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Adoption of Automated Valuation Models in Malawi: Valuers' Perception

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Abstract

The valuation profession is historically known for being more traditional and extensively using traditional valuation methods. Despite this, in the recent past, there have been strides to incorporate Automated Valuation Methods (AVMs) in the valuation profession, especially for rating, mortgages and revaluation purposes. The introduction of the new approach, however, attracted controversy when it was piloted in one of the cities in Malawi. This study sought to explore property valuers' perceptions of the adoption of AVM in rating valuation against the use of traditional valuation methods. The researchers used a descriptive study design with qualitative data collection and analysis methods. Semi-structured interview guides were used to collect data on valuers' perceptions of AVM. A total of 20 in-depth interviews were conducted with professional valuers. The valuers were asked how they perceive the AVM approach to rating valuation compared to traditional valuation methods regarding its accuracy, reliability, and easiness. Data were manually analysed using content analysis. The general perception of valuers towards AVM was mixed. One school of thought gave AVM the benefit of doubt for future incorporation into the profession if modified to suit the local environment. On the other hand, AVM was considered a threat to the valuation profession since anyone may be deemed qualified to carry out property valuation. However, the valuers are of the perception that the models will never replace traditional valuation methods, hence suggestions to incorporate AVM as a supplement to traditional valuation methods so that the former is used as a verification and auditing tool for the latter.

Keywords: automated valuation models, valuation profession, valuers' perceptions, traditional valuation methods, Malawi

1. Introduction

Despite being in existence for decades, the literature on property valuation shows that the

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practice has mainly been carried out using traditional methods (Schulz, Wersing and Werwatz, 2014). This is a practice which Jahanshiri, Buyong and Shariff (2011) contend that it is reliant on the valuer's 'accumulated knowledge' and has challenges of inaccuracy, inconsistency and speed. Źróbek and Grzesik (2013) add that traditional valuation methods are more expensive, time-consuming and subject to errors. To overcome this, an automated valuation model exists in the property valuation market. This model is an advanced method of mass valuation for rating purposes and has the competitive advantage of speed, accuracy, accountability and transparency over traditional methods (Downie and Robson, 2009; RICS, 2017). However, despite the competitive advantage of AVMs over traditional valuation methods, the approach attracted controversy among professional valuers when piloted during mass valuation for rating purposes in one of the local councils in Malawi. This is because it is viewed as technical development and not necessarily an advanced approach to property valuation. Elsewhere, for example, in the United Kingdom, Denmark, Australia, North and Central America and South Africa, AVMs are used to assess property values for taxation and mortgage purposes since these countries are moving from the traditional methods (Royal Institution of Chartered Surveyors, 2013).

Therefore, this study sought to explore professional property valuers' understanding of AVM and determine the perception of the valuation professionals in Malawi towards the adoption of AVM in valuation for rating.

The following specific objectives were explored: how the valuers thought AVM would impact the valuation profession; how credible and accurate AVM is compared to traditional valuation methods; how valuers viewed the incorporation of AVM into the valuation profession; how would AVM affect the valuation profession in the country; and if AVM was posing any threat on the job market of the professional valuers in Malawi.

There is a paucity of literature on the adoption of AVM for rating purposes in most developing countries, including Malawi (Boshoff and de Kock, 2019; Bellotti, 2017; Downie and Robson, 2008), and no studies have been carried out to contextualise the phenomenon in the country. Despite the valuation profession being in existence in the country since 1964 (Cloete and Chikafalimani, 2001), no studies have been carried out to lay a foundation on how technological advancements have affected the valuation profession in the country. Therefore, this study will act as a benchmark for the perception of professional valuers on the adoption of AVM in the Malawian valuation profession.

2. Real Estate Valuation and the Valuation Profession

Valuation work includes valuation of real property to valuation of going concerns (Donovan, 2015). Such services are needed for different purposes by various institutions, for example, local governments, banks and individuals, among others (RICS, 2013). Principally, the valuation profession is regulated by local legislation, which mandates that practising professionals should be registered to carry out valuation services. So far, the commonly used international standard is the International Valuation Standards (IVS) and The Royal Institution of Chartered Surveyors guidelines (RICS) (Donovan, 2015). Essentially, property valuation assesses what would be realised if interest was disposed of on an open market or the value an interest has to the property occupant (Gilbertson and Preston, 2005). This means the comprehensiveness and level of information detail required by the client influences the range of valuation services to be rendered to the client(s) (Gilbertson and Preston, 2005; Downie and

Robson, 2009) hence the need for understanding the dynamics driving the marketplace by the valuers to provide best services (Gilbertson and Preston 2005).

2.1 Automated Valuation Models

Many definitions of AVM exist depending on the context. The International Association of Assessing Officers (2011) define AVM as a mathematically programmed computer software that estimates market values through analysing the location, property market conditions and property characteristics against the information in the database, whereas RICS (2013) puts it that AVMs' use one or more mathematical techniques to provide an estimate of the value of a specified property at a specified date, accompanied by a measure of confidence in the accuracy of the result, without human intervention post-initiation.

Blacklege, (2009) argues that information technology and the internet have made tremendous changes to the valuation profession by making the valuation process be undertaken more easily, eliminating subjectivity and improving accuracy. This is because these advancements do not depend on the valuer's skills and experience. RICS (2013) contends that AVMs are penetrating the property market throughout the world. This observation is also shared by Blackledge (2009), who mentions that AVM was developed to allow for a rapid assessment of a property value since the user is only required to input the required information of the subject property, and the system does the rest to come up with the value of the subject property. This has been an established feature in the property markets of the United States, Germany and Canada and has been used in the assessment of properties for different purposes such as taxation and mortgage (Downie and Robson, 2009; Boshoff and de Kock, 2013; RICS, 2013; RICS, 2017). Literature indicates that the main challenge to AVM is the availability of market data (Boshoff and de Kock, 2013; RICS, 2017). Where market data is insufficient, AVM usage becomes a challenge. However, a well-maintained property transactions database creates a conducive environment for AVM (Bidanset, 2015). Despite the valuation profession being in existence for over six decades in Malawi (Cloete and Chikafalimani, 2001), there exists no property database where recent and up to date property valuations and transactions data can be found apart from the individual valuers who hold that data privately.

Boshoff and De Kock (2013) argue that the source of data is market value valuations which create a reliable database within a conducive environment for AVM. Boshoff and De Kock (2013) further add that the general applicability of AVM varies significantly from one country to another, and Southern African countries are relatively suspicious of the adoption of AVM despite being consistent, transparent, manageable, time and cost-saving and able to combat fraud and bias. This relates well with Donovan (2015), who observed that at its core, AVM is principally meant to produce a valuation that is objective and independent of human bias and error. However, RICS (2017) contend that there is a high likelihood of erroneous valuations using AVM if 'bad data' finds its way into the system. This suggests that despite AVMs being game-changers on one end, they also have their own loopholes, which, if not managed well, can distort the valuation process.

2.2 Benefits of AVM over Traditional Valuation Methods

Debate on the benefits of AVM over traditional methods is still ongoing (Allen, 2013). However, AVM is rated highly in terms of speed and cost-saving (Tretton, 2007) over traditional methods. On the other hand, traditional methods are also preferred during physical property inspection since it reveals the subject property's overall condition, which AVM cannot (IAAO, 2003; Rossini, 2008; RICS, 2017). The absence of property inspection in AVM has

subjected it to the debate as to whether it is a suitable replacement for traditional methods and if AVM can be wholly adopted in the valuation profession or should be used as a supplement to the traditional valuation methods (Boshoff and de Kock, 2013).

Gilbertson and Preston (2005) argued that despite AVM being speedy and cheaper, unlike traditional methods, it remains to be seen if it will not divert the meaning of the valuation process due to its statistical analyses. Mooya (2011) adds that AVM is threatening the survival of the valuation profession. Despite challenges to meeting standardised valuations with traditional methods, especially in developing economies, as evidenced by objections and appeals in valuations for compensation and rating valuations, respectively (Mooya, 2011; Gatheru, 2015). Tretton (2007) pointed out that AVM adoption does not bring immediate solutions to those challenges hence the need for thorough research on the technological development of how AVM can be incorporated into the valuation profession.

2.3 Implications of AVM to the Valuation Profession

Scholars hold different views on the implications of AVM to the valuation profession. Whilst Blackledge (2009), Mooya (2011) and RICS (2017) believe that valuers may be replaced with the technology hence losing their jobs, (Downie & Robson; 2007) argue that despite AVM taking a certain section of the valuation process, valuers will still be relevant in the interpretation, checking and evaluating of the AVM outputs. This view is also shared by Wilkinson, Halvitigala and Antoniades (2018), who opine that the valuation profession will still need valuers who are 'supported by analytics'. However, valuers need to rapidly embrace 'technological advancements' before becoming extinct (Ibid, 2018). Downie & Robson (2007) add that since there is a shortage of professionals in the developing world and many of those available are in their retirement age, AVM can alleviate that problem.

As pointed out by Gilbertson and Preston (2005) and Tretton (2007), AVMs reliability rests on the availability of accurate property market data, to which, in the absence of the same, AVM efficiency becomes difficult. Furthermore, it is apparent that the system still needs human input of data which means AVM still needs human personnel for efficient running. In all these instances, AVM requires professional judgement, which makes valuers vital in the process.

2.4 AVM Situation in Malawi

There is a dearth of literature on the AVM situation in Malawi, and this review relies on literature from other countries. Malawi has four city councils and six town councils (Government of Malawi, 2013). These councils are mandated to carry out quinquennial valuations to assess property values for rating purposes (Government of Malawi, 1998). However, such is not the case due to financial challenges, among other reasons, and these assessments are carried out using traditional valuation methods. One of the city councils embarked on a project to assess properties for rating purposes within its jurisdiction using AVM, which Etter (2014) contends registered many successes since the valuation process was fast-tracked and cost-effective. Furthermore, the number of properties assessed increased from 10,000 to 40,000 and revenue collection rose tremendously by over 279% (Ibid, 2014). Despite such landmarks, the approach attracted controversy from the valuation professionals who were discontented with AVM incorporation into the valuation profession in Malawi.

3. Methodology

3.1 Research Method

The study took an exploratory qualitative method of collecting data. This method aims to establish the subjects' commonality of thoughts on the concept of adopting AVM in property valuation for rating purposes in Malawi.

3.2 Sampling

The study used a non-probability sampling technique whereby the researchers purposively sampled out registered valuers as research participants to provide insights on the subject matter. Initially, the study targeted all the 35 professional property valuers who were registered and licenced to practice property valuation in the country at the time of the study (Cloete and Chikafalimani, 2001). However, only 20 showed interest to participate in the study. These were deemed relevant and knowledgeable to meet the purpose of the study (Smith, 2009; Patton, 2002; Chilipunde, 2010).

3.3 Data Collection

The researchers conducted a total of 20 in-depth interviews with valuation professionals. The sampled participants met Creswell's (2013) and Chilipunde's (2010) recommendation that a sample size of 5 to 25 that is knowledgeable on the subject matter and is representative. There were 35 registered professional valuers in the country by the time of the study. Semi-structured interview guides were developed to aid data collection.

3.4 Data Analysis

Data were analysed using content analysis. This involved transcribing the interview contents and coding them to identify themes that were coming out frequently from the participants. The themes generated were generalised, interpreted and triangulated by an analyst to check for consistency. Emerging themes were analysed inductively (Creswell, 2013; Scuilli, 2008; Tranfield et al., 2005).

3.5 Ethical Consideration

Participants were informed of the purpose of the study and were assured that their identities and information would be classified. The information provided was kept with the highest confidentiality and was used for this study only. During data analysis, the researcher(s) ethically presented all facts as they were collected and that there was no falsification or misrepresentation of the findings or inclusion of any misleading information.

3.6 Limitation of the Study

The lack of prior studies at the local level in the subject area was the main setback in the literature review and data collection process, which helped lay a foundation for a better understanding of the study. Furthermore, the study explored the perception of professional valuers of a particular section towards the adoption of AVM at a certain point in time. This suggests that the perceptions may change with time and after going through orientation.

4. Results and Discussion

4.1 Demographic Data of the Respondents

Field data was collected through the administration of questionnaires to professional valuers who were registered members of an association called Surveyors Institute of Malawi. These practitioners are spread in all three regions of the country and work in different public and/or private sector institutions, including the Civil Service (Cloete and Chikafalimani, 2001). They are licensed to practice property valuation with the Land Economy Board under the Land Economy Surveyors, Valuers, Estate Agents and Auctioneers Act Chapter 58:08 Section 3 of the laws of Malawi. All the respondents had a first degree in Land Economy/Real Estate, and some had a postgraduate qualification in a related field coupled with practical experience between five to twenty-five years. Furthermore, the respondents had experience in valuing all types of properties. This means the respondents were conversant with the property valuation profession and were capable of providing the information required for the study.

4.2 Knowledge and Experience of AVMs

The study revealed that 77.8% of the professional valuers in Malawi knew AVM. This corresponds with Robson and Downie (2009), who found that about 80% of the professional valuers in the UK knew AVM by the time of their study. On the other hand, it was further revealed that only 15% of the valuers had practical experience with AVM. The low level of exposure can be attributed to AVM piloting in one of the local councils in the country.

4.3 Benefits of AVM over Traditional Valuation Methods

When asked about the benefits of using AVM over traditional methods, the respondents gave different understandings of AVM hence rated it differently as per each valuer's understanding. The benefits ranged from; speed, data availability; cost-effectiveness; accuracy and ease of usage. However, this study found that speed was ranked as the highest benefit of AVM over traditional methods. This agrees with Downie and Robson (2008), who found that AVM has an advantage of speed and cost-effectiveness over traditional valuation methods. However, despite AVM being modelled to incorporate the aspect of location in the property values (McCluskey and Borst, 2007) and the statistical analysis and aggregation of relevant property market data to maintain higher levels of accuracy (Rossini, 2006; Gayler, 2015), the absence of property inspection to ascertain the general condition of the property gives valuers an upper hand over AVMs (Gatheru and Nyika, 2015). On the other hand, the study found that the respondents gave a low rating on AVMs ease of usage, which can be attributed to their unwillingness to acquaint themselves with new technologies (Blackledge, 2009).

Asked further to state the level of accuracy of AVM over traditional methods, the respondents pointed out that "… AVM as an independent approach has (a) low level of accuracy since it has many short-comings". "…however…AVM cannot replace the level of skill and experience of the valuer…" The former agrees with Schuls et al. (2014) and Lipscomb (2017). They opined that professional valuers estimate the property market value by putting together all the factors that affect the value of the property. In contrast, AVMs use statistical models to predict the value, which may affect their accuracy. However, the latter disagrees with Mooya (2011, p.2267), who pointed out that *"the superiority of human valuers over AVMs, even in the so-called subjective aspects of the valuation process, is nothing if not mythical. With regard to the other elements of the valuation process, it is evident that AVMs are giving valuers a good run for their money."*

Furthermore, the respondents stated that "…if AVM was to be adopted as a supplement to the traditional valuation methods, then the performance and accuracy level would be very high, but AVM on its own has low levels of performance and accuracy". Therefore, "…AVM should be adopted as a supportive tool to traditional methods". These observations agree with Allen (2013), who found that many disagreements exist on the accuracy level of AVM. However, Rossini (2006) found that property market data and statistical analysis ensure AVM's higher accuracy. In his study, Mooya (2011) observed that valuers fear being replaced by AVM, hence the support of traditional valuation methods other than AVM.

4.4 Implications of the Adoption of AVM to the Valuation Profession

When asked to explain the implications of AVM to the valuation profession once adopted in the country, the study revealed that valuers had diverse opinions on the implications of AVM to the valuation profession. The majority of the respondents opined that "…AVM is a new concept in the country…" therefore, "…this will inevitably have its own effects (on) the valuation profession up until when the practitioners have a better understanding of it…". However, "…effects of AVM cannot distort (the) valuation process if it can be adopted as a supportive tool to the traditional methods". This concurs with studies by Downie and Robson (2007), Catt (2007), Rossini and Kershaw (2008). They found that even in countries where AVM is well established, professional valuers are sceptical of the model hence cannot fully trust the system. Furthermore, the respondents were of the view that "…if AVM is to be incorporated in the valuation profession, it has to be incorporated as a supporting tool to traditional methods other than a stand-alone method…" This view was also shared by Blackledge (2009), and IAAO (2003) who highlighted that valuation methods supplement one another hence AVM can be a supplement to traditional methods.

On the one hand, some valuers cautioned that "… AVM does not conform to the property valuation standards and should not be adopted at all because it will have negative implications on the valuation principles…." This agrees with Rossini (2008), who observed that AVM is likely to distort the meaning of the valuation process since it does not respect the rule of thumb by disregarding the property inspection stage. On the other hand, other valuers were of the view that "…if AVM is to be adopted, then it needs to be modified to conform to the local situation". This agrees with Donovan (2015,) who pointed out that AVM significant vendors in the UK, Hometrack and Rightmove, conceded that AVM's accuracy varies with situations. Hence, they cautioned the condition in which they can appropriately and effectively be used.

4.5 Acceptance of AVM in the Malawian Valuation Profession

The study further sought to determine how acceptable AVM was in the Malawian valuation profession. The study revealed that 80% of the Malawian valuation professionals were not ready and were unwilling to accept AVM in the valuation profession as a stand-alone approach to property valuation. When asked further about AVM's benefits over traditional methods, the general consensus was that AVMs are not game-changers. Sixteen of the twenty respondents pointed out that "…valuers are suspicious of AVM and its credibility as far as property valuation is concerned…" "… with this AVM, one day we will just wake up and find that colleagues from other professions are doing our work".

Furthermore, the participants pointed out that "…AVM cannot match the experience, knowledge and skill that a professional valuer possesses in estimating property values and

ability to judge the property market in its current situation and condition…" However, in his study, Mooya (2011), argued that "both AVM and traditional valuation approaches are based on false ontological assumptions" hence the discussion goes beyond contrasting AVMs and traditional valuation in the existing framework.

5. Conclusion and Recommendations

Despite knowing AVM and its existence, many professional valuers in Malawi are not ready to welcome the approach in the valuation fold as a stand-alone approach to property valuation. However, a school of thought gave AVM the benefit of the doubt to be incorporated into the valuation practice as a supporting and auditing tool to the traditional valuation methods. This was based on the premise that AVM cannot stand up against the skill and experience of a professional valuer.

Although AVM is associated with many benefits to the valuation profession, for example, speed, cost-effectiveness, transparency and ease of use, Malawian property valuers are not convinced that AVMs are a game-changer to the valuation profession. This is based on the premise that valuers are afraid of losing their jobs to the non-valuer professionals who can carry out property valuation using AVM.

Furthermore, the unavailability of a central property transactions database makes it difficult for AVM to operate efficiently. This is based on the premise that property valuers hold property market data privately since depositing it in a central repository is not mandatory. Therefore, this makes the valuers the 'commanders' of the profession.

Despite literature rating AVM highly in its accuracy, speed, cost-effectiveness and performance, the Malawian professional valuers doubt the accuracy ratio of AVM to traditional valuation methods. This is due to AVMs' inability to incorporate property inspection in property valuation, hence not matching valuers' skills and experience in estimating property values. This is despite the fact that AVM is programmed to incorporate all value forming features which may also distort the property value if bad data has been put into the system.

Malawian valuation professionals are more interested in incorporating AVM as a supplementary tool to traditional property valuation methods rather than adopting AVM as a stand-alone approach to valuation. This is due to the valuation professionals' fear that AVM will absorb the qualified valuers' job market since anybody can do the valuation using the system. This is based on the premise that only those valuers who are registered and licensed to practice with Economy Surveyors, Valuers, Auctioneers and Estate Agents Board are mandated to practice property valuation in the country; the incorporation of AVM will bring insanity to the valuation profession whereby everyone would be deemed 'qualified' to value properties without being regulated.

Therefore, this study recommends that since legal statutes regulate the valuation profession, the Malawi Government, through the Ministry of Lands must engage the professional bodies, i.e. Surveyors Institute of Malawi (Land Economy Board), to open deliberate debates within its membership and property valuation stakeholders to have a generally agreed-upon view on AVM usage in the country. Furthermore, due to technological advancements, the valuation profession cannot be left behind; therefore, the valuation profession, through the Surveyors Institute of Malawi, must deliberately put in place platforms to critically analyse the impacts

of technological innovations on the profession and how they can better be incorporated into the profession.

It is a foregone conclusion that AVM has its implications in the valuation profession in one way or the other. This is the case because most of the highlighted implications of AVM depend on the mode of AVM adopted in such a particular area, together with the stability of the property market and economy. Therefore, it is of paramount importance that the best mode of AVM which can fit the local situation and conditions in Malawi based on the stability of the property market and economy is tried and tested.

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