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# ASSESSMENT OF THE RELIABILITY OF CONVENTIONAL INVESTMENT METHOD OF PROPERTY VALUATION IN SOUTH-EAST, NIGERIA.

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## ABSTRACT

The increasing criticism that the value estimated from conventional investment method of property valuation practice in the country does not accurately predict market price, this study examined the ability of Estate Surveyors and Valuers to estimate accurately the selling prices of residential properties in the South-East Geopolitical Zone of the country using conventional investment method. The aim of the study is to appraise the reliability of the conventional investment method of property valuation in South-East, Nigeria, with a view to providing concrete evidence of reliability or otherwise of the conventional investment method of property valuation and to validate the claims of the Estate Surveyors within the Geopolitical Zones and to achieve these, questionnaire backed up with interviews were administered on the population of forty (40) registered firms in Aba, Enugu, Onitsha, and Owerri Towns. Data obtained were analyzed with the use of the Mean Deviation from the market price, Standard Deviation, and correlation Analysis. The margin of error obtained from the eighteen sample properties using mean deviation was 2.7% and was within the acceptable margin of error of + or – 10% adopted for this study. The P- value in the ANOVA table is 0.000, meaning that there is a statistically significant relationship between the market prices and value estimates. The value estimates using conventional investment method were very good proxies for market prices of real properties and therefore reliable.

**Key word:** Reliability of valuation, conventional method of valuation, residential properties, South-East geopolitical Zone, market price.

## 1. INTRODUCTION

Valuation is defined by the Royal Institution of Chartered Surveyors' Appraisal and Valuation Manual (1996) as the provision of a written opinion as to capital price/value or rental price/value, on any given basis in respect of an interest in property, with or without associated information, assumptions or qualification. Valuation does not include a forecast of value but is the prediction of the most likely selling price of a property. Valuation has been likened to both an art and science of estimating the open market value or prediction of the most likely selling price of interest in land, (Ratcliff, 1968; Lust, 1983; Ordway and Bell, 1984; Millington, 1988; Ajayi, 1998 and Baum, 1998). Eldred and Zerbst (1976) and Ratcliff (1975) further opined that valuation is simply 'market analysis and not 'consumer research'. The implication of the above views is that Valuers either estimate market value in a perfect competitive market/or predict price in an imperfect market which adequately recognize the existence of uncertainty. It is worthy to note that Valuers are not asked what property is 'worth' in absolute term, rather they are asked for their opinion on what the property would bring in real estate market as at the date of valuation. Therefore, Valuers because of their specialized skills are engaged in judging the



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speed at which various markets move and implications for valuation purposes. Reenbstina (1983) affirmed that ‘the Valuer like psychologist or other social scientist is an analyst of human behavior as expressed through transactions in the real estate market.

However, in recent times, other professionals like bankers, accountants, quantity surveyors, engineers etc, are venturing into the ‘grey’ area traditionally exclusively reserved for the Valuers. Even the average layman nowadays thinks though unjustified, that advice Valuers offer may be driven by the need to increase or generate their fees (Udobi, Egolum & Ugonabo, 2016). Valuation is central to performance analysis and pricing in the property industry, but in spite of this, Millington (1985) described accuracy of valuation as 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. With market distortions such as lack of central register of sales, property homogeneity, and confidentiality of information, valuation accuracy is improbable (Royal Institute of Chartered Surveyors, 1995). While inaccuracy is to be expected, there have been a number of negligent cases in United Kingdom with acceptable margin of error ranging from 5-15%, while Valuers themselves expect between 5-10% margin of error (Bretten & Wyatt, 2002; Babawale, 2007; Ibiyemi, 2009). Crosby (2002) on this basis concluded that the expectations of the UK court are less onerous when compared with Valuers’ expectation of inaccuracies in valuation. Divergence between valuation and transaction prices determines the degree of valuation inaccuracy, whereas the divergence between two or more Valuers’ value opinions on the same property at the same time for the same purpose is a measure of valuation variance. Reasons given for valuation variation, high margin for error and inaccuracy are: the nature of the property (Downs, 1991; Millington, 1989), valuation assumptions (Baum and Crosby, 1988), behavioral characteristics of the Valuers (Levy and Schunk, 1999); type of property (Waldy, 1997; Ogunba and Ajayi; 1998) and lack of valuation and data bank (Babawale, 2007). The aim of the study is to examine the reliability of conventional investment method of property valuation in South-East Nigeria, with a view to confirming the reliability or otherwise of the method and to provide concrete evidence of reliability or otherwise of the conventional investment method of property valuation.

## 2. CONCEPT OF RELIABILITY

The reliability of an assessment tool is the extent to which it measure learning consistently. The validity of an assessment tool is the extent by which it measures what it was designed to measure. The reliability of an 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 assessments will provide consistent results. This puts us in a better position to make generalized statements about a student’s level of achievement, which is especially important when we are using the results of an assessment to make decisions about teaching and learning, when we are reporting back to the students and their parents or caregivers. No results however can be completely reliable. There is always some random variation that may affect the assessment, so educators should always be prepared to question results.

### 2.1 Factor which can affect reliability are

The length of the assessment: a larger assessment generally produces more reliable results. The suitability of the question or tasks for the student’s being assessed. The phrasing and terminology of the question, examples, the length of time given for the assessment instructions given to students before the text. The design of the marking schedule and moderation of marking procedures. The readiness of students for the assessment: for example, a hot afternoon or straight after physical activities may not be the best time for students to be assessed. How to be sure that a normal assessment tool is reliable.

Check in the user manual or evidence of the reliability coefficient. These are measured between zero and 1. A coefficient of 0.9 or more indicates a high degree of reliability. Information is reliable if a user can depend upon it to be materially accurate and if it faithfully represents the information that it purports to present significantly. Misstatement or omissions in financial statements reduce the reliability of information contained in them. For example, a company is being sued for damages by a rival firm, settlement of which could threaten the financial stability of the company. Non-disclosure of this information would render the financial statement unreliable for its users. Reliability of financial information is enhanced by the use of following accounting concept and principles:

- Mentality
- Faithful Representation
- Prudence

The values for reliability coefficient, according to Udobi, Kalu & Elekwachi (2016) ranges from 0 to 1. Coefficient of 0 means no reliability and 1 means perfect reliability. All things being equal, 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  $\pm 5\%$  to  $\pm 15\%$ , 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 any thing 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”.

## 2.2 Acceptable margin of error for valuation Accuracy

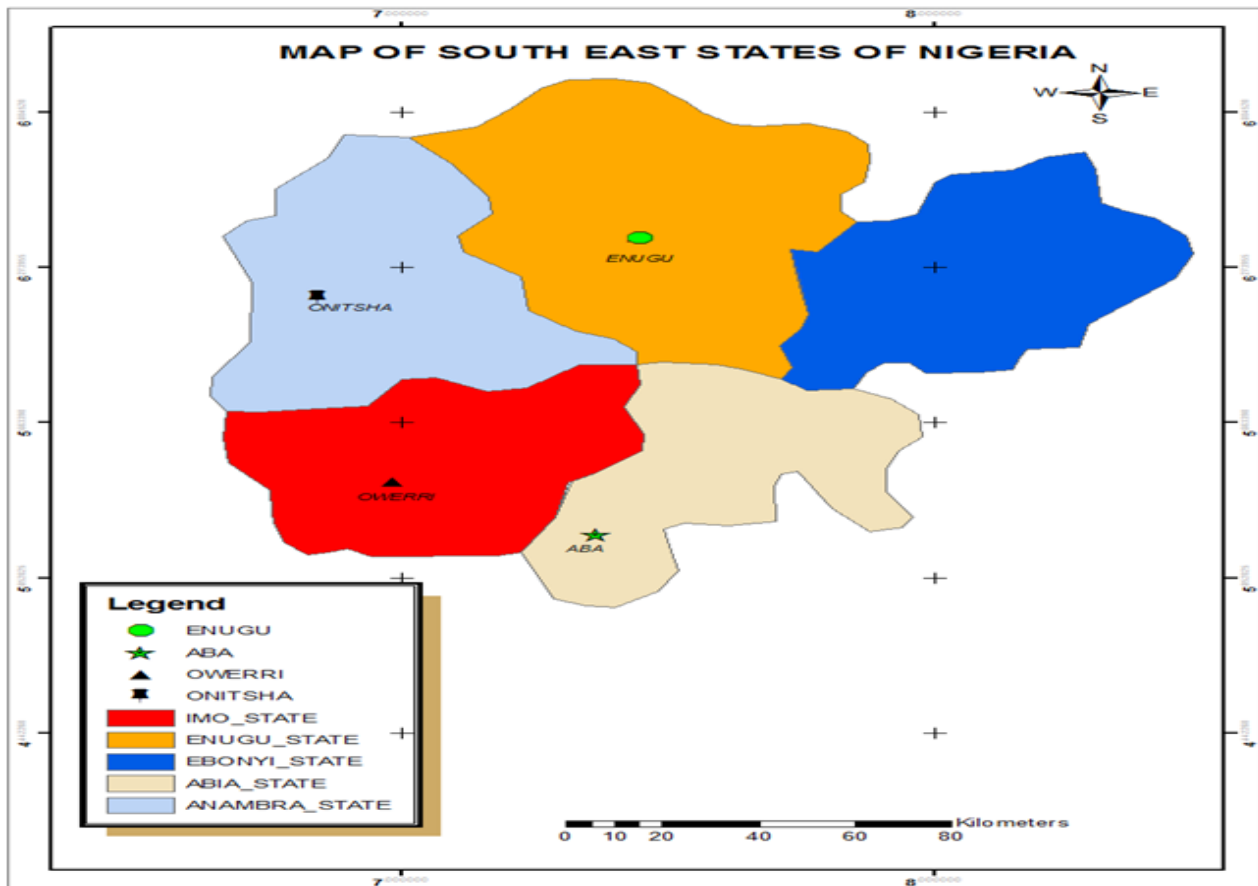
Millington (1985) described accuracy of valuation as an “aim” that should neither be expected nor necessarily sought to be achieved because a valuation that matches a market price would rather be considered anomalous. He further argues that expectation of absolute accuracy (zero percent margin of error) 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, ease 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 Valuers 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 range of  $\pm 5\%$  on either side of the correct value, while Baum and Crosby (1988) cited “margins of error of  $\pm 5\%$  to  $\pm 15\%$ . In Nigeria, Ogunba and Ajayi (1998) employed a margin of error of  $\pm 10\%$  percentage, Ayedun (2009) adopted a margin of error  $\pm 10.2\%$  percent. In Australia, Parker (1993) carried out a property valuation estimate accuracy study in which  $\pm 5\%$  to  $\pm 10\%$  margin of error, a more of  $\pm 5\%$  and arithmetic mean of  $\pm 6.045\%$  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  $\pm 5\%$  margin of error as permissible, 40% considered a  $\pm 10\%$  variance while 24% of the Valuers considered  $\pm 15\%$  variance as an acceptance 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  $\pm 10\%$  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  $\pm 5\%$ , Glover (1985) cited a figure of  $\pm 10\%$  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  $\pm 15\%$  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.

### 2.3 The Study Area

The research is restricted to the South-East geopolitical zone of Nigeria. The Zone comprising (Abia, Anambra, Ebonyi, Enugu and Imo States). The zone covers the bulk of the Igbo speaking ethnic territory the remainder 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 and 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. South East Nigeria showing the study area**

### 3. METHODOLOGY

The data for the study was collected from the sample of forty Estate Surveyors and Valuers from forty Estate Surveying and Valuation firms from the major town of Aba, Enugu, Onitsha and Owerri), where forty Estate Surveying and Valuation practice is most active in the South-East Geographical Zone. Out of these, the twenty-one (21) Estate surveyors and Valuers representing 52.5 of the respondents were retrieved. A sample of eighteen (18) properties which were sold between January-June, 2014 were collected and the respondents Estate Surveyors and Valuers were ask to value each property without knowing the selling prices, using the conventional investment method of valuation. The data collected was used to determine the mean/standard deviations which are measures of reliability of valuations.

### 4. PRESENTATION AND ANALYSIS OF DATA

A sample of eighteen (18) properties which were sold between January-June, 2014 were collected and the respondents Estate Surveyors and Valuers were asked to value each property without knowing the selling prices. Out of thirty six (36) Estate Surveyors and Valuers that responded their valuation estimates were as follows:



**Table 1: Sale prices of the 18 sample properties and their valuation estimates by the 21 respondent Estate Surveyors and Valuers in South-East, Nigeria.**

Pr op ert ies	P(₦ m)	Prices Values by each Estate Surveyor and Valuer																				
		V <sub>1</sub>	V <sub>2</sub>	V <sub>3</sub>	V <sub>4</sub>	V <sub>5</sub>	V <sub>6</sub>	V <sub>7</sub>	V <sub>8</sub>	V <sub>9</sub>	V <sub>10</sub>	V <sub>11</sub>	V <sub>12</sub>	V <sub>13</sub>	V <sub>14</sub>	V <sub>15</sub>	V <sub>16</sub>	V <sub>17</sub>	V <sub>18</sub>	V <sub>19</sub>	V <sub>20</sub>	V <sub>21</sub>
1	48	14	38	28	35	65	68	28	27	30	29	31	50	45	35	40	50	44	49	43	16	50
2	15	6	7	10	18	17	12	16	18	15	17	14	17	14	15	10	11	17	9	6	12	13
3	18	6	8	20	16	18	12	17	18	20	19	16	20	21	7	16	15	14	18	7	20	9
4	40	31	30	15	25	42	51	30	28	27	29	31	38	42	30	25	36	32	28	39	35	35
5	15	11	7	8	20	20	15	19	17	20	18	14	13	16	9	10	20	18	14	7	12	17
6	9	6	6	5	7	8	7	14	15	13	12	10	8	10	15	11	9	7	8	6	6	10
7	50	37	45	30	50	44	32	31	32	30	35	33	76	50	45	50	45	38	55	49	60	45
8	30	30	17	18	35	34	13	26	30	28	29	27	48	38	30	30	45	25	40	35	17	30
9	20	22	25	10	35	42	26	28	25	27	26	24	30	20	22	20	38	18	15	25	21	19
10	14	12	15	8	12	11	25	14	12	15	13	16	15	12	14	14	8	5	11	10	12	14
11	13	11	11	10	15	9	10	17	16	15	20	18	30	8	12	13	5	11	14	5	10	12
12	35	35	30	18	45	44	8	35	36	38	37	39	40	45	36	40	45	37	34	36	40	35
13	28	38	35	25	27	54	50	29	27	28	25	26	30	26	29	27	29	25	28	35	25	30
14	33	35	26	20	25	33	47	28	30	29	32	31	35	30	36	32	22	26	25	30	35	30
15	22	35	30	26	30	43	48	28	30	32	31	29	20	25	23	19	15	24	25	38	25	20
16	9	14	6	12	7	7	25	15	17	14	18	16	8	8	10	10	6	9	10	9	8	10
17	18	13	25	15	22	30	35	26	25	24	27	23	16	20	17	18	20	21	20	20	20	16
18	25	32	28	25	25	33	45	24	26	27	25	28	25	26	30	29	25	27	28	22	25	30



The mean/standard deviation from market price was examined in respect of the 18 sampled properties. Table 2 that follows provides the result of test for the properties.

**Table 2: Assessment of the Accuracy of valuation of the properties using Mean Deviation from Market Price.**

Properties	Sales price (₦,000,000)	No of Valuers	Results of the statistical Tests	
			Mean (N000,000)	Mean Deviation (N000,000)
Property1	48	21	38.81	
Property2	15	21	13.00	2.00
Property3	18	21	15.10	2.90
Property4	40	21	32.33	7.67
Property5	15	21	14.52	0.43
Property6	9	21	9.19	-0.19
Property7	50	21	43.43	6.57
Property8	30	21	24.67	0.24
Property9	20	21	24.67	-4.67
Property10	14	21	12.76	1.24
Property11	13	21	12.95	0.05
Property12	35	21	35.38	0.38
Property13	28	21	30.38	-2.38
Property14	33	21	30.33	2.67
Property15	22	21	28.24	-6.24
Property16	9	21	11.38	-2.38
Property17	18	21	19.95	-1.95
Property18	25	21	27.86	-2.86

Table 2: Showed high level of reliability. The average mean deviation from market price for all the sample properties came to 2.7%. This represents a relatively high degree of accuracy relative to the 5% adopted by Hager and Lord (1985) and by Ogunba (1997) and higher level of accuracy relative to the 10 percent adopted by Ogunba (2003) Matysiak and Wang (1995) and Hutchison *et al* (1995) and 10.2 percent adopted by Ayedun (2009). It also represents a high degree of accuracy relative to the present study. This means that Valuers in this study area are interpreting market prices with an appreciable degree of accuracy.

## 5. CONCLUSION

The study dealt deeply into assessment of the reliability of conventional investment method of property valuation in South-East, Nigeria. This has been done because it has been noted that a host of Estate Surveyors and Valuers in Nigeria resort to the valuation of income yielding properties, using depreciation replacement method of valuation or comparison method instead of conventional investment method of valuation citing the issue of unreliability of the method. Consequently, it is therefore desirable to assess the reliability or otherwise of the method. The study showed that with the mean deviation of 2.7% and standard deviation of between 10.6% and 53%, the conventional investment method of property valuation is reliable.

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