Saharan African country located within the sub-region of West Africa. The country's land size is estimated at 239,000 km² with a population of over 25 million people at an annual growth rate of 2.1% (World Bank, 2015). Ghana is acknowledged as one of the politically stable and peaceful countries in SSA with established democratic credentials. Ghana, in the last decade, has recorded a steady economic growth. For example, the country recorded annual growth rates of 5.6%, 5.9%, 9.3% and 7.3% in 2004, 2005, 2012 and 2013 respectively (World Bank, 2015). Nonetheless, Ghana's economy continues to suffer from recent challenges such as worsening energy crisis, depreciation of the national currency, and rising inflation and interest rates.

The recent challenges, in part, have affected GDP growth. Ghana's economy, for example, grew by 4.2% in 2014 (AfDB, 2015; World Bank, 2015). However, the economy is expected to recover in the medium term based on anticipated increased production of oil and gas coupled with infrastructure investment and improved macro-economic performances among other things (AfDB, 2015). Excepting recent economic activities in the oil and gas sector, bulk of the GDP growth have come from the service, industry and agriculture sectors. These sectors account for 50.2%, 28.4% and 19.9% respectively of the country's growth (AfDB, 2015). The increase in economic activities has culminated in demand for commercial properties such as retail shops and offices signifying growth in real estate market activities in the country. This section discusses the trajectory of real estate markets and valuation practice in the country to garner background insights for systematic inquiry.

2.1 Real Estate Markets in Ghana

Land and property markets in Ghana have undergone several transitions since the pre-colonial era (Gough and Yankson, 2000). Prior to the 1980s formal real estate markets were largely driven by government (Konadu-Agyemang, 2001; Mahama and Antwi, 2006). Government through its agencies, for example, the Lands Department (now Lands Commission), State Housing Corporation (now company) (SHC), Social Security and National Insurance Trust (SSNIT) and the Tema Development Corporation (TDC) acquired lands and undertook developments. These agencies allocated both acquired lands and developments for various purposes such as housing and offices. However, such land acquisitions and developments, and their subsequent allocations were informed by political and social welfare considerations (Konadu-Agyemang, 2001; Arku, 2009; Baffour Awuah et al., 2014). Accordingly, several tenurial arrangements like use rights and estate of leasehold were granted.

A large informal land and property markets also existed. These markets were and are still characterised by private sector developers who acquired lands mostly from customary land owners and constructed their developments or maintenance works on incremental basis (Baffour Awuah et al., 2014). These developments or construction works were small scale in nature and often took a long period, sometimes, over a life time to complete (Baffour Awuah et al., 2014).

2.1.1 Real Estate Markets since the 1980s

The adoption of liberalisation policies by Ghana following the introduction of structural adjustment and economic reform programmes in the 1980s has since had a significant effect on the country's real estate sector (Grant, 2007; Arku, 2009). These policies introduced more pro-market ideas in the real estate sector and sought among other things to: stimulate growth of the real estate sector; withdraw government direct participation in the sector; liberalise land markets and build construction materials industry; and encourage formal private sector real estate investment. The rationale was to introduce competition particularly in the residential development sub-sector, improve efficiency, and increase commercial development, foreign investment and self-development (Arku, 2009).

A number of financial incentives were also put in place to ensure the manifestation of the objectives of the new policy arrangement. These included reduction in corporate tax and five-year tax holiday for real estate developers (Baffour Awuah et al., 2014). Consequent upon these new initiatives, real estate markets in Ghana since the 1980s have recorded a lot of activities especially from the formal private sector. The organisation of private real estate developers known as Ghana Real Estate Developers Association (GREDA) was for the first time established in the country. Also, some of the government real estate development agencies have been reconstituted as limited liability companies. Furthermore, there have been increases in real estate investment both in the formal and the informal sectors. For example, the Ghana Investment Promotion Centre (GIPC) registered 81 real estate development companies with investible real estate development, civil engineering and residential construction valued at US\$105 billion between 1995 and 2005 (Arku and Asiedu, 2009).

The majority of the formal private real estate investments are being undertaken by foreign companies. These companies undertake investments either alone or in conjunction with local companies. Most of these investment activities take place in cities and urban centres, in particular, Accra, the capital city and the adjoining port city of Tema; Kumasi, the second largest city; and recently Sekondi-Takoradi following the discovery oil in commercial quantities in the area. This is due to the comparatively large and articulate real estate markets in these locations (Baffour Awuah et al., 2014). The residential/housing sub-market constitutes the largest proportion of the real estate market in Ghana. In the past decade, the GIPC estimated that the market registered 85,000 transactions yearly. Other sub-markets include: industrial, retail, office and more recently recreational/leisure (Broll, 2015).

Although institutional/formal investors continue to increase in the residential sub-market, the informal sector constitutes the greatest proportion. Most of the formal private residential investments are organised as gated

communities often located on the fringes of major cities and urban centres where lands are available and at comparatively cheap prices (Baffour Awuah et al., 2014). The informal sector also continues to dominate in the retail sub-market despite recent institutional/formal investment interest in the market spurred by the growing interest of international and South African brands such as Edgars, Foschini, Woolworths, Game, Mr Price, and Mango, T.M Lewin, Sunglass Hut and Pay Less Shoes (Broll, 2015).

Apart from developers/investors both formal/institutional and informal, other players in the country's real estate markets include: customary land owners; financiers/financial institutions; public sector regulatory institutions such as the Lands Commission, Town and Country Planning Department/planning authorities and the Internal Revenue Service; and professionals such as valuation and estate surveyors; land/estate agents, architects and lawyers who provide services to support the operations of the real estate markets. According to Broll (2014), the most active institutional investors are TDC, SSNIT, SHC and State Insurance Company (SIC). However, they face competition from private institutional investors such as Regimanuel Gray Limited, Manet Housing Limited and Devtraco Estates among others.

2.1.2 Market Prospects & Challenges

There is no doubt that Ghana's real market has over the years recorded growth. Apart from the 1980s policy incentives, the growth is attributed to steady economic performance, which has resulted in demand for housing and commercial properties such as retail shops and offices. Therefore although the country's economy is currently undergoing some challenging times, it is expected to recover in the medium term (AfDB, 2015), and that the real estate sector will record further growth. The anticipated growth in the real estate sector is predicated on growth in middle income population and income, and rising urbanisation currently estimated at 51% and the need for provision of about 5.7 million homes by 2020 to house the ever-increasing urban population (Paller, 2015). This is further accentuated by the country's progress in real estate transparency (JLL, 2014). There are, therefore, good prospects for real estate markets in Ghana to attain maturity in the near future (JLL, 2014).

Nonetheless, Ghana's real estate markets are faced with a number of challenges. These include: lack of reliable market information; complex and bureaucratic market regulatory procedures (Gough and Yankson, 2000; Mahama and Antwi, 2006), lack of adequate professional valuation and estate surveying expertise and poor service delivery (Mahama and Antwi, 2006). Furthermore, real estate market transparency is still a challenge in spite of recent progress. Quality real estate valuations produced by Ghanaian surveyors and valuers undoubtedly could contribute to the effective and efficient operation of the country's real estate markets and ultimately their maturity.

2.2 Property Valuation Practice in Ghana

As noted in the preceding section and in the introductory section of this report, there are concerns with the standard of valuations produced in Ghana. These concerns relate to errors, in particular, variations in valuations. Therefore, before opening a discussion on valuation practice in Ghana, it is imperative to discuss the subject of valuation errors to provide some background insights.

2.2.1 Valuation Errors

Studies on real estate valuation errors often focus on three main concepts. These are valuation accuracy, variance and bias (Crosby, 2000; Levy and Schuck, 2005). Valuation accuracy relates to the difference between a valuation of a property and a target such as its subsequent market price. Thus, it is the exactness or otherwise of the valuation using the subsequent market price of the property as a reference point. According to Crosby (2000) the basis of valuation is essential in an exercise to determine valuation accuracy. Nevertheless, the idea of valuation accuracy has often been how valuations of properties reflect their market prices.

Conversely, variation in valuations focuses on the ability of two or more valuations to produce the same outcome. It, thus, seeks to measure the difference(s) between two or more valuations. The subject matter of the valuations, basis of the valuations and the valuation instructions should be the same (Crosby, 2000). Valuation bias also occurs when there is a systematic and consistent over-valuation or under-valuation of a property (McCallister, 1995). Despite the differences in the three concepts, they are inter-connected as there is always, for example, an effect of variation in valuations on valuation accuracy (Adair et al., 1996).

Valuation errors are determined or caused by a number of factors. One of the major determinants is the state of real estate markets. A central issue in value determination is valuers' ability to correctly interpret market conditions (Brown, 1992). Therefore, where there are uncertainties with real estate markets or valuers mis-interpret market conditions, errors are likely to occur. For example, studies such as Matysiak and Wang (1995) and Blundell and Ward (1999) established that valuations tend to lag behind market prices during periods of rising markets and above market prices in times of falling markets. Another major determinant/cause of valuation errors connected to market conditions is the availability of reliable property market data such as evidence of recent sales and lettings of properties. Valuations are a function of data (Brown, 1992), and that valuations are likely to be free of errors when informed by good quality property market data (Matysiak and Wang, 1995; Peto, 1997; Dunse et al., 1998).

Valuation methods are also established to be a determinant/cause of valuation errors. Although valuation is not a precise science, it is expected to be conducted in a systematic manner based on scientific process and using appropriate basis, set of assumptions and methods. Without such an approach and the appropriate valuation method, there is the likelihood that errors will occur (Otegbulu and Babawale, 2011). Closely aligned with this determinant is the complex nature of the subject matter of valuations. Bretten and Wyatt (2001), for example, noted that valuation models have influence on valuation error, and valuation of complex properties is comparatively more prone to errors than simple properties. Other determinants or causes of valuation errors include behavioural factors or heuristic behaviours of valuers such as anchoring and client influence (Levy and Schuck, 2005; Bretten and Wyatt, 2001; Iroham et al., 2014).

Unlike the developed world such as the UK, USA and Australia where a number of studies have been conducted into the extent of valuation errors, not much work has been undertaken in this area in SSA. For example, since the seminal work of Hager and Lord (1985) several works such as Brown (1985, 1992), McCallister (1995), Matysiak and Wang (1995), Adair et al. (1996), Blundell and Ward (1999) on the extent of valuation errors have been conducted in the UK. Similar such studies have also been conducted in the USA and Australia. Nevertheless, most of the works in the developed world tend to focus on valuation accuracy.

In the same vein, limited studies have been conducted in the area of determinants/causes of valuation errors in SSA compared to the developed world. One of such areas, which continues to receive attention in the developed world, is behavioural factors in property valuation (Bretten and Wyatt, 2001; Iroham et al., 2014). This is not to say that no relevant work has been in SSA. In fact, there have been a few studies on the extent of valuation errors (Ogunba and Ajayi, 2007; Ayedun et al., 2011; Babawale and Ajayi, 2011) and determinants/causes and behavioural issues in valuation (Otegbulu and Babawale, 2011; Amidu and Aluko 2007). However, these studies are mostly focused on Nigeria and tend to follow the developed world studies. Further, although these studies largely corroborate the problems with valuations conducted in the region there have been concerns over the methodologies, which were employed especially in the studies that sought to estimate the extent of valuation errors (Ayedun et al., 2011).

2.2.2 Origins of Valuation Practice in Ghana

Anecdotal evidence suggests that formal real estate valuation practice in Ghana is traceable to the colonial era. Real estate valuers like other built environment professionals such as land surveyors, development planners, engineers and quantity surveyors were required to help the British colonial administration in its spatial development activities. For example, the British colonial administration as part of its spatial development activities expropriated private lands and properties for public

purpose such as the construction of roads, railways and other public works. Valuers were required to advise on the acquisitions and also determine values of expropriated properties for compensation purposes. This was also the situation for real estate taxation, public estate management and private real estate transaction issues among others.

The British colonial administration, therefore, instituted the framework for valuation practice in Ghana. Several legislations and policies that impinge on valuation practice were passed. For example, ordinances such as the Waterworks Ordinance (1937), the Valuation of Premises Ordinance (1945), the Municipal Councils Ordinance (1953), the Local Government Ordinance (No. 29 of 1951) and the Valuation Bill (1955) were put in place to inform rating valuation in the country. Apart from valuers who acquired their training outside the country, mostly in the UK, government also made arrangements for the training of valuation personnel locally. The Government Valuation School was, for example, established to train valuation technicians. Although private practice existed, most of the valuers worked for public institutions such as the Railway Corporation, Public Works Department (PWD), the Lands Department, Housing Corporation and other parastatals.

In broad terms, valuation practice in the country at that time was guided by British standards. The valuers who received their training in the UK and became members of the RICS together with their counterparts from related disciplines such as quantity and land surveying constituted the Ghana Branch of the RICS. However, in 1969 the Ghana Branch of the RICS at its AGM established the GhIS. Membership of the new Institution comprised members of the RICS and the Institute of Quantity Surveyors, and those of the Licensed Surveyors Association who agreed to be incorporated into the class of Licentiatees. The GhIS since then has been responsible for the regulation of surveying practice including valuation for its members. The University of Science & Technology now KNUST has been the main initial training grounds for members of the GhIS (Sawyer, 1972).

For the VES Division of the Institution, its members are mainly drawn from graduates in the BSc Land Economy and BSc Real Estate programmes at KNUST, and HND Estate management programme at the Kumasi Polytechnic who are initially admitted as technicians. Table 2.1 gives a summary of the current members and registered firms of the VES Division in good standing.

2.2.3 Valuation Service Delivery & Challenges

Valuers in Ghana practice valuation in several capacities. These range from private practitioners; and those fully employed by public institutions and other parastatals like the Lands Commission, Judiciary Service, PWD, Architectural Engineering Services Limited (AESL), and Metropolitan, Municipal and District Assemblies (MMDAS);

Table 2.1 Number of VES Members & Firms in Good Standing as at 2015

Members/Firms	Number
Fellows	55
Professional Members	307
Technicians	47
Total	409
Firms	49

Source: Records at GhIS

financial and mortgage institutions; real estate developers and investors; and others such as traditional/customary institutions and NGOs. Apart from private practitioners who constitute a significant proportion of valuers particularly in Accra, the others usually undertake in-house services for their employers. Nevertheless, some of these employers engage the services of private practitioners from time to time. For example, although valuers at the Real Estate Department of the VRA undertake in-house valuation assignments the Authority engages private practitioners to conduct valuation of its assets periodically.

Valuers in Ghana are known by several names such as general practice surveyors, valuation and estate surveyors, estate officers and estate managers. They also render numerous valuation services. These include:

- Market valuation;
- Valuation for sale/purchase;
- Rental valuation;
- Asset valuation;
- Mortgage valuations;
- Insurance valuation;
- Divestiture valuations;
- Rating valuation;
- Compensation valuation;
- Valuation of joint venture investments;
- Valuation for estate management; and
- Valuation for lease renewal/ surrender and renewal valuations.

The clientele base especially for private practitioners include local individuals and institutions who want to purchase or sell their properties, local and foreign investors, financial institutions, insurance companies, real estate developers, public institutions and other parastatals, and customary land owners/traditional institutions (Broll, 2014).

There are a number of challenges with the practice of valuation in Ghana. For example, there is a lack of national regulation on the practice of surveying in the country. This has resulted in proliferation of a lot of informal practitioners who often lack the requisite training and experience to practice valuation (Mahama and Antwi, 2006). As part of efforts to address this challenge, the GhIS have put together Survey Council and Real Estate Brokerage Bills (The Estate Surveyor, 2014). However, these bills are yet to be passed into laws. Another challenge is the unstable nature of the real estate markets in Ghana, which is characterised by rapid fluctuations in market prices, and quotation and payment of agreed prices in foreign currencies (Mends, 2006). A major challenge, however, to the practice of valuation in Ghana is the lack of adequate reliable property market data (Gough and Yankson, 2000; Mahama and Antwi, 2006; Mends, 2006; Obeng-Odoom and Ameyaw, 2011). This challenge has been said to lead to over-reliance on the use of the Replacement Cost Method of Valuation by valuers, and concerns over the standard of valuations produced in the country (Obeng-Odoom and Ameyaw, 2011). The next sub-section discusses the property market data question.

2.2.4 The Property Market Data Question

As stated previously, availability of reliable property market data is essential to valuation. However, there is a lack of readily available verified organised property market data required for informed valuation practice in Ghana. Valuers in the country, therefore, rely on several property market data sources for data to undertake valuations. The main property market data sources for valuation practice are: public and quasi-public institutions such as the Lands Commission, AESL, TDC, SHC and MMDAs; parties to real estate transactions; practitioners and professional property consultancy firms; lawyers who deal with property transactions; real estate developers; auctions; and informal real estate agents (Mends, 2006; Mahama and Antwi, 2006).

Ideally, a reliable property market data should, for example, have indication of: its source; the date the transaction took place; location of the subject property; interest in the property; development status of the property; agreed consideration; and history of the transaction among other things (Mends, 2006). However, as a result of poor record keeping data kept by the public and quasi-public institutions are often not well organised. Besides, the data are at times devoid of useful information such as date(s) of transactions and agreed considerations (Mends, 2006). Excepting administrative lapses, this may be due to secrecy often associated with property transactions (Gough and Yankson, 2000) and deliberate non-disclosure of information by parties to transactions for tax evasion purposes.

Parties to property transactions including real estate developers potentially offer a useful source of obtaining property market data for valuation practice. However, as noted in the preceding section property transactions are often undertaken under confidential arrangements. Therefore, parties to the transactions are often unwilling to disclose details of the transactions. Practitioners, professional property consultancy firms and lawyers who deal with property transactions keep some form of databases, which they usually share with colleagues upon request (Mends, 2006). Nevertheless, the source of the data is often unknown and the integrity of the data is most of the time questionable (Mends, 2006). Indeed, there are even cases where same data are obtained from different sources, but with significant variations. With regard to auctions, they are not a major medium for property transactions and, therefore, do not offer much in terms of data.

A major source of obtaining property market data is through informal real estate agents. However, as stated elsewhere in this report they often lack the requisite training and experience (Mahama and Antwi, 2006; Obeng-Odoom, 2011). Consequently, besides their primary interest of earning commissions they hardly record transaction details, circumstances, property characteristics and the financial arrangements for transactions.

From the foregoing discussions, it can be surmised that obtaining reliable property market data for valuation purpose in Ghana could be an onerous task. Addressing this task may require examination of where, what and how to obtain property market data and above all how to organise and manage them to ensure that they pass some form of integrity and reliability test. This research, however, sought to identify property market data sources and how to improve data collection for valuation practice. The other issues were beyond the scope of the research.

3.0 Methodology

The methodology for the delivery of the research was premised on the pragmatist philosophy. This prescribes a combination of philosophies, strategies and data collection tools to provide solutions to social problems (Creswell, 2014). The choice of the underlying research philosophy was rooted in the imperatives of the research aim and objectives. These informed a need to explore and have understanding of the research issue, design pragmatic and suitable research strategies taking into account the geographical scope for the research, and identify and develop suitable measuring criteria to calibrate the research variables among other things.

The case study approach/strategy was adopted given that it was impossible, in practical terms, to study the entire SSA region due to time and resource constraints. Further, to provide useful input(s) to inform policy formulation and practice, an in-depth examination of the research issue was imperative and, thus, recourse was made to the case study approach as the suitable approach under such circumstance (Creswell, 2014). Prior to, and after the selection of the case study country, systematic identification and evaluation of the relevant literature were undertaken. These were complemented with a stakeholder workshop. Relevant data was subsequently procured through examination of the LVD’s archival

database and a questionnaire survey of real estate valuers/valuation surveyors in Accra. The archival data were set(s) of compensation valuations conducted by the LVD and private valuation practitioners on the same properties at or around the same period of time. The questionnaire survey requested sampled real estate valuers to conduct market valuation of a hypothetical residential property as at a particular date based on the same set of instructions. It also elicited their views on property market data sources and data collection template among other things. The collected data were analysed and interpreted to draw conclusions and make recommendations including the development of property market data collection template.

Ghana was selected as the case study country. Although there have been increased real estate market activities in Kumasi, the second largest city, and Sekondi-Takoradi following the discovery of oil in commercial quantities in the area, Accra, the capital city has the most vibrant real estate market in the country (Baffour Awuah et al., 2014; Viruly and Hopkins, 2014). Most of the valuers and valuation firms are also located in the city. The research, therefore, predominantly focused on Accra. Figure 3.1 summarises the methodology used for the research.

Figure 3.1 Methodology

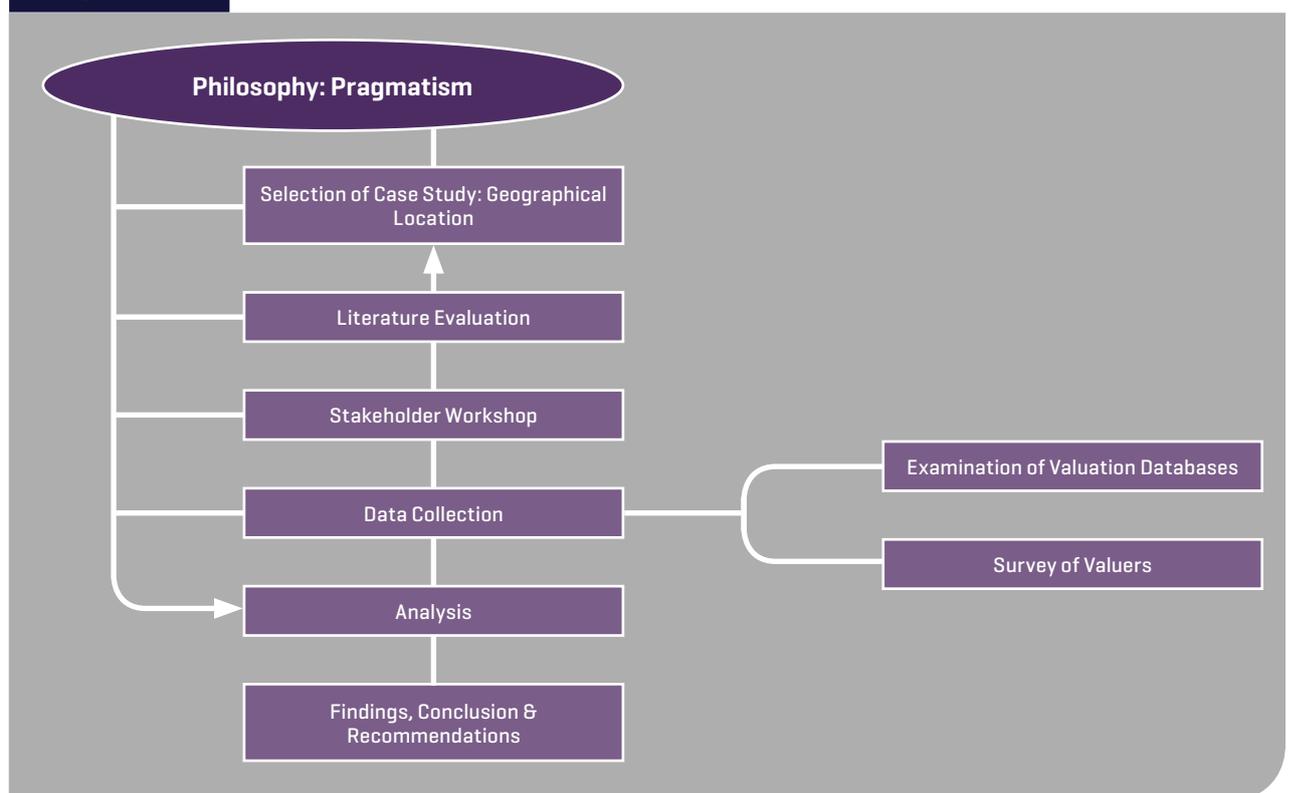




Image source: Felix Lipov – Shutterstock.com

3.1 Literature Evaluation

A systematic search to identify relevant literature for the research was initially undertaken. The relevant literature was identified from databases such as science Direct, Web of Knowledge, Emerald, Google Scholar and those of RICS and GhIS among others. The identified literature was subsequently evaluated. The literature identification and evaluation sought to establish existing knowledge on valuation errors, and real estate markets, valuation practice and data sources in the case study country as well as some relevant international evidence. The rationale was to obtain background insights for systematic inquiry.

3.2 Stakeholder Workshop

The literature evaluation was complemented by a one-day stakeholder consultation workshop. The workshop was held in Accra on February 25, 2015 to consult with key stakeholders (valuation and estate surveyors) in the property valuation industry. It was undertaken with the assistance of the RICS, GhIS and the CASLE. The workshop was organised in three phases, and over 50 valuation and estate surveyors including 5 past presidents of the GhIS attended. The first phase was devoted to presentations bordering on the research. The presentations focused on the research background, findings from the literature evaluation, valuation practitioners perspectives of property valuation practice and market data challenges, and the GhIS experience with the development of property data collection template for valuation purpose. The second phase was a break-out session where the participants were partitioned into five groups based on themes developed from the research. The themes were: “existence of valuation errors”; “variation in valuations”; “property market data”; “property market data collection template”; and “research and knowledge”. The groups discussed pre-formulated questions related to their themes. The discussions were facilitated by a chairperson. Each of the groups also had a rapporteur

who recorded the outcome of the discussions. The third phase was a plenary session where outcomes from the group discussions were reported and discussed.

The workshop, thus, discussed findings from the literature evaluation. It also offered opportunities to obtain additional insights into the operation of property markets, valuation practice, property market data sources and challenges in Ghana as well as a platform to facilitate empirical data collection to deliver the research. The literature evaluation, in conjunction, with the stakeholder workshop therefore enabled further contextualisation of the research. It also informed the choice of data collection approaches, in particular, the selection of institutional valuation database(s) for examination, sampling of valuers and design of questionnaires.

3.3 Data Collection

Two main strategies, examination of institutional valuation databases and questionnaire survey of real estate valuers, were employed to obtain empirical data. Both strategies were implemented with the assistance of the GhIS. Also, research ethics approval was obtained from the Faculty of Environment and Technology, UWE Ethics Committee. This was to ensure that the research was conducted under the highest possible ethical standards.

3.3.1 Examination of Institutional Valuation Databases

Estimation of the extent of variation in valuations requires two or more valuations conducted on same properties for the same purpose at or around the same period of time (Brown, 1992; section 2.2.1). This strategy was, therefore, primarily employed to examine databases of the main property valuation institutions in Accra to obtain information on two or more valuations conducted on the same properties for the same purpose at or around the same period of time.

This required:

1. Identification of the major property valuation institutions in Accra with databases of valuations undertaken by two or more valuers/valuation firms on the same properties at the same or around the same period and for the same purpose; and
2. Selection of samples of the required sets of valuations from the sampled valuation institutions.

Knowledge of valuation institutions with comprehensive databases of valuations is limited. However, the database of the LVD is an official and relatively well managed database that could provide the required data for the research. The database was, therefore, purposively relied upon to obtain the requisite data.

The LVD is the main public valuation entity in Ghana. The Division conducts all forms of valuations for government and public agencies in the country. It also undertakes valuation consultancies and accepts into its database valuations undertaken by other public agencies and private valuers/valuation firms especially on cases relating to compensation payments for government acquisitions. Such cases often rely on valuations produced by the Division and expropriated owners' valuers/valuation firms as bases for negotiations to determine compensation payable. The Division, thus, has records of valuations across the country, which date back to the colonial era and explains why its database was purposively selected for the research.

Nevertheless, knowledge of the extent of the valuations held in the Division's database and those that meet the requirements for this study was limited as a significant proportion of the valuations appeared to be scattered on numerous files and in several locations. This meant that there was a lack of reliable sample frame based on which probability sampling could have been applied to select the relevant valuations. The relevant valuations were, therefore, selected in an explorative manner based on insights from purposive and convenience sampling techniques. Examination of the LVD's database took place between May and July, 2015.

To ensure smooth data collection from the LVD's database, the research team initially explored the nature of valuation reports held in the database. Based on the insights obtained and the information required to estimate the extent of variation in valuations, a database/spreadsheet was prepared and then subsequently populated. The database/spreadsheet contained fields such as: property number; location; property type; interest in the property and the unexpired term; size of the property; registration status; purpose of valuation; basis of valuation; dates on which the valuations were conducted by LVD and the private valuation practitioners; the method(s) of valuation they used; and their valuation opinions. Since information on the valuations/valuation reports were scattered in different locations including on computers and paper files, and in different offices, they had to be initially identified and examined, and then the relevant information used to populate the designed database. The identification and examination of

the information on the valuations/valuation reports were undertaken with the assistance of officials of the LVD. A total of 98 data sets were obtained. Each data set comprised two valuations; that of the LVD and the private practitioners. The data sets were all compensation valuations.

3.3.2 Questionnaire Survey

A questionnaire survey of real estate valuers/valuation surveyors in Accra was undertaken between July and September, 2015. It was to complement the examination of institutional valuation databases and also to obtain additional data to address the other objectives of the research. The questionnaire targeted real estate valuers who are members of the GhIS. It requested the valuers to undertake a market valuation of a hypothetical residential property as at a particular date based on the same set of instructions.

The property was a leasehold single storey 3-bedroom house with an unexpired term of 10 years sited on 0.093 hectare land located within the SHC Neighbourhood along the Liberation Road, Airport Residential Area, Accra, a commonly known area. This property was used because the design is well known by valuers in the study site and that market data for properties in where it was located is comparatively easy to come by. Thus, it was to ensure that a lot more valuers participate in the research. All the property details were given to the respondents. These included the specific location of the property, its construction details, fixtures and fittings, external works, access to services, neighbourhood characteristics, total floor area, sketch ground floor and location plans, title and planning/building permit status and ground rent reserved. Also, information on the method employed by the respondents to undertake the valuation and why they employed the method was obtained.

The questionnaire was designed based predominantly on insights from the literature evaluation and the outcome of the stakeholder workshop. The questionnaire was partitioned into 4 parts and an appendix, which contained the hypothetical property details. Part 1 dealt with the profile of the respondents, which sought to elicit information about the nature of practice of respondents and their years of professional experience. Part 2 was about the valuation assignment. Part 3 sought to ascertain the extent of importance of a number of real estate value attributes as applied to the valuation assignment. Part 4 solicited information on the reliability of the main sources of property market data in Ghana by the respondents and the relative importance of the attributes/fields that a property market data collection template should contain. Likert scale was used to assist in eliciting the information that was sought by parts 3 and 4 of the questionnaire (see appendix of the report information on how to obtain a copy of the questionnaire).

The questionnaires were self-administered (face-to-face administration). Prior to the administration, a pre-testing of the questionnaire was undertaken to ensure that it passed the face and content validities test. This process among other things requested 4 experienced valuers to evaluate the questionnaire in terms of whether or not it covers what

it envisaged to address, and the effectiveness of how the research variables were to be measured. A total of 110 questionnaires were administered to the respondents. The respondents were selected based on purposive and snow ball sampling techniques. These sampling techniques were employed due to a lack of a reliable sample frame.

Although the GhIS provide a yearly list of valuers in good standing in Ghana, there is no such list specifically for valuers in Accra. Also, the lists do not often have the address and location of valuers. Accordingly, probability sampling could not be undertaken. The selected sampling approaches were, therefore, the most practical and suitable means by which the required data could be procured to the deliver research.

Based on the research team's knowledge of practicing valuers in Accra, information provided by the GhIS and some senior official of the Institution, the respondents were initially contacted by phone and e-mails to inform them of the survey and enquire about their readiness to participate. Subsequently, the research team visited and discussed the survey with the respondents, and administered the questionnaires in person. Also, dates for collection of the completed questionnaires were agreed upon with the respondents. Prior to the initial contact with the respondents, however, the GhIS informed its members of the survey and encouraged them to participate in it as much as possible. A response rate of 63.64% was obtained.

3.4 Data Analysis

Information obtained from the stakeholder workshop was initially organised under the themes, which were created purposely to stimulate discussions during the workshop. Subsequently, the workshop outputs were generated based on common trends established under the themes.

The data obtained from both examination of the institutional valuation databases (archival data) and survey of real estate valuers were first entered into Microsoft Excel spreadsheets and thereafter coded, and transferred to Stata and SPSS. The data were then explored, cleaned, diagnosed and checked for consistency. Subsequently, they were subjected to statistical analysis based on which inferences were drawn to help address the objectives of the research.

Fundamentally the research sought to: 1. estimate the extent of variation in valuations undertaken by Ghanaian surveyors and valuers; 2. identify property market data sources in Ghana; and 3. develop a property market data collection template to support property market data collection for valuations. Addressing the first objective required two or more valuations conducted on the same properties for the same purpose at or around the same period of time (Brown, 1992; Hansz and Diaz, 2001). Data to address this objective were procured from examination of the database of the LVD and the questionnaire survey of real estate valuers in Accra.

Similar to studies such as Hansz and Diaz (2001), the extent of variation was assessed using the coefficient of variation of the value estimates. For the value estimates that were obtained from the LVD, the coefficient of variation was first calculated for each pair of valuations on the same property after which the mean of the series of coefficient of variations was computed as follows:

$$CoV = \frac{SD}{\bar{x}} \tag{Equation 3.1}$$

Where:

CoV = Coefficient of variation for each pair of valuations;
SD = Standard deviation of each pair of valuations; and
 \bar{x} = The mean of each pair of valuations.

The standard deviations and the means were also assessed respectively as follows:

$$SD = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n - 1}} \tag{Equation 3.2}$$

$$\bar{x} = \frac{\sum x_i}{n} \tag{Equation 3.3}$$

Where:

SD = As previously defined;
 \bar{x} = As previously defined;
 $x_1 \dots x_n$ = Estimated market values by both the LVD and private valuation practitioners; and
n = The number of valuations for each property.

The mean of the coefficient of variations was assessed as follows:

$$\bar{x}_{CoV} = \frac{\sum x_{iCoV}}{n_{CoV}} \tag{Equation 3.4}$$

Where:

\bar{x}_{CoV} = Mean coefficient of variation;
 \bar{x}_{iCoV} = The coefficients of variation of each pair of valuations; and
 n_{CoV} = The total number of the coefficient of variations (sample size).

The extent of variation in the market valuations obtained from the questionnaire survey was estimated by coefficient of variation and percentage median deviation of the valuations. Thus, the coefficient of variation of all the reported market values was estimated. The percentage median deviation was used because evaluation of the distribution of the reported market values was not normal based on both Levene and Simonov Kolmogorov tests. The median was, therefore, more representative of the distribution of the values than the mean (Field, 2005). The use of the percentage median variation to report the extent of variation is similar to the study by Adair et al. (1996), which used the percentage mean deviation to do so.

Using absolute values and ignoring negative signs, the percentage median deviation of each reported market value from the median market value was assessed as follows:

$$PMD_i = \frac{|x_i - MD|}{MD} \times 100 \quad \text{Equation 3.5}$$

Where:

PMD_i = Percentage median deviation of each reported market value from the median market value;

x_i = Each reported market value; and

MD = Median market value.

Objective 2 was primarily addressed through the literature evaluation and the subsequent stakeholder workshop. However, having identified the possible sources of property market data, the questionnaire was used to obtain information on the reliability of the data sources. A Likert scale was used and the respondents (real estate valuers) were requested to rate the reliability of the identified property market data sources on a scale of 1-5 (1 = very unreliable, 2 = unreliable, 3 = quite reliable, 4 = reliable and 5 = very reliable). Also, the possible information/fields that a property market data collection template should contain were obtained from the stakeholder workshop as part of the strategy to address objective 3. Similar to objective 2, the questionnaire was used to obtain information on the relative significance of the information/fields that a property market data template should contain on a scale of 1-5 (1 = very insignificant, 2 = insignificant, 3 = quite significant, 4 = significant and 5 = very significant). Prior to that, information on the extent of significance of property market data collection template to the effective property market data collection for valuation purpose was obtained on a scale of 1-5 (1 = very insignificant, 2 = insignificant, 3 = quite significant, 4 = significant and 5 = very significant).

In broad terms, evaluation of an issue on a Likert scale is often undertaken based on consensus around the mean score. Tastle and Wierman (2007) intimate that such consensus could be assessed as follows:

$$Cns(X|\mu_x) = 1 + \sum_{i=1}^n p_i \log_2 \left(1 - \frac{|X_i - \mu_x|}{d_x} \right) \quad \text{Equation 3.6}$$

Where:

$Cns(X|\mu_x)$ = Consensus around the mean score from the responses (the scores given the mean score);

X = The scores;

μ_x = The mean score;

X_i = Each score; and

d_x = The range of X ($d_x = X_{max} - X_{min}$).

However, Tastle et. al (2009) on the basis of Equation 3.6 suggest that the evaluation could be undertaken using a preferred target (reference). Thus, μ_x could be replaced by the preferred target and in such circumstance d_x should be multiplied by 2.

The research sought to evaluate the information obtained on the Likert scale in relative terms and 5 was the highest score on all the scales. Thus, 5 was used as the preferred target since a score on an attribute closer to or further away from 5 compared to the other attributes studied determine how high that particular attribute was evaluated compared to the others. This was assessed by:

$$Agr(X|5) = 1 + \sum_{i=1}^n p_i \log_2 \left(1 - \frac{|X_i - 5|}{2d_x} \right) \quad \text{Equation 3.7}$$

Where:

Agr = The level of agreement on evaluation of an attribute, and all other variables are as previously defined.

The property market data collection template was, thus, developed using findings from the literature evaluation, stakeholder workshop and evaluation of the relative significance of the information/fields that such template should contain. The experience of the GhIS was also relied upon greatly.

4.0 Research Findings



Image source: Anton_Ivanov – Shutterstock.com

Findings from the research are presented in three broad sections as follows:

- Outcome from the stakeholder workshop;
- Results from analyses of the archival data from LVD database; and
- Results from analyses of the questionnaire survey data.

4.1 Outcome from Stakeholder Workshop

The outcome from the stakeholder workshop is reported based on the themes, which were developed for the group discussions at the workshop. These themes were: “Existence of valuation errors”; “variation in valuations”; “property market data”; “property market data collection template”; and “research and knowledge.

4.1.1 Existence of Valuation Errors

The workshop established that there are concerns over valuation errors in Accra and Ghana as a whole, and practitioners acknowledge them. Such concerns are often expressed by stakeholders in the real estate sector such as: banks and other financial institutions; institutions that use valuations for accounting purposes and decision-making; investors; other professionals in the built environment particularly lawyers, planners and architects; and public institutions like the Lands Commission. A number of general examples of errors in valuations were cited to corroborate their existence. Further, it was noted that the errors stem principally from: variation in valuations; inadequate property

details such as poor specification of location and condition of properties; inadequate knowledge of dates of previous property transactions and their conditions; and lack of quality property market data. Other factors mentioned were: practitioners’ inability to adequately analyse and interpret available data, as well as inadequate training in data acquisition. For example, it was acknowledged that:

- Practitioners often lack the skill to ask relevant questions to obtain meaningful data;
- Practitioners inability to determine tenurial arrangements for properties and unexpired terms for terminable interests due to lack of relevant documentation;
- There is lack of uniform practice standards for practitioners; and
- There are incidences of undertaking valuations without adequate referencing of the subject matter of valuations.

4.1.2 Variation in Valuations

Variation in valuations was acknowledged by the workshop participants to be prevalent across all types of valuations in Ghana. Further, the variation was perceived to be pronounced especially when different valuation methods are applied. However, the participants suggested that incidence of variations among different types of valuations were not clear. Also, the participants observed that wide variation in valuations adversely affect clients’ confidence regarding decision making since both the credibility of such valuations and the professional advice, which flow from them become questionable.

The workshop identified lack of quality property market data as the main cause/determinant of variation in valuation in Ghana. Other causes, which were noted, are: inappropriate application of the various valuation methods particularly the use of unsuitable yields under the investment/income capitalisation method, and employment of inappropriate depreciation rates and disregard for interest in properties under the replacement cost method; client influence and pressure; and activities of special interest property market participants such as money launderers. However, the participants stated that there was currently no acceptable or agreed level of variation (margin of error) between valuations, and that there is a need for such standards to be developed to guide practice. A margin of error for variation in valuations of $\pm 5\%$ was suggested.

4.1.3 Property Market Data

The workshop participants expressed the opinion that reliability of property market data used for property valuation in Ghana largely depends on the source of the data. Consistent with findings from the literature, the participants identified sources of property market data for property valuation as: state/public institutions such as the Lands Commission, TDC, AESL and SHC; professional property consultancy firms; lawyers; parties to property transactions; real estate developers; auctioneers; informal estate agents; and online transactions. Further, they observed that unlike property market data obtained from state/public institutions those obtained from real estate developers often appear more current, and that online transactions could be used as a guide not as a real data source. Nevertheless, the participants bemoaned that paucity of reliable property market data is a challenge to the practice of valuation in Ghana and has often resulted in questionable valuations.

The workshop participants recommended the establishment of property market databank, and that the GhIS should take the initiative for doing so and it should be supported by law. However, they noted a need for support from practitioners to make it successful and suggested the provision of incentives such as discounts on fees to practitioners for access to data from such a databank to entice them to support it. Also, as to effective and efficient ways to obtain data for valuation in Ghana, they suggested that: there should be easy access to published data at a fee; there is a need for legal requirement to compel all property related transactions to be published; information sharing among practitioners should be encouraged; informal estate agents should be trained to enable them provide quality data; and a property market data collection template should be developed with some guidelines to follow to collect reliable property market data.

There was an issue of whether or not the cost of obtaining reliable data should be transferred onto clients and how such costs should be assessed. However, this issue could not be resolved and merits further investigation and research.

4.1.4 Property Market Data Collection Template

Participants at the workshop agreed that a standardised property market data collection template would significantly improve property market data collection practices in Ghana. In particular, they observed that such a template will be a good reference point to guide property market data collection and assist valuation practitioners to ask suitable questions during data collection. Further, the participants noted that the template will promote standardisation in data collection and enhance quick and easy access to information for valuation assignments. However, they suggested that valuation and estate surveyors should be involved as much as possible in the development of the template to promote its use, and the GhIS especially the VES Division should take the lead in the development of the template. They also recommended that the data collection template should: be user friendly and adaptable to all property types and land uses; be easy to understand and use by all practitioners; be easy to access for use; and have fields to capture relevant information such as property numbers/identification, nature of transaction, parties to the transaction, agreed consideration and the construction details of properties among other things.

4.1.5 Research & Knowledge Gaps

The workshop noted that although causes of variation in valuations and valuation errors generally such as paucity of reliable property market data, inappropriate application of valuation methods and client pressure appear to be well known, effective solutions to the problem were yet to be found. It was further noted that knowledge on the extent of variation in valuations in Ghana was limited. Participants at the workshop, thus, recognised a need for research into the issue, and identified lack of knowledge on the extent of variation in valuations and its impact on client confidence, credibility of valuers and the valuation profession as well as a need to find solutions to the problem as the main drivers for the research. The participants also suggested that the research should explore issues such as the extent of variation in valuations, their possible causes, role property market data challenges in variation in valuations, and recommend practical and sustainable solution to the problem. In addition, they noted that although finding solutions to the variation in valuations problem was paramount it was equally important to ascertain the state of the problem and its possible causes first before prescribing solutions.

4.2 Results from Analyses of the Archival Data

A total of 98 data sets (pair of valuations) were obtained from the LVD. Each data set consisted of 2 valuations; one from the LVD and the other from a private valuer or valuation firm (see section 3.3.1). The valuations were conducted between 2009 and 2015. The entire valuations were conducted for the purpose of compensation for government's compulsory acquisition. Market value constituted the basis of all the valuations. Almost all the valuations were conducted both from the standpoints of the LVD and private practitioners with the replacement cost method of valuation. However, there were few cases where other methods of valuation were employed.

The valued properties were diverse and comprised washing bays; and single storey, two storey and three storey structures both completed and uncompleted. The land sizes for the properties range between 0.01 and 0.65 acres. The properties were located in two regions; the Greater Accra and the Western Regions of the Republic of Ghana. However, most were in the Greater Accra Region. The interests subsisting in the properties comprised customary freehold and estates of freehold and leaseholds although interests in a significant number of the properties were not available. The unexpired term for most of the leasehold interests were also not available. It was ascertained that where ownership of the land on which the improvements (properties) were sited was in dispute, the valuations were restricted to the improvements. This, coupled with non-availability of some of the information on the properties' details may be a probable reason for the reliance on the replacement cost of valuation method to undertake most of the valuations. This further emphasises the paucity of property market data problem in Ghana for good valuation practice as identified by the relevant literature and the stakeholder workshop.

For the purpose of the analyses, the properties were categorised into four main property types namely: office/retail shop; residential; fuel service station; and mixed-land use. Equations 3.1 - 3.4 were activated to assess the extent of variation in the valuations.

4.2.1 Extent of Variation in Valuations

The majority (54.08%) of the observations were valuations on office/retail shop properties compared to fuel service station, which recorded the lowest observations. This was followed by the valuations on residential properties, which constituted 29.59% and then mixed land use and fuel service station, which formed 9.18% and 7.14% of the valuations respectively (Table 4.1). The distribution of the sample by property type does not correspond with the structure of the real estate market in Ghana, which is dominated by residential properties (section 2.1.1). Nevertheless, it is quite understandable given that the valuations were for compensation claims on government compulsory acquisitions for existing road widening and alignment. This means that most of the expropriated properties were located along existing roads and the majority of such properties in the case study country are retail shops particularly informal ones, and office premises.

Table 4.1 also reports the results of the extent of variation in the valuations based on the estimated coefficients of variation for the entire sample and by property type. The results show that the variations in the total observations ranged from a minimum of 0.014 (1.4%) to a maximum of 1.304 (130.4%). Overall, the results show that valuations in the sample had, on average, a coefficient of variation of 0.336 (33.6%) whereas the median coefficient of variation was 0.237 (23.7%). Further breakdown of the coefficient of variation by property type demonstrates that the extent of variation in the valuations on fuel service station was the highest (68.2%). This was followed by variation in valuations on residential properties (44.8%), mixed land use (36.9%) and retail/office (22.3%) in that order (Table 4.1). While the high level of variation in the valuations on fuel service station could possibly support the assertion that complex properties are more prone to have high variations in their valuations (Bretten and Wyatt, 2001) given that this property type was the most complex, the extent of variation in the valuations on the other property types, in particular residential was striking.

Table 4.1 Summary Statistics of the Coefficient of Variations (CoV)

Property Type	Number/% of CoV		Coefficient of Variation			
	Number	%	Minimum	Maximum	Mean	Median
Retail/Office	53	54.082	0.014	1.037	0.223	0.181
Residential	29	29.592	0.056	0.886	0.448	0.424
Fuel Service Station	7	7.142	0.094	1.304	0.682	0.733
Mixed-land use	9	9.183	0.128	1.242	0.369	0.272
Total	98	100	0.014	1.304	0.336	0.237

Note: Mixed land use: This refers to properties which were mainly used for both residential & commercial purpose

Table 4.2 Analysis of Variance of Co-efficient of Variations based on Property Type

Items	Sum of Squares	DF	Mean Square	F-value	P-value
Between Groups	1.891	3	0.63	10.009	0
Within Groups	5.919	94	0.063	-	-
Total	7.809	97	-	-	-

Table 4.3 Multiple Comparisons of Coefficient of Variations by Property Type based on Tukey HSD

Property Type (I)	Property Type (J)	Mean Difference (I-J)	Std. Error	P-Value
Retail/Office	Residential	-0.225	0.058	0.001
	Fuel Service Station	-0.459	0.101	0.000
	Mixed Land Use	-0.146	0.090	0.375
Residential	Retail/Office	0.225	0.058	0.001
	Fuel Service Station	-0.234	0.106	0.126
	Mixed Land Use	0.079	0.096	0.842
Fuel Service Station	Retail/Office	0.459	0.101	0.000
	Residential	0.234	0.106	0.126
	Mixed Land Use	0.313	0.126	0.070
Mixed Land Use	Retail/Office	0.146	0.090	0.375
	Residential	-0.079	0.096	0.842
	Fuel Service Station	-0.313	0.126	0.070

Ordinarily residential properties are expected to be simple compared to office/shop and mixed land uses or properties. Consequently, the high variation in the valuations on the residential properties compared to those of the mixed land use and retail/office properties was unexpected. This perhaps could be explained by the varying nature of the residential properties that constituted the subject matter of the valuations. In fact, residential properties in the case study country especially those outside the emerging gated communities come in various forms, designs and sizes. Another possible reason for the lower variation in valuations on the office/retail shop properties compared to those of the residential properties and the mixed land utilisation could be that most of the office/retail properties were the small simple informal type developments. This would have meant that the properties were much simpler compared to the other property types.

To ascertain whether or not the difference between the extents of variations in valuations on the property types was statistically significant, a one-way independent between groups analysis of variance (ANOVA) was undertaken to compare the means of the coefficients of variation of the property types. Further, a post-hoc multiple comparison of the means of the coefficients of variation by property type based on Tukey HSD was undertaken to evaluate the nature of the difference of the extent of variation in valuations among the property types. Results from both analyses are reported in Tables 4.2 and 4.3 respectively. Prior to undertaking the ANOVA, both the assumptions of normality and homogeneity of variance were evaluated to ensure that they all satisfy the requirements of a parametric test.

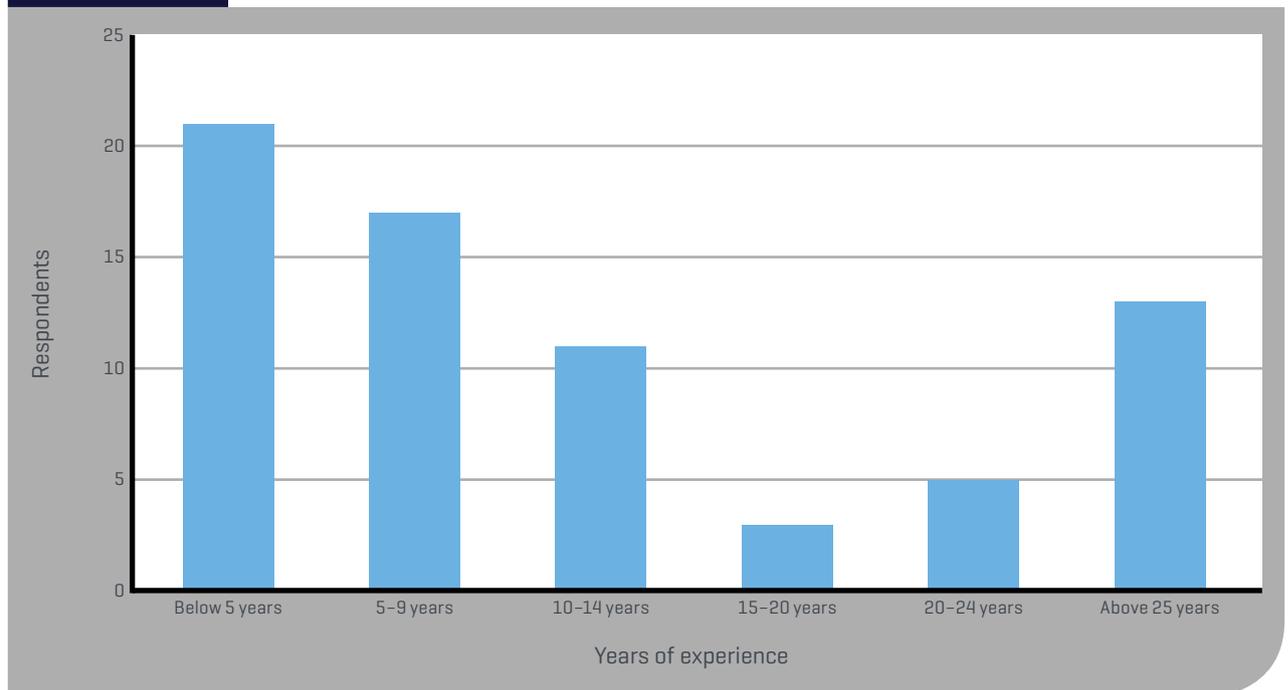
The results established that property type has a statistically significant effect on the extent of variation within the valuations, ($F(3, 97) = 10.009, P = 0.00$). Results from the post-hoc analyses show that the extent of variation in valuations on the retail/office properties was lower than all the other three property types except for the mixed land use, which showed no statistically significant difference. Also, the extent of variation in valuations in the residential properties was lower when compared to that of the fuel service station, and higher when compared to that of mixed land use, but both were not statistically significant. Further, the extent of variation in the valuations on fuel service station was significantly higher relative to that of mixed land use at 10% level of significance.

In broad terms, the results reflect wide variation in valuations compared to the often accepted margin of error of between $\pm 5\%$ and $\pm 15\%$ and in exceptional case of residual valuations up to $\pm 20\%$ for UK valuations (Crosby, 2000). This corroborates the findings from an earlier study conducted in the case study country by Baffour Awuah and Booth (forthcoming). A plausible reason for the wide variation in the valuations could be the probable positions of the LVD and private valuation practitioners in compensation claim transactions. Whereas it is natural for the LVD to seek to reduce the compensation claims paid by government, the private practitioners will want enhanced claims for their clients. This could result in two extreme value estimates and hence wide variation in the estimates.

The results also suggest that valuations on fuel service stations, residential properties and mixed land uses are more prone to high variations. Further, they suggest that the valuations may have valuation accuracy problems given that excessive variation in valuations could result in valuation inaccuracies (Adair et al., 1996). Most importantly, since the observations were compensation valuations, the results suggest the tendency for protracted negotiations on compensation claims for government acquisitions.

Additionally, the results corroborate the outcome of the stakeholder workshop regarding the potential existence of wide variation in valuations in the study country. The extent of variation in valuations estimated by this study far exceeded the margin of error of $\pm 5\%$ that was suggested at the workshop for valuation practice in the country. This further buttress the concern over the existence of wide variation in valuations, and as acknowledged at the workshop this has the potential to adversely affect client confidence and the valuation profession. Clearly, this may not auger well for real estate investment and market operations in the country.

Figure 4.1 Respondents' Years of Experience

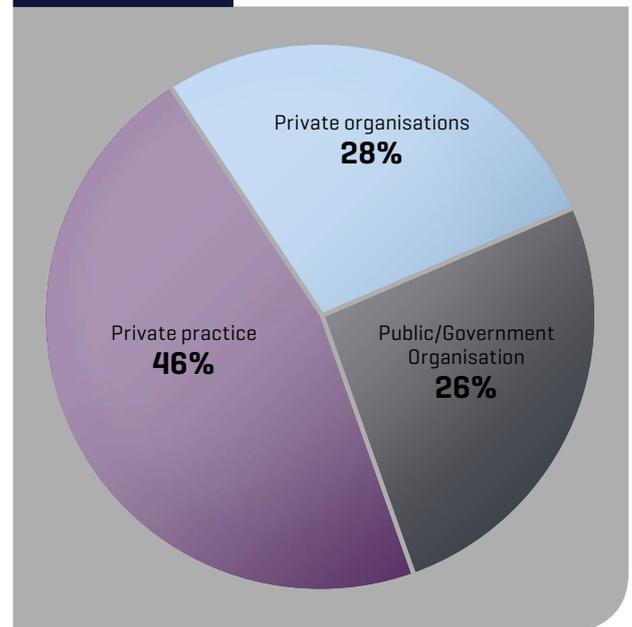


4.3 Results from Questionnaire Survey of Real Estate Valuers

Seventy (70) out of a total of 110 questionnaires administered to the real estate valuers were received. This constituted 63.64% of the questionnaires that were administered. This is more than the response rate recorded from comparable studies such as Adair et al. (1996) (56%). However, for a few number of the received questionnaires, some of the questions were not answered. These were taken into account in the data analyses.

Most of the respondents had less than 15 years of professional experience (30% were below 5 years of experience, 24.29% within 5-9 years, 15.71% within 10-14 years, and 18.57% above 25 years) (Figure 4.1). This result could be attributed to the increasing number of student intake on both the BSc (Hons) Land Economy and Real Estate programmes at the KNUST over the last 10 years or more compared to the initial years when the Land Economy programme was introduced. Since graduates from these programmes have been the main source of professional membership for VES, it can be inferred that any change in student intake on the programmes would affect the membership state of the Division. However, regarding the nature of practice of the respondents, 45.71%, 25.71% and 28.57% of the respondents were in private practice, worked for government/public, and private organisations respectively (Figure 4.2).

Figure 4.2 Nature of Respondents' Professional Practice



4.3.1 Extent of Variation in Valuations

The extent of variation in the valuations obtained from the survey of real estate valuers was estimated by Equations 3.1 and 3.5 (refer to Section 3). Tables 4.4 and 4.5 summarise the results on the extent of variation in the market value estimates received from the respondents on the 3-bedroom residential property that constituted the subject matter of the valuations. The results corroborate findings from both the stakeholder workshop and the analyses of the archival data on the potential existence of wide variations in valuations produced in Ghana. However, the variation in the valuations observed from the survey data (63%) was higher than that of the archival data. Also, the results show that only 2.86%, 8.57% and 14.29% of the valuations fell with $\pm 5\%$, 10% and 20% of the median for the reported value estimates respectively (Table 4.4). Further, these results show a much higher variation compared to Adair et al. (1996) in the UK, which established that the majority (80%) of the sampled valuations ($n = 446$) produced a variation from the mean of $<20\%$ and Hansz and Diaz (2001) in the USA, which produced a coefficient of variation of 0.098 (9.8%). This further emphasises the extent of variation in the valuations.

A number of plausible reasons could be attributed to the high level of variability in the value estimates that were returned by the respondents. First, the subject matter of the valuations; a government leasehold interest in a residential property with an unexpired term of 10 years may have appeared quite complex to the respondents. This is because in practice valuations of such properties are often valued as 50-year interest based on the assumption that government will renew the lease although renewal is usually undertaken at a substantial cost, and it is not guaranteed. Second, the varying levels of experience of the sampled valuers (refer to the earlier discussion under the main subsection) may have resulted in different interpretation of the property market and the value estimates. Third, the use of different methods of valuation to arrive at market value estimates could have accounted for the high variability in the valuations. The results show that 8 different approaches (sales comparison (35.71%), replacement cost (38.57%), investment (15.71%), sales comparison & replacement cost (4.29%), sales comparison & replacement cost & investment (2.86%), sales comparison & investment (1.4%), investment & replacement cost (1.4%)) were used by the respondents to produce the market value estimates. While this may reflect inadequate standardisation in valuation practice, which could be corroborated by the numerous reasons reported by the respondents for the choice of a particular approach, it also mirrors the property market data challenge to valuation practitioners. This is particularly so given that the valued hypothetical residential property was located in one of the prime and choicest areas of the case study country where the property market is very articulate, and that based on valuation theory the market approach (sales comparison) should have been the preferred method of valuation.

Table 4.4

Summary Statistics of the reported Market Value Estimates

Statistic	Values
Minimum	90,700
Maximum	3,364,480
Mean	1,247,379
Median	1,134,650
Standard Deviation	784,428
Coefficient of Variation	0.63

Table 4.5

Percentage Mean & Median Variation in Valuations

	Percentage Variation	
	Mean	Median
<5	2.86%	2.86%
<10	7.14%	8.57%
<20	21.43%	14.29%
<30	34.29%	31.43%
<40	42.86%	42.86%
<50	57.14%	57.14%
<60	60.00%	60.00%
<70	72.86%	70.00%
<80	78.57%	71.43%
<90	85.71%	84.29%

4.3.2 Property Market Data Sources

Evaluation of the frequency of use of property market data sources by the respondents and their reliability was undertaken with Equation 3.7. A 5-point Likert scale was used to elicit the required responses (section 3.4). Results from the evaluation are reported in Tables 4.6 & 4.7.

In broad terms, the results demonstrate that valuers want to use property market data sources they perceive to be reliable. However, relying on professional colleagues for property market data was the most used property market data source ($Agr|5 = 0.939$) compared to the media, which is the least used ($Agr|5 = 0.548$). Valuation practitioners own database was the second most used property market data source ($Agr|5 = 0.826$). This was followed by public institutions ($Agr|5 = 0.797$), estate developers ($Agr|5 = 0.784$), estate agents ($Agr|5 = 0.717$) and property owners ($Agr|5 = 0.636$) in that order. Ease of access to property market data, the need for valuation practitioners to check the reliability of their own databases, and the reliability of the property market data sources are possible reasons for the results. However, apart from the media as a property market data source that its usage corresponded to how the respondents rated its reliability, there were variations in how the respondents rated the reliability of the other property market data sources compared with their frequency of use (Table 4.6).

Although obtaining property market data from professional colleagues was the often used data source, it was not perceived as reliable ($Agr|5 = 0.888$) as practitioners own database ($Agr|5 = 0.925$), which was rated as the most reliable. Nevertheless, obtaining property market data from professional colleagues was perceived as more reliable than the other property market data sources. A possible reason for this finding could be the confidence that professionals have in property market data collection and management capabilities of their colleagues. Further, obtaining property market data from real estate developers was rated as the next most reliable data source ($Agr|5 = 0.802$) followed by public institutions ($Agr|5 = 0.794$), property owners ($Agr|5 = 0.671$) and estate agents ($Agr|5 = 0.657$). The finding for real estate developers may be due to their ability to often provide current property market data as noted by the participants at the stakeholder workshop. Inadequate records keeping, and the tendency for provision of out of date data and the bureaucratic process for provision of property market data may account for the finding on public institutions as a source of property market data. Also, the practice of not disclosing details of real estate transactions by property owners, and the poor data collection and documentation on real estate transactions by real estate agents could be possible explanations for the findings on the other two property market data sources respectively.

4.3.3 Significance of Property Market Data Collection Template & the Content

Data on the significance of property market data collection template to effective data collection for valuation practice and the content/fields for the template were collected based on 5-point Likert scales. Analyses of the data were undertaken with the use of Equation 3.7 (refer to section 3). Results from the analyses are reported in Tables 4.8 and 4.9. The findings show that all the respondents virtually agreed that property market data collection template is very significant to effective property market data collection for valuation practice. This finding corroborates the finding from the stakeholder workshop on the issue.

The ratings (results) on the importance of the information/fields that a property market data collection template should contain are arranged in order of their importance with the most important information/field coming first (Table 4.8). The results show that, on average, all the information/fields are significant. Also, they show that date of transaction was considered as the most important information/field ($Agr|5 = 0.978$). Conversely, rooms' orientation was perceived as the least important ($Agr|5 = 0.533$). The level of importance assigned to date of transaction could be related to how recent a property market data is or may be. Generally, a close examination of the results shows that apart from size of property including land all the first few information/fields, which were considered most important, appear to be more fundamental to the quality of property market data. The remaining factors relate to value attributes. This is quite understandable and significant since it is often useful for appropriate property market data to be initially assembled subsequent to which the required analyses could be undertaken to ascertain the effect of value attributes as part of value determination process.

4.3.4 Development of Property Market Data Collection Template & Guidelines for effective Property Market Data Collection

The property market data collection template was developed based on insights drawn from the literature evaluation, stakeholder workshop, the experience of the GhIS and the outcome from the analyses of the survey data. The guidelines for effective property market data collection for valuation were also based on the same insights. The literature reveals that the appropriateness and reliability of real estate valuations are, in part, dependent on good quality property market data (Peto, 1997; Dunse et al., 1998; Gudat, 2010). However, unlike some developed countries where there exist infrastructures such as a multi-purpose cadastre, fiscal cadastre and property transaction price database to aid easy access to property market data for valuation purpose, the literature evaluation and the stakeholder workshop established that no such organised infrastructures exist at the moment in Ghana.

Table 4.6 Extent of Use of Property Market Data Sources

Source	No	Frequencies [%]					Min	Max	Mean	Median	Mode	Agr 5
		1	2	3	4	5						
Property Owner	70	2.86	21.43	37.14	18.57	20	1	5	3.31	3	3	0.636
Estate Agent	69	1.45	7.25	34.78	39.13	17.39	1	5	3.64	4	4	0.717
Professional Colleagues	69	0	0	8.7	13.04	78.26	3	5	4.7	5	5	0.939
Public Institutions	70	0	10	20	27.14	42.86	2	5	4.03	4	5	0.797
Estate Developers	69	1.45	10.14	14.49	37.68	36.23	1	5	3.97	4	4	0.784
Media	70	12.86	24.29	25.71	27.14	10	1	5	2.97	3	4	0.548
Own Database	66	3.03	6.06	10.61	30.3	50	1	5	4.18	4.5	5	0.826

Note: 1 – Do not use at all 2 – Rarely 3 – Quite often 4 – Often 5 – Very Often

Table 4.7 Reliability of Property Market Data Sources

Source	No	Frequencies [%]					Min	Max	Mean	Median	Mode	Agr 5
		1	2	3	4	5						
Property Owner	70	2.86	10	42.86	28.57	15.71	1	5	3.44	3	3	0.671
Estate Agent	69	1.45	11.59	42.03	39.13	5.8	1	5	3.36	3	3	0.657
Professional Colleagues	70	0	0	7.14	42.86	50	3	5	4.43	4.5	5	0.888
Public Institutions	70	0	5.71	25.71	31.43	37.14	2	5	4	4	5	0.794
Estate Developers	68	1.47	4.41	19.12	38.24	36.76	1	5	4.04	4	4	0.802
Media	67	7.46	22.39	50.75	17.91	1.49	1	5	2.84	3	3	0.528
Own Database	65	0	0	3.08	32.31	64.62	3	5	4.62	5	5	0.925

Note: 1 – Very unreliable 2= Unreliable 3 = Quite reliable 4 = Reliable 5 = Very reliable

Table 4.8 Significance of Property Market Data Collection Template

Source	No	Frequencies [%]					Min	Max	Mean	Median	Mode	Agr 5
		1	2	3	4	5						
Usefulness/Relevance	62	0	0	6.45	33.87	59.68	3	5	5	5	5	0.908

Note: 1 – Very insignificant 2= insignificant 3 = Quite significant 4 = Significant 5 = Very significant

Table 4.9

Relative Importance of Information/Fields that a Property Market Data Collection Template Should Contain

Source	No	Frequencies [%]					Min	Max	Mean	Median	Mode	Agr 5
		1	2	3	4	5						
Date of transaction	70	0.00	0.00	0.00	11.43	88.57	4	5	4.89	5	5	0.978
Sale/purchase price/rent	68	0.00	0.00	1.47	10.29	88.24	3	5	4.87	5	5	0.974
Size of property including land	70	0.00	0.00	2.86	18.57	78.57	3	5	4.76	5	5	0.952
Property address/location	70	0.00	0.00	2.86	25.71	71.43	3	5	4.69	5	5	0.939
Title	70	0.00	0.00	4.29	25.71	70.00	3	5	4.66	5	5	0.933
Neighbourhood	69	0.00	0.00	5.80	24.64	69.57	3	5	4.64	5	5	0.928
Condition of property	67	0.00	0.00	1.49	34.33	64.18	3	5	4.63	5	5	0.928
Term of interest	70	0.00	2.86	7.14	22.86	67.14	2	5	4.61	5	5	0.922
Nature of transaction	70	0.00	0.00	5.71	40.00	54.29	2	5	4.54	5	5	0.907
Accessibility	70	0.00	0.00	11.59	30.43	57.97	3	5	4.49	5	5	0.899
Floor finish	69	0.00	0.00	15.71	35.71	48.57	3	5	4.46	5	5	0.893
Walls	70	0.00	0.00	15.71	35.71	48.57	3	5	4.33	4	5	0.866
Ceiling	70	0.00	0.00	17.14	32.86	50.00	3	5	4.33	4	5	0.866
Roof	70	0.00	0.00	17.14	34.29	48.57	3	5	4.33	4.5	5	0.866
Windows	70	0.00	0.00	18.57	31.43	50.00	3	5	4.31	4	5	0.863
Doors	70	2.94	0.00	11.76	38.24	47.06	3	5	4.31	4.5	5	0.862
Encumbrances	34	0.00	0.00	20.29	39.13	40.58	1	5	4.26	4	5	0.848
External works	69	0.00	0.00	18.57	42.86	38.57	3	5	4.20	4	5	0.840
Electricity	70	0.00	1.43	21.43	35.71	41.43	3	5	4.20	4	4	0.840
Fixtures and fittings	70	0.00	2.86	18.57	45.71	32.86	2	5	4.17	4	5	0.833
Pipe borne water	70	0.00	1.43	25.71	37.14	35.71	2	5	4.09	4	4	0.815
Age of property	70	0.00	2.86	34.29	27.14	35.71	2	5	4.07	4	4	0.812
Registration status	70	1.43	4.29	22.86	42.86	28.57	2	5	3.96	4	5	0.786
Number of rooms	70	0.00	7.25	27.54	39.13	26.09	1	5	3.93	4	4	0.779
Planning scheme	69	0.00	5.80	33.33	31.88	28.99	2	5	3.84	4	4	0.761
Building permit status	69	1.45	4.35	31.88	39.13	23.19	2	5	3.84	4	3	0.761
Proximity to other social amenities	69	2.90	11.59	20.29	34.78	30.43	1	5	3.78	4	4	0.748
Rent passing	69	1.45	7.25	34.78	33.33	23.19	1	5	3.78	4	4	0.741
Parties to transaction	69	8.57	7.14	40.00	25.71	18.57	1	5	3.70	4	3	0.728
Telephone	70	12.86	18.57	40.00	24.29	4.29	1	5	3.39	3	3	0.650
Rooms' orientation	70	0.00	2.86	7.14	22.86	67.14	1	5	2.89	3	3	0.533

Note: 1 – Very insignificant 2 – Insignificant 3 – Quite significant 4 – Significant 5 – Very significant

In Germany, for example, there are even specialised property market data banks for valuations for specific purpose such as mortgages and investments, and also to support the use of specific valuation methods (Gudat, 2010). The Investment Property Databank (IPD) in the UK is another example of such property market data bank where valuation practitioners could access data for their practice. The lack of such infrastructures coupled with other real estate market challenges as explained in section 2 has partly culminated in the seemingly lack of standardisation in valuation practice in Ghana. This could be exemplified by the different valuation methods that were used in the valuation assignment (section 4.3.1) requiring it to be taken into account in the development of property market data collection template.

Nevertheless, the literature evaluation and the stakeholder workshop identified the main sources of property market data for valuation practice in Ghana and their weaknesses. Furthermore, the questionnaire survey evaluated the reliability of the property market data sources. The literature evaluation gave indications of the information fields that a property market data collection template should contain. For example, it highlighted that a good quality property market data should have an indication of: its source; the date the transaction took place; location of the subject property; interest in the property; development status of the property; agreed consideration; and history of the transaction.

Additionally, the stakeholder workshop acknowledged the relevance of property market data template for effective data collection and provided some essential characteristics for such a template. The workshop observed that the template will be a good reference point to guide property market data collection and assist valuation practitioners to ask suitable questions during data collection. Also, it noted that the template will promote standardisation in data collection and enhance quick and easy access to information for valuation assignments. Participants at the workshop expressed the opinion that the template should: be user friendly and adaptable to all property types and land uses; be easy to understand and use by all practitioners; be easy to access for use; and have fields to capture relevant information such as property numbers/identification, nature of transaction, parties to the transaction, agreed consideration and the construction details of properties among other things. The survey evaluated the relative importance of the information/fields for the template and concluded that all the information/fields that were evaluated, on average, were significant (Table 4.9). All these insights together with the GhIS experience were used to develop the property market data collection template (see appendix of the report for a copy).

Based on the same insights, the guidelines to improve property market data collection for valuation practice are outlined in Figure 4.3 below. Like all data, findings from the literature evaluation and the stakeholder workshop suggest that property market data is required for a purpose and in this particular instance, valuation. However, valuations may be commissioned for several purposes and the property market data requirements to address the various purposes may vary. Also, the findings show that good quality property market data should meet certain requirements. Further, they identified the various sources of property market data and their short comings. The survey, in particular, evaluated the reliability of the various data sources suggesting that some data sources are considered better than others in terms of supply of good quality data by valuers. Additionally, the findings suggest a systematic approach to property market data collection especially in the face of the challenges with the data sources. This may require careful planning, strategies to mitigate data collection cost and a set of data collection skills for effective property market data collection. Using these findings and their implications, four main interconnected principles were used to develop the guidelines for effective property market data collection. These principles were adapted from Urban Institute for Health Forum's¹.

The principles are:

- Establishment of the purpose/conducting a need analysis for property market data;
- Identification of possible property market data sources;
- Planning for property market data collection; and
- How to collect property market data.

As can be seen from Figure 4.3, each of the four principles outlines steps for effective property market data collection. However, for effective application of the guidelines the property market data environment must be conducive and each of the players in the environment, in particular, the data sources/institutions needs to be proactive. The other suggestions for improvement in property market data collection are reported as part of the conclusions and recommendations of this research.

¹ Data Collection and Information Management for Healthier Communities – see http://www.cde.state.co.us/sites/default/files/documents/early/downloads/eccouncils/dataactiontemplate_compatible.pdf

Figure 4.3

Guidelines for Effective Property Market Data for Valuation Practice



5.0 Discussion and Implications

This section discusses findings from the research and their implications for real estate valuation practice, valuers/valuation surveyors and property market operations in Ghana and SSA as well as future research.

5.1 Knowledge of the Extent of Variation in Valuations

Although there is some anecdotal evidence, the literature evaluation established that knowledge on the existence and particularly the extent of variation in valuations in Ghana and across the SSA region is limited. Based on consultations with key stakeholders in the property valuation industry and analyses of the empirical data, this work provides evidence of the extent of variation in real estate valuations produced in Ghana. It also provides evidence of variation in valuations on several property types namely: office/retail shops; residential; mixed land utilisation. The evidence shows that the level of variation in real estate valuation is quite high compared to international evidence in the literature and that the high level of variation in valuations is more pronounced in valuations on fuel service stations and residential properties compared to office/retail properties and mixed land utilisations. Although this may not be favourable for the current real estate investment drive and market operations in Ghana as it could affect investor and client confidence, the research provides new knowledge and insights for valuation practice in the country and across SSA region.

Apart from property market data challenges, lack of standardisation in the application of valuation methods and complexity of subject matter of valuations among other things may account for some of the variation in the valuations. The survey results revealed significant differences in the methods, which were employed for the valuation of the hypothetical residential property. Furthermore, findings from analyses of the archival showed that variations in valuations were more pronounced for complex properties such as fuel service station. These findings suggest a need for in-depth investigation into the causes of the variations, but they also provide useful information and insights for regulators such as the GhIS and RICS, and CASLE, Ghana's National LAP, other public and private real estate valuation related institutions to devise initiatives to improve valuation practice. This could be achieved through an approach to target improvement in valuation standard as well as data consistency and access. This output is a useful input for the IPMSC in its quest to formulate international property measurement standards.

5.2 Identification of Property Market Data Sources

Paucity of property market data was established as a challenge to valuation practice in Ghana. However, several property market data sources to support property valuation practice were identified. The work also evaluated their perceived reliability and noted issues such as lack of documentation of transactions, poor records keeping and non-disclosure of transaction details among others as part of problem with access to reliable property market data for valuation. Notwithstanding the foregoing, this work provides useful information not only to valuation practitioners, but to allied professionals such as land administrators, planners, lawyers, quantity surveyors and project managers, land/property taxation and financial institutions and investors as to where to obtain property market data for decision making on land/property transactions.

5.3 Property Market Data Collection Template & Guidelines for Effective Data collection

Consistent with the views expressed at the stakeholder workshop, the property market data collection template developed by this work and the guidelines for effective property market data will aid valuation practitioners to collect reliable property market data to improve valuation practice. Further, they could help in promoting standardisation in valuation practice, which is essential to reduce errors in practice. The template follows the principle of consultation with valuers suggested at the stakeholder workshop taking into account the other findings from the workshop as well as the survey results. There is, therefore, a huge potential for its usage. The template and the guidelines could also provide insights for other built environment professionals and institutions on best practices for data collection as they are flexible and they could be adjusted to suit their purpose.

5.4 Implications for Valuers/Valuation Surveyors

Real estate valuation practice should enhance real estate business and market operations. This research provides a motivation for valuation practitioners in Ghana and their professional body (GhIS) as well as other sister professional bodies such as the RICS, and CASLE and FIG to re-examine property valuation service delivery to support smooth business and sustainable real estate market operations in the country and across the SSA region.

Thus, it is essential that good quality valuations with incidence of limited variations and other errors are produced. This may require continuous re-evaluation of standard for valuation practice at the professional body level in the face of rapidly changing local and international real estate markets. It may also require valuation practitioners to examine their approach to valuation practice, in particular, the need to apply appropriate valuation methods at all times and how to obtain reliable property market data. This includes working in harmony and collaboration with all the stakeholders in the valuation/real estate industry to promote standardisation and access to good quality property market data to improve practice. The property market data collection template and guidelines for effective property market data collection developed by this study as stated previously would be very useful in this regard. Other suggestions are provided as part of the conclusions and recommendations for this research in the next section.

5.5 Further Research

The literature evaluation and the stakeholder workshop identified a number of areas for further research on property valuation errors in Ghana and SSA.

This research has provided new empirical evidence on the existence and extent of variation in valuations in Ghana. However, not much empirical work has been undertaken on the causes/determinants of such variations, and valuation errors in SSA. Although inferences were made as to the possible causes of the variations that were observed in the valuations based on literature, there is a need for empirical research to identify the causes for policy formulation and practice. Indeed, there is no known empirical research in Ghana that seeks to examine the extent of the other valuation errors; valuation accuracy and bias, and causes of valuation errors. Such studies have largely not been undertaken across the SSA region.

Further, other areas that beg empirical examination include variation in valuation and its impact on client confidence, the valuation profession, and practical and sustainable solutions to excessive variation in valuations problem. Additionally, investigation into the cost of obtaining property market data and its finance is also essential.

It is, therefore, essential that empirical investigations are undertaken into the identified areas for further research to generate additional and complementary data and insights to inform long term initiatives to improve valuation practice.



Image source: Anton_Ivanov – Shutterstock.com

6.0 Conclusions and Recommendations

The research was carried out in response to the need to improve property valuation practice in SSA to support real estate business and efficient market operations as well as strengthen the current investment drive in the region. The direction of the research stemmed from the increasing concerns over valuation errors, in particular, variation in valuations, and a lack of relevant studies. The research used Ghana as a case study site due to the rising levels of such concerns in the country and the recent efforts of the GhIS to improve valuation practice as well as dearth of relevant studies. The research sought to investigate the extent of variations in valuations produced by real estate valuers, identify property market data sources, develop a property market data collection template to support property market data collection for valuations and outline guidelines for effective property market data collection to improve valuation practice. A combination of literature evaluation, stakeholder consultation workshop, examination valuation institution databases and survey of real estate valuers was used to address the objectives of the research.

Variation in valuations was found to be quite high (33.6% for the archival data and 63% for the survey data) relative to international evidence in the literature and the suggested margin of error for valuations in Ghana ($\pm 5\%$) at the stakeholder workshop. It was found that property type has a substantial influence on the extent of variation. Analyses of the archival data showed that variations in valuations on fuel service stations and residential properties were more pronounced compared to those of office/retail properties and mixed land utilisations.

Excepting property market data challenges, the research highlighted: the use of different valuation methods for valuation assignments; lack of standardisation in the application of valuation methods and complexity of the subject matter of valuations as the probable causes of the high level of variations. The other probable causes for variation in valuations noted at the stakeholder workshop were: inappropriate application of the various valuation methods particularly the use of unsuitable yields under the investment/income capitalisation method, and employment of inappropriate depreciation rates and disregard for interest in properties under the replacement cost method; client influence and pressure; and activities of special interest property market participants such as money launderers. These findings confirm the concerns over valuation errors among practitioners and real estate sector in Ghana, and makes the quest of regulators such as the GhIS and RICS, and CASLE to improve valuation practice in the country and SSA more significant and, thus, requiring urgent measures to be put in place to redress the situation.

The research emphasised the paucity of property market data problem to valuation practice in Ghana, but also identified a number of sources of property market data for valuation practice namely: property owner; estate agent; professional colleagues; public institutions; estate developers; media and practitioners own database. However, there were challenges with each of these data sources that could affect the reliability and integrity of data obtained from them. These included:

- Property owners' usual habit of not disclosing transaction details;
- Inadequate documentation of transactions by estate agents;
- Lack of integrity test on practitioners own data and those from professional colleagues;
- Poor records keeping and provision outdated data by public institutions; and
- Inadequate provision of data by estate developers.

In broad terms, valuers tend to use property market data sources they perceived to be reliable; their own databases and those of their professional colleagues. Ease of access to property market data, the need for valuation practitioners to check the reliability of their own databases, and the reliability of the other property market data sources are possible reasons for this finding. This suggests that the ability of practitioners and their colleagues to effectively collect and manage property market data is vital to addressing the paucity of data for valuation under the current practices. The quality of valuations is likely to vary as long as they rely primarily on such private held data collected with different levels of quality. Therefore, it is also vital for the other sources of data to be developed to produce good quality property market data that are universally consistent and available.

The research developed a property market data collection template for effective property market data collection. This template was developed based on the literature evaluation, stakeholder workshop, previous experience of the GhIS, and evaluation of the possible information that a suitable template should contain through the survey of real estate valuers. The template provides useful information to guide meaningful property market particularly the kind of information practitioners will have to collect in any data collection exercise for valuation purpose. The template could be useful in the promotion of standardisation in valuation practice. The relevance of the template follows the observation made at the stakeholder workshop.

Guidelines for effective property market data collection were developed for use by practitioners. These guidelines highlight a systematic approach to property

market collection, which will require practitioners to demonstrate care, consciousness and a set of data collection skills to implement. This suggests a need for practitioners to undergo periodic training to improve their approach and skills for data collection. An extension of the data collection training to informal estate agents will be very helpful given that the stakeholder workshop recommended for such training. A favourable data collection environment will also be useful to the implementation of the guidelines.

Gaps in research to identify the causes of variation in valuations, the impact of variation in valuation on client confidence, credibility of valuers, the valuation profession, and practical and sustainable solutions to address excessive variation in valuations problem to generate additional and complementary data and insights to inform long term initiatives to improve valuation practice were highlighted. Investigation into the cost of obtaining property market data and its finance was also noted.

6.1 Recommendations

Based on the findings and conclusions of the research, the recommendations below are made:

Improvement in regulation of Valuation Practice

Enhanced regulation of valuation practice in Ghana to promote standardisation in practice is essential to reduce variation in valuations and other errors, and improve valuation practice in the country. The need to pursue the promulgation of the Survey Council and the Real Estate Brokerage Bills, which are currently before Ghana's Parliament, into laws by the GhIS to strengthen its regulatory activities is necessary. The Professional and Valuation Standards Committees of the GhIS should as a matter of urgency begin to initiate discussions first within practitioners and subsequently among the other stakeholders in the real estate sector to determine an acceptable margin of error for valuation practice in Ghana. The committees on the basis of the determined margin of error and the other imperatives confronting the valuation profession should continue to revise the Guidance Notes on valuation practice in Ghana and ensure that practitioners comply with it to achieve standardisation. The GhIS could draw useful lessons from professional bodies such as the RICS and the work being undertaken by the IPMSC.

Promotion of enabling environment for effective data collection

An enabling environment to aid effective property market data collection should be created. The creation of property market data bank in Ghana is long overdue. The GhIS with the support of its members should take the initiative in establishing a data bank and also encourage private sector investment in property market data collection and management including the establishment of property

market data banks. Further, the institution should begin to institute programmes to promote discussions and collaborations among all the stakeholders in the property market data industry such as valuation practitioners, public institutions, financial institutions, estate developers, estate agents and property owners on the need to build a robust property market data base in the country to support real estate business and market activities, how to undertake and harmonise effective data collection, and establish standards for and access to good quality property market data among others. The GhIS could make arrangements for regular informal meetings with property owners and local estate agents to encourage them to document property transactions, and build trust between them and valuation practitioners regarding data sharing. The GhIS should find ways to incorporate local estate agents into the institution under suitable terms as part of efforts to build a strong property market database. Additionally, the institution should encourage practitioners to apply a systematic approach to property market data collection and build their own databases.

Education and Training

The need for a systematic approach to property market data collection will require real estate valuers/valuation surveyors to undergo regular relevant training to develop and enhance their knowledge, skills and capabilities to collect good quality property market data and produce high standard valuations. The GhIS as part of its CPD should organise such education and training programmes for practitioners. Also, such training programmes should be extended to local estate agents and other property market data collection and management institutions in the country.

Research and Development

Further research into the identified areas for research is recommended to generate additional and complementary insights to inform regulators such as RICS and GhIS, and CASLE initiatives and CPD programmes to improve valuation practice in Ghana and other SSA countries.

SSA Valuation Practice

Given the general similarities of valuation practices especially in terms of problems across the SSA region, regulators in constituent countries may draw insights from the findings and recommendations from this research to improve practice. However, as established from the literature limited studies exist on valuation errors; variation in valuation, valuation accuracy, bias and their impact as well as practical and sustainable solutions to valuation errors. It is, therefore, recommended that more studies should be undertaken on valuation errors in other constituent countries to inform initiatives to improve valuation practice in the region.

7.0 References

- Adair, A., Hutchison, N., MacGregor, B., McGreal, S. and Nanthakumaran, N. (1996) An analysis of valuation variation in the UK commercial property market. *Journal of Property Valuation and Investment* 14(5), 34- 47.
- African Centre for Cities (2015) Urban Infrastructure in Sub-Saharan Africa – Harnessing land values, housing and transport.
- African Development Bank (AfDB) (2015) Ghana economic outlook. Online at: <http://www.afdb.org/en/countries/west-africa/ghana/ghana-economic-outlook/> [Accessed: September, 2015].
- Amidu, A.R. and Aluko, B.T. (2007) Client influence on valuation: Perceptual analysis of the driving factors. *International Journal of Strategic Property Management* 11(2), 77-89.
- Arku, G. (2009) Housing policy changes in Ghana in the 1990s. *Housing Studies* 24(2), 261-272.
- Asiedu, A.B. and Arku, G. (2009) The rise of gated housing estates in Ghana: Empirical insights from three communities in Metropolitan Accra. *Journal of Housing and the Built Environment* 24(3), 227-247.
- Ayedun, C.A., Ogunba, O.A., Oloyede, S.A. (2011) Empirical verification of the accuracy valuation estimates emanating from Nigerian valuers: a case study of Lagos Metropolis. *International Journal of Marketing Studies* 3(4), 117-129.
- Babawale, G.K. and Ajayi, C.A. (2011) Variance in residential property valuation in Lagos, Nigeria. *Property Management* 29(3), 222-237.
- Baffour Awuah, K.G., Hammond, F.N., Lamond, J.E. and Booth, C.A. (2014) Impact of land use planning on real estate investment return in a developing world context: A case study of Ghana. In: Squires, G. and Heurkens, E. (Eds.) *International Approaches to Real Estate Development*, London, Routledge.
- Baffour Awuah, K.G. and Booth, C.A. (forthcoming) Insights and implications of real estate valuation variance in Sub-Saharan Africa: Evidence from Accra.
- Blundell, G.F. and Ward, C.W.R. (1999) The accuracy of valuations - expectations and reality", working paper, Department of Land Management, University of Reading, Reading.
- Bretten, J. and Wyatt, P. (2001) Variance in commercial property valuations for lending purposes: an empirical study. *Journal of Property Investment & Finance* 19 (3), 267-282.
- Broll (2014). 2013/2014 Africa Report. Online at: www.cbre.eu/emea_en/africa/.../Broll_Africa%20Report%202014.pdf [Accessed: August, 2015].
- Broll (2015). 2014/2015 Report. Online at: www.broll.com/assets/uploads/.../2015/.../The_Broll_Report_2014-2015 [Accessed: August, 2015].
- Brown, G. (1985) Property investment and performance measurement: A reply. *Journal of Valuation* 4 (1), 33-44.
- Brown, G.R. (1992) Valuation accuracy: Developing the economic issues. *Journal of Property Research* 9 (3), 199-207.
- Creswell, J.W. (2014) *Research Design Qualitative, Quantitative and Mixed Methods Approaches*, (4th Edn.). London: Sage Publications.
- Crosby, N. (2000) Valuation, accuracy, variation and bias in the context of standards and expectations. *Journal of Property Investment & Finance* 18 (2), 130-161.
- Dunse, N., Jones, C., Orr, A. and Tarbet, H. (1998) The extent and limitations of local commercial property market data. *Journal of Property Valuation and Investment* 16 (5), 455-473.
- Field, A. (2005) *Discovering Statistics Using SPSS* (2nd Edn.). London: Sage Publications.
- FTSE Global Markets (2015) Sub-Saharan African real estate: a growing asset class? Online at: <http://www.ftseglobalmarkets.com/issues/issue-80-january-february-2015/sub-saharan-african-real-estate-a-growing-asset-class.html> [Accessed: August, 2015].
- Gough, K.V. and Yankson, P.W.K. (2000) Land markets in African cities: The case of peri-urban Accra, Ghana. *Urban Studies* 3(13), 2485 – 2500.
- Government of Ghana (2003) *Land Administration Project Document*. Accra: Ministry of Lands, Forestry and Mines.
- Grant, R. (2007) Geographies of investments: How do the wealthy build houses in Accra? *Urban Forum* 18(1), 31-59.
- Gudat, R. (2010) Collections of property market data for the valuation process: A Germany approach in an international context. Paper presented at FIG Congress 2010: Facing the challenges – building the capacity, Sydney, April 11-16.
- Hager, D. and Lord, D. (1985) *The Property Market, Property Valuations and Property Performance Measurement*. London: Institute of Actuaries.
- Hansz, J.A. and Diaz, J. (2001) Valuation bias in commercial appraisal: a transaction price feedback experiment. *Real Estate Economics* 29(4), 553-565.
- IMF (2015) Regional economic outlook: Sub-Saharan Africa – Navigating headwinds. World economic and financial surveys. Online at: <http://www.imf.org/external/pubs/ft/reo/2015/afr/eng/> [Accessed: August, 2015].
- Iroham, C.O., Ogunba, O.A. and Oloyede, S.A. (2014) Effect of principal heuristics on accuracy of property valuation in Nigeria. *Journal of Land and Rural Studies* 2 (1), 89-111.
- Jones Lang Lassalle (JLL) (2013) Twenty African cities emerge as next frontier for commercial real estate growth between now and 2020. Online at: <http://www.joneslanglasalle.co.uk/unitedkingdom/engb/pages/NewsItem.aspx?itemID=27948> [Accessed: September, 2013].
- JLL (2014) Real Estate Transparency improves in Sub-Saharan Africa. Online at: www.jll.com/Research/JLL_Africa_Transparency_Index.pdf? [Accessed: August, 2015]. JLL (2015) Real Estate Markets Thrive. Despite Economic Headwinds. Global Market Perspective, Third Quarter. Online at: www.jll.com/Research/jll-global-market-perspective-q3-2015.pdf [Accessed September, 2015].
- Konadu-Agyemang, K. (2001) Structural adjustment programmes and housing affordability in Accra, Ghana. *The Canadian Geographer* 45(4), 528-544.
- Levy, D. and Schuck, E. (2005) The influence of clients on valuations: the clients' perspective. *Journal of Property Investment & Finance* 23 (2), 182-201.
- Lorenz, D. and Lützkendorf, T. (2008) Sustainability in property valuation: Theory and practice. *Journal of Property Investment & Finance* 26 (6), 482-521.
- Mahama, C. and Antwi, A. (2006) *Land and Property Markets in Ghana*. London: RICS.
- Matysiak, G. and Wang, P. (1995) Commercial property market prices and valuations: Analysing the correspondence. *Journal of Property Research* 12 (3), 181-202.
- McAllister, P. (1995) Valuation accuracy: A contribution to the debate. *Journal of Property Research* 12 (3), 203-216.
- Mends, T.M. (2006) Property valuation in Ghana: Constraints and contradictions. Paper presented at FIG Regional Conference on "Promoting Land Administration and Good Governance", Accra, March 8-11.
- Obeng –Odoom, F. (2011) Real estate agents in Ghana: A suitable case for regulation. *Regional Studies* 43(3), 403-416.

Obeng-Odoom, F. and Ameyaw, S. (2011) The state of surveying profession in Africa: A Ghanaian perspective. *Property Management* 29 (3), 262-284.

Ogunba, O.A. and Ajayi, C.A. (2007) The response of Nigerian valuers to increasing sophistication in investors' requirements. *Journal of Property Investment and Finance* 25(1), 43-61.

Otegbulu, A. and Babawale, G.K. (2011) Valuers' perception of potential sources of inaccuracy in plant and machinery valuation in Nigeria. *Property Management* 29 (3), 238-261.

Paller, J. (2015) Rising through cities? A look at Ghana. Africa Research Institute. Online at: <http://www.africaresearchinstitute.org/blog/rising-through-cities-a-look-at-ghana/> [Accessed: August, 2015].

Peto, R. (1997) Market information management for better valuations. *Journal of Property Valuation & Investment* 15 (5), 411- 422.

PWC (2012). An African perspective: Valuation methodology survey (6th Edn.). Online at: http://www.pwc.co.za/en_ZA/za/assets/pdf/valuation-methodology-survey-2012.pdf [Accessed: August, 2015]

RICS (2015) International property measurement standards. Online at: www.rics.org [Accessed: March, 2015]

Sawyer, H.M. (1972) Presidential speech at the inauguration of the Ghana Institution of Surveyors. *The Journal of the Ghana Institution of Surveyors* Vol. II (1), 19-21.

Tastle, W.J. and Wierman, M.J. (2007) Consensus and dissent: A measure of ordinal dispersion. *International Journal of Approximate Reasoning*, 45, 531-545.

Tastle, W.J., Boasson, E. and Wierman, M.J. (2009) Assessing team performance in information systems projects. *Information System Educational Journal* 7(90), 1545-679X.

The Estate Surveyor (2014) A quarterly publication of the Valuation & Estate Surveying Division of the Ghana Institution of Surveyors. Vol. 1(2).

Viruly, F. and Hopkins, N. (2014) *Unleashing Sub-Saharan Africa Property Markets*. London: RICS

World Bank (2015) *World development indicators*. Washington: The World Bank



Image source: Anton_Ivanov - Shutterstock.com

8.0 Appendix

Figure 4.3 Property Market Data Collection Template

Property Address					
Property/flat number/ building name	Plot number	Street name/landmark	Location		
			Region		
			District		
			City/town		
			Neighbourhood		

Transaction					
Date [DD/MM/YY]	Nature [eg. Sale/Rental]	Parties		Consideration [eg. Sale price]	Transaction Conditions [eg. Arm's length]
		Eg. Seller/Landlord			
		Eg. Purchaser/Tenant			

Tenure/title					
Type of Tenure [Tick]	Terms of Tenure		Registration Status		Encumbrances
Allodial <input type="checkbox"/>	Term		Registration date [DD/MM/YY]		
Freehold/Customary Freehold <input type="checkbox"/>	Commencement date		Registration number		
Leasehold <input type="checkbox"/>	Expiration date				
Sublease <input type="checkbox"/>	Option to renew [For lesser tenures]				
License <input type="checkbox"/>	Unexpired term [For lesser tenures]				
Other [Specify] <input type="checkbox"/>	Ground rent/contract rent [For lesser tenures]				

continued

continued

Property Description							
Property Type [Tick]		Description [Eg detached, semi-detached, bungalow - with outbuilding]	Stage of Development		Total Floor Area		Land Size
Residential	<input type="checkbox"/>		Main building		Main building		
Commercial [eg retail shop/office]	<input type="checkbox"/>		Outbuilding		Outbuilding		
Mixed land utilisation	<input type="checkbox"/>						
Industrial	<input type="checkbox"/>						
Educational	<input type="checkbox"/>						
Recreation	<input type="checkbox"/>						
Other [Specify]	<input type="checkbox"/>						

Accommodation					
Main building			Outbuilding		
Number of rooms			Number of rooms		
Rooms	Description	Size	Rooms	Description	Size
Eg. Bedroom	En-suite	18.6m			
Eg. Living room					
Other Spaces	Description	Size	Other Spaces	Description	Size
Eg. Porch					
Eg. Kitchen					
Orientation of rooms			Orientation of rooms		
External Works [Eg. Compound, carport]					

continued

continued

Construction Details

	Main building	Outbuilding
Foundation		
Floors		
Walls		
Doors		
Windows		
Ceiling		
Roof		
Fixtures & Fittings		
External Works		

Services & Condition

	Main building	Outbuilding	External Works
Electricity			
Pipe borne Water/Water			
Telephone			
Age			
General Condition			

Planning, & other Permissions

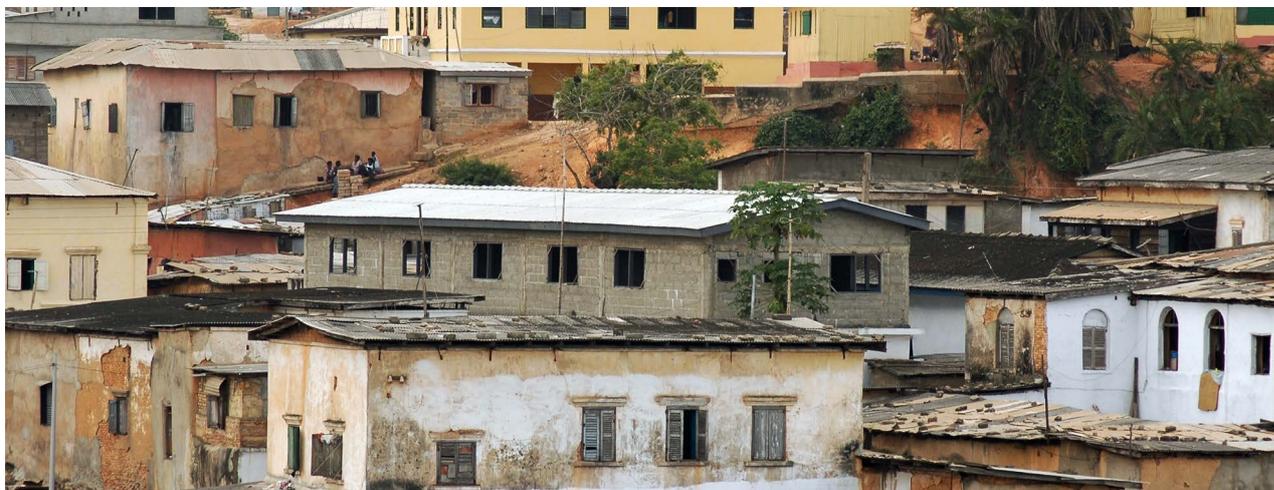
Approved Planning Scheme	
Zoning Status	
Building Permit	
Fire Safety Clearance	
EPA Clearance	
Traffic Impact Assessment Clearance	

Accessibility, Amenities & Neighbourhood

Access to the property	
Proximity to Social Amenities	
Neighbourhood Characteristics	

Data source	Compiled by	Date [DD/MM/YY]

9.0 Acknowledgements



The research was funded by the Royal Institution of Chartered Surveyors (RICS) Research Trust (Evaluation of Property Valuation Practice in Sub-Saharan Africa: A Case Study of Ghana); and the Faculty of Environment and Technology, University of the West of England (UWE), Bristol as well as the Department of Land Economy, Kwame Nkrumah University of Science & Technology (KNUST), Kumasi, Ghana. It was supported by the Ghana Institution of Surveyors (GhIS) and the Commonwealth Association of Surveying and Land Economy (CASLE).

The research team would like to thank all those who assisted in diverse ways to ensure the successful delivery of this research project. The team would like to acknowledge, in particular, the Land Valuation Division (LVD) of the Lands Commission for the use of its database, and the assistance of the following people:

- The Chair, and the Research Committee of the Valuation and Estate Surveying (VES) Division of the Ghana Institution of Surveyors;
- Surv. James Ebenezer Kobina Dadson, Past President, GhIS, and Greater Accra Regional Lands Officer, Lands Commission, Ghana;
- Surv. Kwasi Bensti-Enchill, Chief Valuer, LVD, Accra, Ghana;
- Surv. Timothy Anyidoho, Public & Vested Lands Management Division (PVLMD) of the Lands Commission, Accra, Ghana;
- Surv. Samuel Tackie, LVD, Accra, Ghana;
- Surv. Emmanuel Okyere, LVD, Accra, Ghana;
- Jennifer Welch, RICS Director for West Africa ; and
- RICS Staff who contributed to the development of this research report
- Susan Spedding, Secretary General, CASLE.

Enquiries:

For further enquiries or information concerning this research such as a copy of the questionnaire contact:

Dr Kwasi Gyau Baffour Awuah
Kwasi.Baffourawuah@uwe.ac.uk
or **Baffour09@live.com**





Confidence through professional standards

RICS promotes and enforces the highest professional qualifications and standards in the development and management of land, real estate, construction and infrastructure. Our name promises the consistent delivery of standards – bringing confidence to the markets we serve.

We accredit 118,000 professionals and any individual or firm registered with RICS is subject to our quality assurance. Their expertise covers property, asset valuation and real estate management; the costing and leadership of construction projects; the development of infrastructure; and the management of natural resources, such as mining, farms and woodland. From environmental assessments and building controls to negotiating land rights in an emerging economy; if our members are involved the same professional standards and ethics apply.

We believe that standards underpin effective markets. With up to seventy per cent of the world's wealth bound up in land and real estate, our sector is vital to economic development, helping to support stable, sustainable investment and growth around the globe.

With offices covering the major political and financial centres of the world, our market presence means we are ideally placed to influence policy and embed professional standards. We work at a cross-governmental level, delivering international standards that will support a safe and vibrant marketplace in land, real estate, construction and infrastructure, for the benefit of all.

We are proud of our reputation and we guard it fiercely, so clients who work with an RICS professional can have confidence in the quality and ethics of the services they receive.

United Kingdom RICS HQ

Parliament Square, London
SW1P 3AD United Kingdom

t +44 (0)24 7686 8555

f +44 (0)20 7334 3811

contactrics@rics.org

Media enquiries

pressoffice@rics.org

Ireland

38 Merrion Square, Dublin 2,
Ireland

t +353 1 644 5500

f +353 1 661 1797

ricsireland@rics.org

Europe

[excluding UK and Ireland]

Rue Ducale 67,
1000 Brussels,
Belgium

t +32 2 733 10 19

f +32 2 742 97 48

ricseurope@rics.org

Middle East

Office G14, Block 3,
Knowledge Village,
Dubai, United Arab Emirates

t +971 4 446 2808

f +971 4 427 2498

ricsmenea@rics.org

Africa

PO Box 3400,
Witkoppen 2068,
South Africa

t +27 11 467 2857

f +27 86 514 0655

ricsafrica@rics.org

Americas

One Grand Central Place,
60 East 42nd Street, Suite #542,
New York 10165 – 2811, USA

t +1 212 847 7400

f +1 212 847 7401

ricsamericas@rics.org

South America

Rua Maranhão, 584 – cj 104,
São Paulo – SP, Brasil

t +55 11 2925 0068

ricsbrasil@rics.org

Oceania

Suite 1, Level 9,
1 Castlereagh Street,
Sydney NSW 2000. Australia

t +61 2 9216 2333

f +61 2 9232 5591

info@rics.org

North Asia

3707 Hopewell Centre,
183 Queen's Road East
Wanchai, Hong Kong

t +852 2537 7117

f +852 2537 2756

ricsasia@rics.org

ASEAN

10 Anson Road,
#06-22 International Plaza,
Singapore 079903

t +65 6635 4242

f +65 6635 4244

ricssingapore@rics.org

Japan

Level 14 Hibiya Central Building,
1-2-9 Nishi Shimbashi Minato-Ku,
Tokyo 105-0003, Japan

t +81 3 5532 8813

f +81 3 5532 8814

ricsjapan@rics.org

South Asia

48 & 49 Centrum Plaza,
Sector Road, Sector 53,
Gurgaon – 122002, India

t +91 124 459 5400

f +91 124 459 5402

ricsindia@rics.org