STRATEGIC ASSESSMENT OF THE EFFECTS OF HEURISTICS ON REAL ESTATE INVESTMENT DECISIONS IN LAGOS METROPOLIS.

[1] MURITALA, A. O.; [1]AJIBADE, N. A.; [1]ADELEKE, M. A.; & [2]ONIFADE, A. O.
[1]*Department of Estate Management and Valuation, the Oke-Ogun Polytechnic, Saki [2]Department of Architectural Technology, the Oke-Ogun Polytechnic, Saki.*

Abstract

Investment decisions are deemed as a deliberate and rational process based on availability of information. Though at times people are usually found to hold little information but yet end up making general decisions. Heuristics factors are simple rules of thumb which explain how people make decisions, arrive at judgments and solve problems when faced with complex situations or in cases where the available information is incomplete. This study sought at assessing the influence of the heuristic factors on real estate investment in Lagos Metropolis. The study was guided by Heuristic theory. A census of 126 registered real estate investors from Lagos Island, Lagos Mainland and Ikeja was undertaken. Primary data were collected through a self-administered questionnaire composed of closed ended questions. Cronbach alpha coefficient of 0.7 was used to ascertain test of the reliability of the data collection instrument. Descriptive and regression analysis were used to analyze data with the help of statistical package. Inferential statistics was also carried out to establish the nature of the relationship that exists between heuristic factors and real estate investment. Data was interpreted with the help of 0.05 significance P-values. Model fitness R^2, ANOVA statistics and regression coefficient were generated. Prior to running a regression model, normality test was conducted. The study findings indicated heuristics factors have a positive and statistically significant relationship with real

estate investment in Lagos Metropolis. This study concludes that real estate investors in Lagos Metropolis sometimes do not make investment decisions rationally but are influenced by heuristic biased decisions. The study recommends that Lagos State Government should establish a mechanism to ensure that the prices of real estate in specific regions are availed to enable investors evaluate price changes as it may influence their decision to buy or sell the investment

Keywords: *Heuristics, real estate investments, decision making, Lagos Metropolis, sustainability.*

Introduction

Heuristics factors according to Kahneman (2011) are simple rules of thumb which explain how investors make decisions, arrive at judgments and solve problems when faced with complex situations or in cases where the available information is incomplete. He noted that people are usually found to hold little information and make general decisions, but, yet end up making a correct decision. Shah and Oppenheimer (2008) stated that the "mental short cuts" that ease the burden of decision making are referred to as heuristic factors.

Investors usually rely on host of heuristics. Most important heuristic factors from literature include representative, availability, gambler's fallacy, overconfidence, anchoring and judgment. First, representative heuristic which occurs when one chooses a thing due to its recognizability hence utilizing the least effort or information to make decisions (Hilbi and Pohl, 2008). Simply making a conclusion due to the fact that event 'A' resembles event 'B'.

The second important heuristic factor is availability which is when one makes a decision since the information available can be retrieved easily (Redelmeier, 2005). The third heuristic is anchoring and judgment which the foundational decision is making heuristic where some estimate of value is needed (Epley and Gilovich, 2006). This is mostly seen when in negotiation table; people tend to make a counter offer depending on the

anchoring provided to them. People tend to start with a first value, then followed by some adjustment leading to the final answer. Fourth, overconfidence heuristic is manifested when an individual chooses to invest in only one alternative fully they are familiar with even, if there exist rationally justifiable alternatives (Jordan and Miller, 2008). For example, an investor may invest in debt instrument of one local company rather than for an international company since the investor may be unfamiliar with it Dietrich (2010).

According to Adedeji (2019), Lagos Commercial land use experienced a drastic growth of about 25.79% between 2010 and 2018; this is not unconnected with the preference for real estate investment as earlier stated. Real estate industry has become an increasingly important component of the Lagos State economy; it is the state's fastest growing sector.

With the huge amount of funds being committed to real estate investment, there is the greater need for rational decision making procedures so as to avoid financial loss. The decision making process is a cognitive and complicated process which results in the selection of action among several alternatives. Markowitz portfolio theory (1959) laid the theoretical foundations for asset selection and management. In this process, the emphasis is on weighing the outcomes and alternatives before arriving at a final decision.

However, the decision maker is influenced by parameters outside the realm of financial theory and mathematical models (French and French, 1997; French, 2001). The actual behaviours of decision makers can deviate from this normative model. This is in line with the submission of Ajayi (1998) that traditional property investment was seen as a means to obtain security and regular income, thus decisions were made on the basis of intuition and past experience. It is against this background that this study has examined the heuristics factors that influence real estate investment decisions in Lagos Metropolis.

Problem Statement

Investment in real estate has been on the upsurge in Nigeria mostly in cities and now clustered in metropolitan cities in recent times. Real estate

contributes over 7% to Gross Domestic Product (GDP) directly and therefore one of the key Sectors in Nigeria. This sector is therefore key in the achievement of 10% growth rate as envisioned in Nigeria's Agenda 2030 and beyond.

Viability of real estate project implies that investments must be done in a fairly rational manner in the evaluation of the investment risks, timing and amount of cash flows. If this is not done with caution, these investments could lead to wealth erosion rather than the expected wealth creation, against the planned investment objectives, limiting employment and Sustainable Development Goal (SDG) on fostering economic growth and industrialization. The heuristic factors and real estate investment has scarcely been studied. Besides, none of the prior study known to the researcher has been conducted Lagos Metropolis.

Literature Review
Heuristic Theory

Heuristics are defined as the rules of thumb, which makes decision making easier, especially in complex and uncertain environments (Ritter, 2003) by reducing the complexity of assessing probabilities and predicting values to simpler judgments (Kahneman and Tversky, 1974). In general, these heuristics are quite useful, particularly when time is limited (Waweru et al., 2008), but sometimes they lead to biases (Kahneman and Tversky, 1974; Ritter, 2003). Kahneman and Tversky seem to be ones of the first writers studying the factors belonging to heuristics when introducing three factors namely representativeness, availability bias, and anchoring (Kahnemanand Tversky, 1974). Waweru et al. also listed two factors named Gambler's fallacy and Overconfidence into heuristic theory (Waweru et al., 2008). Representativeness refers to the degree of similarity that an event has with its parent population (DeBondt and Thaler, 1995) or the degree to which an event resembles its population (Kahneman and Tversky, 1974). Representativeness may result in some biases such as people put too much weight on recent experience and ignore the average long-term rate (Ritter, 2003). A typical example for this bias is

that investors often infer a company's high long-term growth rate after some quarters of increasing (Waweru et al., 2008).

Representativeness also leads to the so-called "sample size neglect" which occurs when people try to infer from too few samples (Barberis and Thaler, 2003). In stock market, when investors seek to buy "hot" stocks instead of poorly performed ones, this means that representativeness is applied. This behaviour is an explanation for investor overreaction (DeBondt and Thaler, 1995).

The belief that a small sample can resemble the parent population from which it is drawn is known as the "law of small numbers" (Rabin, 2002; Statman, 1999) which may lead to a Gamblers' fallacy (Barberis and Thaler, 2003). More specifically, in stock market, Gamblers' fallacy arises when people predict inaccurately the reverse points which are considered as the end of good (or poor) market returns (Waweru et al., 2008). In addition, when people subject to status quo bias, they tend to select suboptimal alternative simply because it was chosen previously (Kempf and Ruenzi, 2006).

Anchoring is a phenomena used in the situation when people use some initial values to make estimation, which are biased toward the initial ones as different starting points yield different estimates (Kahneman and Tversky, 1974). In financial market, anchoring arises when a value scale is fixed by recent observations. Investors always refer to the initial purchase price when selling or analyzing. Thus, today prices are often determined by those of the past. Anchoring makes investors to define a range for a share price or company's income based on the historical trends, resulting in under-reaction to unexpected changes. Anchoring has some connection with representativeness as it also reflects that people often focus on recent experience and tend to be more optimistic when the market rises and more pessimistic when the market falls (Waweru et al., 2008).

When people overestimate the reliability of their knowledge and skills, it is the manifestation of overconfidence (DeBondt and Thaler, 1995; Hvide, 2002). Many studies show that excessive trading is one effect of investors. There is evidence showing that financial analysts revise their assessment of a company slowly, even in case there is a strong indication proving that assessment is no longer correct. Investors and analysts are often overconfident in areas that they have knowledge (Evans, 2006).

Availability bias happens when people make use of easily available information excessively. In stock trading area, this bias manifest itself

through the preference of investing in local companies which investors are familiar with or easily obtain information, despite the fundamental principles so-called diversification of portfolio management for optimization (Waweru et al., 2003). In this research, five components of heuristics: Overconfidence, Gambler's fallacy, Availability bias, Anchoring, and Representativeness will be used to measure their impact levels on the commercial property investment decision making.

Heuristic Factors and Real Estate Investment

Heuristics factors are factors that applies rule of thumb to simplify a complex problem or decisions that need to be made in unlikely environments (Ritter, 2003) by forecasting simpler judgments using probabilities and especially under limitations of time circumstances (Waweru et al., 2008; Loung and Ha, 2011).

Robin (2002) explains heuristics by use of "law of small numbers," which is the belief that small sample or branches can be a representative of the parent population. Skinner (2004) study of the Indian Stock Market found that there is a difference between behaviour patterns of investors. This study was based on the influence of certain identified behavioural finance concepts or biases, on the decision making process of individual investors who were categorized into two groups of young and experienced. The results of the study found that, "Gamblers Fallacy, Anchoring and Hindsight biases affected the young investors significantly more than experienced investors."

By applying the behavioural finance theory, Mwangi (2011) studied how behavioural factors influence Kenyan property market investment decisions. One hundred and fifty five listed real estate agents in Nairobi region were selected for the survey from the yellow pages. The results of the findings indicated that there were two classifications of human cognitive illusions: heuristic and prospect theory. More specifically, the author found that heuristics theory comprised of anchoring, representativeness and availability bias had greater impact on the investment decisions making.

Osmond, Adebayo and Adesiyan (2013) investigated the valuation of property investment as result of using of heuristics factors in Nigeria. The key heuristic factors considered by the study were availability, representative, anchoring, adjustment and positivity. A total of two hundred and eighteen (218) Estate Surveying and Valuation Firms in three

cities were select randomly for cross sectional administration of questionnaires. These primary data were measured using ordinal scale. Osmond et al. confirmed that the four heuristics factors actually influenced property valuesin the study areas. However, this study should have tested the nature of the relationship between the heuristics factors and valuation of estate property.

Lowies and Hall (2015) examined whether anchoring and adjustment as heuristic-driven bias influences listed property fund managers in South Africa property investment decisions. Seventeen questionnaires were sent via email to listed property fund managers operating in Johannesburg Securities Exchange. A survey based design was used. The results from the non-parametric tests showed that the fund managers anchored information on favourable property even if the new information showed the original anchor to be less favourable.

These results were consistent to findings of past studies (Leung & Tsang, 2013; Bucchianeri and Minson, 2013). Results also found no statistical ground for property fund managers to exhibit herding behaviour. Scott and Lizieri (2012) investigated the anchoring effect on UK house price valuations through an incentivized experiment on students. Scott and Lizieri argued that the student sample represents first time home buyers. It was established that valuation judgments of house prices were anchored to arbitrary values. Bucchianeri and Minson (2013) too studied the relationship between anchoring and pricing strategies of houses. The authors found signs of anchoring and insufficient adjustment to correlate positively with higher listing prices.

Research Method

The study adopted descriptive research design. According to Oso and Onen (2009) a descriptive survey design seeks to describe the situation as it is. It's appropriate in the current study since the study sought to explain the relationship between heuristic factors and real estate investment in Lagos Metropolis. A census of 126 registered real estate investors from Lagos Island, Lagos Mainland and Ikeja was undertaken. Primary data was collected through a self-administered questionnaire composed of closed ended questions. Saunders (2007) supports the use of closed ended questions since they are easily answered since minimal writing is required. The choice of closed ended questions increases completeness on questions responses.

Test of Reliability

Kombo and Tromp (2006) argued that reliability of the research instrument is attested through its ability to yield similar results if administered to different respondents. Cronbach alpha coefficient of 0.7 was used to ascertain test of the reliability of the data collection instrument. The results of the reliability of this study gave the alpha value of 0.727 as shown in table 1 which implies that data collection instrument was reliable and fit for the purposes of the study since the Cronbach alpha coefficient exceeding 0.70.

Table 1: Reliability Test Results

Variables	Number of Items	Cronbach's Alpha Coefficient
Heuristic Factors	6	0.727

Source: Data Analysis, 2019

Data Analysis and Presentation of Results

The collected data was cleaned and edited to ensure completeness and consistency. The data was then analyzed using descriptive and inferential statistics with the help of statistical package for social sciences. Inferential statistics was carried out to establish the nature of the relationship that exists between heuristic factors and real estate investment. Data was interpreted with the help of 0.05 significance P-values. Model fitness R^2, ANOVA statistics and regression coefficient were generated. Prior to running a regression model, normality test were conducted.

The linear regression equation for this study was in the form;

$$Y = \beta_0 + \beta_1 X_1 + \acute{\varepsilon} \qquad (1)$$

Y= Real Estate Investment decision

X1 -Heuristic factors

ε- Error term

In the model, β_0 is the constant term; the coefficient β_i is used to measure the sensitivity of the dependent variable (Y) to unit change in the predictor variables while ε is the error term which captures the unexplained variations in the model.

Findings and discussions

Data Background

The study targeted one hundred and twenty six (126) registered real estate investors in Nigeria. Out of the 126 questionnaires that were issued, 118 were dully filled and returned to the researcher for analysis. This gave

a response rate of 93.7% which is considered as very good according to (Mugenda and Mugenda, 2004).

Investment Experience of Respondents

Investment experience of respondents in the Lagos Metropolis was sought to establish whether the respondent were fairly familiar with the heuristic factors that could affect real estate investment.

Table 2: Distribution of Respondents by year of experience in real estate investment

S/n	Year of Experience of Respondents	Frequency	Percentage of Respondents
1.	0 -5	19	16.1
2.	6 – 10	31	26.3
3.	11 – 15	12	10.2
4.	16 – 20	24	20.3
5.	Above 20 years	32	27.1
	Total	**118**	**100.0**

Source: Field Survey, 2019.

From Table 2, 16.1% of the respondents have experience of not more than 5 years, 26.3% of the respondents have investment experience for period between 6 –10 years, 10.2% have invested for 11 –15 years, and 20.3% have invested for 16-20 years while 27.1% have invested for more than 20 years. Thus majority of the respondents had investment experience of more than 6 years.

In this case, given that more than 83% of the total respondents had more than 6 years of real estate investment experience in Lagos Metropolis, it is expected that the respondents had in-depth information regarding the heuristic factors that affect real estate investment in Lagos Metropolis.

Heuristic Factors and Real Estate Investment decisions

A heuristic is a mental shortcut that allows people to solve problems and make judgments quickly and efficiently. These rule-of-thumb strategies shorten decision-making time and allow people to function without constantly stopping to think about their next course of action (Barberis, 2001). Table 3 shows the heuristic factors in the study area.

Table 3. Descriptive analysis of Heuristic Factors

S/n	Heuristic Factors	N	Mean	St. Error	SD
1.	Pricing of RE based on recent selling/ buying price	118	4.07	0.079	0.857
2.	Use of trend Analysis	118	4.06	0.087	0.945
3.	Use of past experience to predict future	118	4.03	0.089	0.965
4.	Have high expectations on return beyond market expectations	118	3.91	0.092	1.004
5.	Use of RE, buy price to determine point of selling/trading	118	3.87	0.086	0.930
6.	Predictive skills to time and outdo the market	118	3.80	0.077	0.833
7.	Valid N (list wise)	118			

Source: Data Analysis, 2019.

Pricing of real estate based on recent selling/buying price was highly rated with mean of 4.09 followed by use of trend analysis with a mean of 4.06. Use of past experience to predict future had a mean of 4.03, high expectations on return beyond market expectations had a mean of 3.91.Use of real estate buy price to determine point of selling/trading had a mean of 3.87 while predictive skills to time and outdo the market had a mean of 3.80.This means that investors mainly focus on the recently sold parcel of land to establish the price but they also analyze the trend of the real estate when making investment decisions. Overall, it is evident from the above evaluation that investors consider heuristic factor under consideration when making real estate investment decisions.

Table 4. Model Summary for Heuristic Factors

Model	R	R-Square	Adjusted R-Square	Std. Error
1	.247[a]	.061	.053	.939

a. Predicators: (Constant), Heuristic Factors

From the regression results in Table 4, the R value was 0.247 indicating that there is a relationship between heuristic factors on real estate investment decisions in Lagos Metropolis. The R squared (R^2) value of 0.061 shows that approximately 6.1 percent of the real estate investment

decisions are explained by heuristic factors. The remaining 93.9 percent is explained by other factors. In order to assess the significance of the influence of heuristic factors on real estate investment in the study area, ANOVA Statistics were generated. The results are as presented in Table 5.

Table 5. ANOVA for Heuristic Factors

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	86.670	1	6.670	7.567	0.07[b]
1 Residual	22.254	116	0.881		
Total	108.924	117			

a. Dependent Variable: Real estate investment decisions
b. Predictors: (Constant), Heuristic Factors.

Table 5 shows an F ratio of 7.567 and an associated p value 0.007 which is less that p= 0.05. These values are an indication that heuristic factors when considered singly have a statistically significant influence on real estate investment decisions in Lagos Metropolis. These results agree to Shah and Oppenheimer (2008) who suggest that there is a relationship between investment and heuristics and that it is possible that investors at times apply simple rules that seem to work for them instead of applying complex models in decision making. Similarly these findings are similarly to those of Osmond, Adebayo and Adesiyan in Nigerian property investment.

Apart from establishing an existing relationship, these results confirm a statistically significant influence of heuristic factors on real estate investment. While most of the studies in behavioural finance are conducted in developed economics and organized security markets, this study appears to indicate that in an emerging economy like Nigeria, behavioural investors largely use the same decision making rules as is the case in developed security markets.

Table 6. Regression Coefficients for Heuristic Factors

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficient Beta	T	Sig.
(Constant)	3.233	0.301		10.753	.000
1 Heuristic Factors	0.215	0.078	0.247	2.751	.007

a. Dependent Variables: Real estate investment decision
Heuristic factors had positive and significant effect on real estate investment decisions. With $\beta = 0.215$ at p value 0.007 which is less than 0.05. The indication was that as the heuristic factors are enhanced by one unit, a real estate investment decision is enhanced by 0.215. The bivariate regression equation for this study can be stated as: $Y= 3.233 + 0.215X1 + e$. where $X1 =$ heuristic factors. This is an indication that heuristic factors considered in this study greatly influences investors decision to invest in real estate.

Conclusions and Recommendations

The study sought to examine the effect of heuristics factors on real estate investment decision in Lagos Metropolis. Based on the findings the study concludes that heuristics factors positively and significant influence investors' decision making of real estate investment at 5% level of significance. The study further revealed that majority of the respondent base the pricing of real estate on recent selling/ buying price where the investors in real estate over react to price changes of investment by either buying or selling depending on their future projections. In addition, most of the respondents agreed that investors use of trend analysis of price changes based on past experience and expectations of return to make real estate investment decisions. Following these findings, this study recommends that Nigerian Institution of Estate Surveyors and Valuers establish property data base to ensure that the prices of real estate in specific regions are made available to enable investors evaluate price change as it influence their decision to buy or sell the investment. In addition, for sustainability, the study recommends that investors need to evaluate heuristic factors before making real estate investment decision.

References

Ajayi, C.A. (1998), *Property Valuation and Investment Appraisal*, Ibadan: De Ayo Publications.

Barberis, N. and Thaler, R. (2003), "A Survey of Behavioural Finance", *Handbook of the Economics of Finance (Edited by G.M. Constantinides, M. Harris and R. Stulz), Elsevier Science B.V.,* 1051-1121.

Bucchianeri, G. W. and Minson, J. A. (2013). A homeowner's anchoring in residential dilemma: anchoring in residential real estate transactions. *Journal of Economic Behaviour & Organization, 89(1), 76-92.*

DeBondt, W. F. M. and Thaler, R. (1995), *Financial Decision-Making in Markets and Firms: A Behavioral Perspective*. Handbooks in Operations Research and Management Science, 9 (13): 385-410.

Dietrich, C. (2010). "Decision Making: Factors that Influence Decision Making, Heuristics Used, and Decision Outcomes." *Student Pulse, 2(02).* Retrieved from http://www.studentpulse.com/a?id=1803.

Epley, N., & Gilovich, T. (2006). The anchoring-and-adjustment heuristic. *Psychological Science, 17(4), 311-318*. DOI: 10.1111/j.1467-9280.2006.01704.x4.

Evans, D.A. (2006), "Subject perceptions of confidence and predictive validity in financial Cues", *Journal of Behavioural Finance*, 7: 12-28.

French, N. and French, S. (1997), "Decision Theory and Real Estate Investment". *Journal of Property Valuation and Investment*, 15 (3): 226-232

Hilbig, B.E., & Pohl, R.F. (2008). Recognition users of the recognition heuristic. *Experimental Psychology,* 55(6), 394-401. DOI: 10.1027/1618-3169.55.6.394.5.

Hvide, H. K. (2002), "Pragmatic beliefs and overconfidence", *Journal of Economic Behaviour and Organization,* 48 (1): 15-28.

Jordan, B., & Miller, T. (2008). *Fundamentals of Investments*. McGraw-Hill.

Kahneman, D.and Tversky, A. (1974), "Prospect Theory: An Analysis of Decision under Risk" *Econometrica,* 47: 263-291.

.Kahneman, D. (2011). *Thinking, Fast and Slow*. New York: Macmillan.

Kempf, A. and Ruenzi, S. (2006),"Status Quo Bias and the number of alternatives: An Empirical illustration from the mutual fund industry", *Journal of Behavioural Finance*, 7 (4): 204-213.

Kombo, D. K., & Tromp, D. L. (2006) *Proposal and Thesis Writing: An Introduction*. Paulines Publications Africa. Nairobi.

Leung, T.C. and Tsang, K.P. (2013), "Anchoring and loss aversion in the housing market: implications on price dynamics", China Economic Review, Vol. 24,No.1, pp.42-45.9.

Lowies, G.A., Hall, J. H, and Cloete, C.E .(2015)," The role of market fundamentals versus market sentiment in property investment decision-making in South Africa,"*Journal of Real Estate Literature, Vol.23 No.2, pp.297-314.10*.

Mugenda, O. M., & Mugenda, A. G. (2009) *Research Methods: Quantitative and Qualitativeapproaches.* Nairobi Africa Centre for Technology Studies (ACTS) press.

.Mwangi, G.G, (2011) Behavioural Factors Influencing Investment Decisions in the Kenyan Property Market. Unpublished Master of Commerce (Mcom) Project, Strathmore University Nairobi, Kenya.

Osmond, I. C., Adebayo, O. O., Adesiyan, O. S., & Moronke O. M., (2013). Factors Affecting the Usage of Major Heuristics in Nigeria Property Investment Valuation. *Journal of Sustainable Development Studies. 4(2), 114-133*.

Oso W.K. & Onen D (2009). *A guide to writing research proposal and report*. A handbook for beginning researchers. Revised Edition. Jomo Kenyatta Foundation.

Parikh, P. (2011). *Value Investing and Behavioural Finance*. New Delhi: Tata Mcgraw Hill.

Phouc Luong, L. and Thi Thu Ha, D. (2011), "Behavioural Factors influencing individual investors'decision-making and performance: a Survey at the Ho Chi Minh Stock Exchange (Master Dissertation)", UMEA University Sweden.

Rabin, M. (2002), "Inference by believers in the law of small numbers", *Quarterly Journal of Economics,* 117 (3): 775—816.

Redelmeier, D.A. (2005). The cognitive psychology of missed diagnosis. *Annals of Internal Medicine*, 142(2), 115-120.

Ritter, J.R. (2003), "Behavioral finance", *Pacific-Basin Finance Journal, 11(4), 429-437*

Ruitha, J. (2010), Emerging opportunities in the housing industry in Kenya. *The National Housing Corporation.*

Scott, P.J. and Lizieri, C. (2012). Consumer house price judgements: new evidence of anchoring and arbitrary coherence, *Journal of Property Research, 29 (1), 49-68.*

Shah, A.K., Oppenheimer, D.M. (2008). Heuristics Made Essay: An Effort-Reduction Framework, *Psychological Bulletin, 134 (2), 207-222*.

Skinner, B.F. (2004). *Science and human behavior*. Cambridge: Sinner Foundation Publisher.

Statman, M. (1999), "Behaviour Finance: Past battles and future engagements",*Financial Analysts Journal*, 55 (6): 18-27.

Wanzala, W. (2013). Quest for quality and relevant higher education, training and learning in Kenya: an overview*. Education Journal, 2 (2)36-49.* Lifestyle Analysis to Segment Individual Investors", *Financial Analysis Journal.*

Waweru, N., M., Munyoki, E., and Uliana, E. (2008),"The effects of behavioural factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange",*International Journal of Business and Emerging Markets*, 1 (1):24-41.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffith, M. (2010). Business Research Methods (8th edit.). Canada, South-Western Cengage.