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A study of the acceptable margin of error for valuation accuracy in south-east, Nigeria

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Abstract
Due to the believe of many valuation stakeholders that value estimated from investment method of property valuation practice in the country does not accurately predict market prices, this has lead to the various stakeholders having numerous perceptions of the level of reliability required for valuation estimates relative to selling prices. Stakeholder like; Valuers, valuation users, banks, and other financial institutions, courts and even laymen have divergent views of what constitute valuation accuracy. This study examined the perception of Estate Surveyors and Valuers in the South-East Geopolitical Zone of the country on the margin of error expected of an Estate Surveyors and Valuers in carrying out valuation assignment. To achieve the objectives of the study, questionnaire backed up with interviews were administered on the population of ninety eight (98) registered firms in Aba, Enugu, Onitsha and Owerri towns.
Data collected were analyzed with the use of the relative importance indices (RII) from the analysis, the valuers acceptance of margin of variation between their valuation estimated and the sale price was 0-10%. This means that valuation estimates should closely approximate the sale price of the property.

Keywords: valuation accuracy, margin of error, valuers perception, residential property, value estimates, market prices

1. Introduction
The reliability of assessment tool is the extent to which it consistently and accurately measure learning. When the results of an assessment are reliable, we can be confident that repeated or equivalent assessment will provide consisted result. The values of reliability coefficient ranges from o-1. Coefficient of 0 means no reliability and 1 means perfect reliability. Since all text of some errors, reliability coefficients never reach 1.0. Generally, if the reliability of a standardized text is above 0.80, it is said to have very good reliability, if it is below 0.50, it would not be considered a very reliable text. Reliability according to Allan (2000) is the degree to which a measurement instrument gives the same results each time it is used, assuming that the underlying object/situation being measured does not change, one can test reliability by determining whether several observers of an objective/situation will give similar accounts of it. Reliability is used interchangeably with the term accuracy in this study. Mathematically, reliability/accuracy is usually measured either in terms of percentage, standard deviations ranging from +-5% to +-15%, or through statistical tests such as regression equation, where it is expected that the intercept of the equation would be statistically indistinguishable from zero or the constant indistinguishable from one. The study will adopt Crosby *et al* (2003) definition of reliability/accuracy as to closeness (proximity) of the valuation to the realized exchange price. According to French (2007), uncertainty was defined as anything that is not known about the outcome of a venture at the time the decision was made. Similarly, Mallision and French (2000) observed that "normal uncertainty is a universal and unsurprising fact of property valuation. The open acknowledgment of that fact and transparent management of its implications will enhance the utility of valuation". A lot of work has been done in this valuation reliability/accuracy, in United Kingdom, United states of America, Australia, Canada and even a few in this country Nigeria.

2. Literature Review
Millington (1985) described accuracy of valuation as an "aim" that should neither be expected nor necessarily sought to be achieved because a valuation that matches a market price would rather be considered anomalous. He further argues that expectation of absolute accuracy (zero percent margin of error) is "foolish" and akin to an aspiration of predict of the winner of the Grand National, which if achieved, would remove risk, and the prospect of gains and losses from investment. The fundamental characteristics of property as an asset class which can preclude accuracy as stated by mainly for students (1985) and Millington (1985) are the imperfect of nature of the property market, the lack of a central register of sales, the individual character of buildings and confidentiality of information. Millington (1985) further observes that the condition of full information of prices, homogeneity of product, case of mobility of participant and product and competition between numerous active participants which exists for a perfectly competitive market are completely absent for the property market. According to him, such imperfection is compounded by other factors which also influence supply or demand for investment property, including the cost and availability of credibility, tax charges on investment framework with which the author contends "great"

and "regular" accuracy are impossible. The various opportunities for rounding up numbers of figures during the valuation process, was also given as reason why total valuation accuracy cannot be achieved. (Millington, 1989) while noting that "where a series of figures are all "rounded off" there is always the possibility of cumulative errors being unacceptably large". Acceptance of Millington's arguments does not however preclude the establishment of an appropriate margin of error acceptable to all stakeholders: Valuers, courts, the Valuer's clients, professional institutions etc. For now, there appears to be no universal consensus as to what the acceptable level of accuracy should be. What level of inaccuracy can be recommended to all valuation stakeholders for acceptance?, there is not yet clear guidance on this from the professional bodies. For instance, at no point with the RICS's valuation standard manual (the "Red Book"), or any of the RICS's professional guideline is there any definition of what constitutes the acceptance minimum level of accuracy that should be achieved by Valuers working within the scope of the manual definition (Harvard, 2001). There is similarly no guidance in this regard from Nigeria's guidance Notes on property valuation (1985) even though the guidance notes recognize that "practice problems do arise where differences of opinion of two Valuers on the same property are so wide that the values could not be relied upon". A review of valuation accuracy studies and legal cases are as follows: Hager and Lord (1986) credited with pioneering work on valuation accuracy provide for the rage of +-5 on either side of the correct value, while Baum and Crosby (1988) cited "margins of error of +-5 to +-15%. In Nigeria, Ogunba and Ajayi (1998) [2] employed a margin of error of +-10 percentage; Ayedun (2009) [3] adopted a margin of error +-10.2 percent. In Australia, Parker (1993) carried out a property valuation estimate accuracy study in which +-5% to +-10% margin of error, a more of +-5% and arithmetic mean of +-6.045 were adopted. Brethren and Wyatt (2002) in United Kingdom conducted a study amongst the valuation stakeholders on the acceptable margin of error for mortgage loan security. The result showed that 36% of the respondent favoured a +-5% margin of error as permissible, 40% considered a +-10% variance while 24% of the Valuers considered +-15% variance as an acceptable margin of error. The authors quoted one of the investors as saying that the size of bracket would depend on the nature of individual valuation and that a single percentage range cannot satisfy all cases. All works cited above fail to establish a consensus, though a compromise margin of +-10% percentage seems to be up and coming. Whilst valuation inaccuracy appears to be generally expected, there are however considerable differences as to what should constitute the acceptable extent or range of such inaccuracy. While Hager and Lord (1985) anticipated a range of about +-5%, Glover (1985) cited a figure of +-10% as the outer limit of an acceptable margin of difference, and this view was equally supported by mainly for student (1985). Baum and Crosby (1988) suggested that "it is even common to quote an acceptable margin of error of up to +-15 in valuations. The courts in the UK of recent have also constituted themselves into one of the major stakeholders in the discussion of acceptable margin of error.

Courts have always adopted the "margin of error" principle as a means of establishing whether a Valuer has been negligent in his duty or not. The "margin of error' or "bracket" is a theoretical bracket placed at equal distances on either side of valuation deemed by the court to be "correct". The "correct" valuation figure as well as the size of the bracket is provided by expert witnesses called to assist the court with unbiased opinions on the valuation that defendants should have reasonably reached with plaintiff at the relevant date (Crosby, 2000). Norris and Joyce (1994) noted that the "acceptable margin of error" or "bracket" was first used in UK courts in the case of Singer and Fried Lander V John D. Wood & Co. (1977) 243 EG212 (a case concerning a rural residential development), which the judge held that there can be a "permissible margin of error of 10% either side of the "correct figure" extended to 15% in "exceptional circumstances". Norris and Joyce (1994) further noted that in the case of Trade Credits Limited Vs Bailieu Knight Frank (NSW) Limited (1988) Aust. Torts Reports 80-757, court Decision No.18, (a case concerning a rodeo property), expert evidence indicate a margin of "up to 15%" Furthermore, in Private & Trust Co. Limited Vs (UK) Limited (1983) EG112 (a case concerning the redevelopment of an office property), the judge Rice J. accepted a "permissible" margin of error of 15% on either side of a bracket of value". One of the judicial cases that did not arrive at a definite conclusion was one which focused on the valuation of an investment property involving Banque Bruxelles Lambert SA Vs Eagle Star Insurance Company Limited and others (1994) 31 EG 68 and (1994) 32 EG 89, where the valuation of three substantial office properties produced differences from market prices in the range of between 39% and 74%. Whilst the judge, Philips J. expressed an opinion that such differences were unacceptable, he did not however express an opinion as such as to the extent of acceptable margin of error, though he did note that the Plaintiff; Banque Bruxelles Lambert assumed that "valuations will be within +-10% of true market values". From the foregoing reviews, one can assume that UK literature accepts that the lack of hundred percent accuracy is a fundamental feature of valuation principle and practice, with +-5% to +-15% maximum levels of variance appearing to be generally accepted within the qualitative commentaries and 10% to 15% generally accepted within court precedent. Therefore, while the literature indicates inaccuracy of between 5% to 15% or between 10% to 15% as noted above, it does not consider its acceptability to the user, however it appears that an aggrieved user (client) of valuation estimate may not likely succeed in a claim of incompetence if the level of inaccuracy is +-15% of the market sale figure.

2.1 The Study Area

The research is restricted to the South-East geopolitical zone of Nigeria. The Zone comprises Abia, Anambra, Ebonyi, Enugu and Imo States. The zone covers the bulk of the Igbo speaking ethnic territory, the reminder of which extends westwards into Delta and South wards into Rivers state. The zone also include a few non-Igbo speaking communities on the Northern and Eastern borders. In pre-colonial times, Igbo land maintained a strong organic entity, with strong genetic and cultural linkages among the communities and deep interpenetration of their societies and economics through

migration and trade. Under colonial rule and from Independence until 1967 the area was administered as part of the Eastern Region. With the creation of a 12 –state structure in 1967, it became a state of its own as the East central state, but could not attain full operational status until the end of the civil war in 1970.

Progressive state creation restructured the area into two in 1976, then four in 1987, then five states in 1991. Through all this, the area and the people have retained a recognizable identity and character within the Nigeria nation state. By territorial size, the South-East zone is by far the smallest in Nigeria in terms of land mass, accounting for mere 3.2% of the national land mass. However, the 2006 census data put the population of the zone at 16,431,555 people (about 11.7% of the country's population), giving it a population density of nearly four times the national average. The zone is bounded on the North by Kogi and Benue states, on the West by Edo and Delta States, on the south by the Rivers, Akwa Ibom and Cross Rivers States (see fig.1) The major cities in the zone are: Enugu, Onitsha, Awka, Nnewi, Aba, Owerri, Umuahia and Abakaliki and these are the cities where the bulk of practicing estate surveying and valuation firms are located.

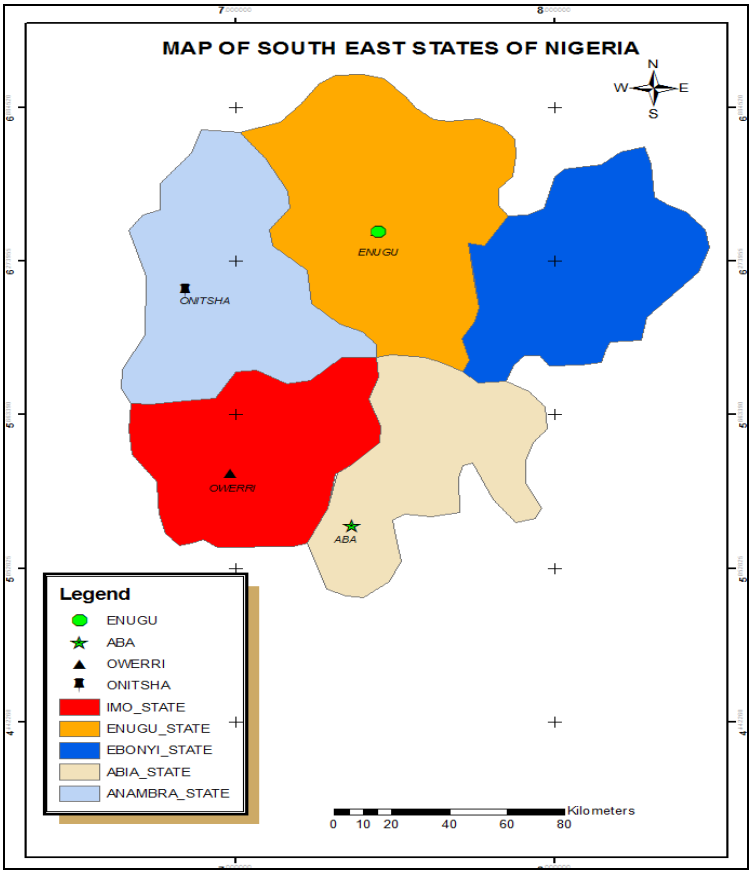

Fig 1

3. Methodology

Data for the study was collected from the sample size of 98 Estate Surveyors and Valuers from 98 estate surveying and valuation firms in the four major towns in the South-East geographical zone, where estate surveying and valuation practice is most active: the towns are Aba, Enugu, Onitsha, and Owerri. A total number of 98 registered estate surveying and valuation firms have their offices in these towns. This figure represented about 100% of the total population of estate surveying and valuation firms, which is in line with the recommended a minimum of 40% of the total population if in few hundreds. The data collected was analyzed using relative important indices (RII)

4. Data Analysis

Table 1: Perceptions of Estate Surveyors and Valuers of Need for Valuation Accuracy in South East, Nigeria

Statement on valuation estimates vis-à-vis sale prices	Strongly Agreed w=4	Agreed w =3	Disagred w=2	Strongly disagreed w =1	Total	RII	Ranking
Valuation estimates that are not 100% equal to sale prices are worthless		14 wf (42)	28 wf = (56)	18 wf = (18)	60 (116)	1.93	3rd
Valuation Estimates should closely approximate to sale prices	19 wf (76)	22 wf (66)	11 wf = (22)	8 wf = (8)	60 (172)	2.87	1st
Valuation estimates should just be a loose approximate of realized sale prices of the property (--+20% of sale price)	9 wf (36)	11wf=(33)	22 w=(44)	14 wf=(14)	60 (127)	2.17	2nd

Valuation estimates can never be close to sale price (--+30% of sale prices)			28 Wf=(56)	32 wf = (32)	60 (88)	1.47	4th

Key: wf= weighted frequency

Table 1: Above showed that expectation of the Valuers that valuation estimates should vary closely approximate to the sale price ranks highest (RII = 2.87) among other perceptions of valuation accuracy. This was followed by the perception that valuation estimates should just be a loose approximation of realized sale prices of the property (RII = 2.17). Some Valuers however, believed that valuation estimates that are not 100% equal to sale prices are useless (RII = 2.93) while others thinks that valuation estimates can never be close to sale price due to the viotality in the property market and the economy. This shows that Valuers have a diverse range of opinions and expectations of valuation accuracy. To assess the Estate Surveyors and Valuers expected reliability and acceptance of liable for default in the valuation estimates, the Valuers were asked to state at what percentage beyond which the variation of their valuation estimate and the sale price, they should be held liable for professional negligence. The question was pose thus:

Question: Assume your firm is asked to value a property for sale and the property is put in the market immediately after, what is the maximum acceptance variation between your valuation estimate and the sale price beyond which in your opinion, your firm should be held liable for your negligence?

Table 2: Response to Question Above

Response	Acceptance Frequency	Percentage	Unacceptable frequency	percentage
0-10%	60	100%	0	0

The response in table 2 Showed that all Valuers acceptance margin of variation between their valuation estimate and the sale price is 0-10%. It also showed that the Valuers were of the view that the maximum acceptance variation between the valuation estimate and the sale price were 20% beyond which they should be held liable for negligence. However, all the Valuers insisted that variation between valuation estimates and sale price should not exceed 10% beyond which the Valuers should be held liable for negligence. This conformed to the perception of the majority of the Valuers in Table 1above that valuation estimates should closely approximate the sale price of the property (RII = 2.87).

5. Conclusion

The study has shown that the general perception and expectation of the Estate Surveyors and Valuers in South-East Geopolitical Zone is that margin of error between valuation estimates and sale prices should not exceed 10%. The paper therefore recommends that all Estate Surveyors ad Valuers should strive to render a high quality valuation output to meet this expectation. The study also recommends that NIESV should make it mandatory for all Estate Surveyors and Valuers to submit relevant data (sale figures, rental values, outgoing, yield rates etc.) on all transactions with respect to property sales and letting compulsorily for the purpose of building and regularly updating a data bank and each state chapter of NIESV should be mandated to establish such a property data bank and review periodically to make such data continually relevant. Such information so collated could serve as a reference point for comparison between valuers within the state and among investors in Nigerian who may wish to invest in any state within the country. Such property data bank would assist researchers in performance measurement and reliability test, conventional investment method of property valuation

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