The Effect of Behavioral Factors on Investment Decisions in Real Estate Sector in Nairobi

County

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Abstract

Purpose-This study was intent on establishing the effect of behavioral factors on investment decisions in the real estate sector in Nairobi County. The behavioral factors explored for this study were herd behavior, representativeness, anchoring and overconfidence.

Methodology-The study exploited descriptive research design to explicate how investors in real estate sector in Nairobi County make investment decisions from a behavioral finance point of view. Descriptive statistics and inferential statistics were used to scrutinize the data. Descriptive statistics adopted in this study included frequencies, mean, percentages and standard deviation. Additionally, inferential statistics of regression models and correlation analysis were used to examine the relationship of the study variables. The scrutinized data were presented in form of frequency tables and pie charts.

Findings-The results of the study revealed that 53.71% of the respondents make use of the intuitions when evaluating investment decisions. The outcomes of the study further showed that representativeness, herd behaviour, anchoring and overconfidence have positive correlation coefficients of 0.21, 0.31, 0.16 and 0.32 respectively with the investment decisions in the real estate sector. The multiple R for the regression was 0.817, suggesting a strong positive correlation between the values that the model predicts and the actual values of the dependent variable. The R Square was 0.667 suggesting that about 66.7% of the variation in the real estate investment can be explained by the variation in the extent to which they are influenced by the

behavioral factors. The *Multiple* R and the *R Square* suggest that behavioral factors exert influence on the investment decisions in the real estate sector.

Implications- Behavioural factors analysis provides explanations on the trend of the investors in making critical investment decisions which portray a particular pattern of behaviour in the investment. Investors lack rationality when making decisions about their investments but rather make decisions based on emotions, feelings, mood and sentiments.

Value- The study findings will enable investors to acquire skills necessary in eliminating various behavioral biases and increasing their rationality when making investment decisions in the real estate sector.

Key Words: Behavioural factors, investment decisions in real estate in Nairobi County

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Introduction

Individuals' growth and country's economy at large are anchored by the level of investments undertaken. Investment has engrossed the minds of individuals and institutions that are trying to maximize their returns from given risks undertaken. According to Chavali & Mohanraj (2016), investment is a major component of the investor's well-being.

Several factors influence the investment decisions of whether to buy, sell, participate, merge or buy out. These factors can either be financial or behavioral. Financial and economic studies presume that share-owners behave intelligently and give thought to all factors that are available in making the choice of the investments to undertake. However, proponents of Behavioural Finance have reasoned otherwise. They have insisted on the need to integrate the human judgment in choosing of a specific option from various choices (Shapira &Venezia, 2000). According to Barberis, N. (2013), much focus should be put on the investors' interpretation and application of information in making investment decisions; otherwise it leads to various market anomalies. Bernstein (1996) argued that decisions pertaining to investment are made with a level of inconsistency, incompetency and irrationality. Statman et al. (2008) contended that investors lack rationality when making decisions about their investments but rather make decisions based on emotions, feelings, mood and sentiments.

It is recognized that the financial specialists do not always respond sensibly to the financial information but rather to the changes in the investment environment (Olsen, 1998). These inconsistencies in the efficient market hypothesis have triggered the investors to use the human behaviour model that has been considered and recommended in the social science (Shiller, 2000). Ricciardi and Simon (2000) asserted that Behavioural Finance attempts to provide explanations on the trend of the investors, including the details of their emotional process and the level to which they affect the decision-making.

The real estate sector in Nairobi has experienced tremendous growth resulting from the interest of the investors. Nevertheless, many investors have had to endure low returns on their investments due to wrong decisions made concerning the real estate investments. According to Winchester et al. (2011), investors have experienced challenges in making choices about their property due to inconsistency in the information available in the market.

Research Problem

There is comprehensive literature on how investors make systematic errors in their investment decision process. Investors put too much concentration on the financial and market analysis which may be experienced with a lot of distortion and errors. The behavioural factors attempt to recognize the use of the emotions and psychological factors in making of choices of the investment by various investors (Subrahmanyam, 2007).

Recently, the economy of Kenya has experienced tremendous development in the real estate especially in Nairobi County resulting from the interest of the investors. The Kenya National Bureau of Statistics (KNBS) of 2017 has established that the value of the real estate industry in Nairobi County has risen to Kshs. 18.6 Billion from Kshs.13 Billion with prices expected to increase even further due to the continuous application for the approval for construction of new commercial and residential buildings through National Construction Authority (NCA). Despite the rise in the level of investment, many investors have had to endure low returns on their investments due to wrong decisions made concerning the real estate investments. Fromlet (2001) asserted that decision making in the real estate has become more complicated because more and more information tend to spread faster.

Globally, Johnson, Lindblom and Platan (2002), established that behavioural factors such as anchoring, overconfidence and loss aversion were the significant contributors to the speculative bubbles in banks in Southern Sweden. Kishore (2004) established the behavioural attributes of the investors which tend to be irrational in the analysis of the property investment. Iroham, Ogunba and Oloyede (2014) discovered that heuristic behaviour notably representative are not always accurate in making investment decisions for they majorly depend on the current information in the market during the analysis of the Accuracy of Property Valuation in Nigeria.

Locally, Antony, (2009), reasoned that psychology plays a great role in making investment decisions and market prices in real estate sector. Besides that, Obong'o, S. M., et al. (2016)

recognized that there is high correlation between the growth of the real estate and behavioral factors.

Researchers have demonstrated that there is need to consider behavioral factors rather than rely on the standard financial models in the analysis of investments to undertake. From the comprehensive literature, it has come into view that investors have embraced hidden factors for instance overconfidence, anchoring and herd behavior when deciding on the property investment in the real estate.

Notwithstanding, from the aforementioned global and local studies, researchers did not adequately address the effect of behavioral factors on decision making in real estate to the best knowledge of the researcher. The study thus tended to fill the gap from the aforementioned studies by analyzing heuristics factors (overconfidence, representativeness, anchoring and herd behaviour) and their effect on investment decisions in Real Estate in Nairobi County. This led to the research question: What are the effects of behavioral factors on investment decisions in the Real Estate Sector in Nairobi County?

Research objective

The general desire of the study was to establish the effect of behavioral factors on investment decisions in the real estate sector in Nairobi County. Specifically, the study aimed at analyzing heuristics factors (overconfidence, representativeness, anchoring and herd behaviour) and their effects on investment decisions in real estate sector in Nairobi County.

Methodology

The study employed descriptive research design. According to Creswell (2003), a descriptive research design is utilized when data is collected to describe people, organizations, settings and developments. The aim of a descriptive research design in this study was to get information that explain how investors in real estate make investment decisions by asking questions relating to personal perceptions and attitude.

The study targeted 165 real estate agents who had renewed their practising certificates and therefore sanctioned by the Estate Agents Board (2015) to practice as Estate Agents in Nairobi county. A sample size of 85 was used to represent the population under study. This figure was picked using Krejcie & Morgan (1970) pre-arranged table of sample sizes for different population sizes. The study made use of a simple random sampling technique to pick an illustrative sample size. According to Sekaran (2003), a simple random sampling is where all members of the population under study have equivalent likelihood of being picked to form a sample. The aim of simple random sampling was to ensure accurate representation of the population under study.

The study made use of primary data. The primary data was collected using structured questionnaire relating to the precise intentions of the study. The employment of primary data enabled the researcher to have a comprehensive and good understanding of issues relating to behavioral factors on the investment decision-making in the real estate sector in Nairobi.

The data collected from the population on the behavioral factors being qualitative was coded using the numerical scales that were used by the respondents in answering the questions posed in the questionnaire. This enabled the data to be transformed into quantitative form that allowed the use of quantitative methods. Descriptive measures such as measures of central tendency and dispersion were adopted in the analysis; more importantly the mean and standard deviation. The data was later subjected to a multi-linear regression equation model to test the relationship between the independent variables (representativeness, Anchoring, Overconfidence and Herd Behaviour) and the dependent variable of investment decision. The multi-linear regression equation assumed the following expression:

 $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where;

- a. Y = Investment Decisions in Real Estate,
- b. β_0 = Constant; that is, the value of *Y* when *X* = 0,

- C. X_1 = Representativeness,
- d. X_2 = Anchoring,
- e. X_3 = Overconfidence,
- f. X_4 = Herd Behaviour,
- g. β_1 , β_2 , β_3 and β_4 will be the coefficient of determination and
- h. ε will be the error term.

For the testing of the power of the model, the researcher conducted an analysis of variance (ANOVA). Upon extracting the ANOVA table, the researcher looked at the significance value. The coefficient of determination (\mathbb{R}^2) was used to measure the extent to which the variation in investment decisions could be explained by the various behavioral factors. F-statistic was also computed at 95% confidence level to test whether there was any significant relationship between the variables. This analysis was done using SPSS software.

Data Validity and Reliability

The study applied a constructive validity test. According to Hunter and Schmidt (1990), a constructive validity test is the degree to which the test measures what the researcher wants it to measure.

A reliability test on the study was performed in order to guarantee accuracy with which the instrument measured the attributes of behavioral factors it was stipulated to measure.

Results and Discussions

Descriptive Statistics

This presents the descriptive statistics of the data collected in the study in which the researcher used the frequency and percentages in analyzing the data in this section.

Demographic Data

85 questionnaires were administered to the targeted respondents. Out of the 85 respondents, 54 respondents completed and handed back the questionnaires translating to a response rate of

63.53%. The researcher deemed this response rate satisfactory considering Kothari's (2004) suggestion that for survey findings to be reliable, researcher needs a response rate of at least 60%. The researcher sought to establish the period over which the respondents had worked at their firms and Table 1 below shows the findings. According to the findings, most of the respondents (51.85%) had worked at their firms for over 12 years while 40.74% and 7.41% of the respondents had worked in their organizations for the periods between 9 to 12 years and 5 to 8 years respectively. Therefore, most of the respondents had the work experience required to understand the effect of behavioral factors on investment decisions that the researcher was investigating.

Period	N	%
5-8 years	4	7.41
9-12 years	22	40.74
Over 12 years	28	51.85
Total	54	100

Source: Researcher (2017)

Figure 1 below further shows the findings on the work experience that the respondents had.

Figure 1: Work Experience



Source: Researcher (2017)

Behavioral Characteristics

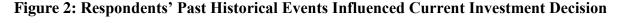
The respondents were asked if their current investment decisions are influenced by the past historical events so as to establish the use of the behavioral factors by the real estate investors in making investment decisions. Table 2 shows the findings from the respondents:

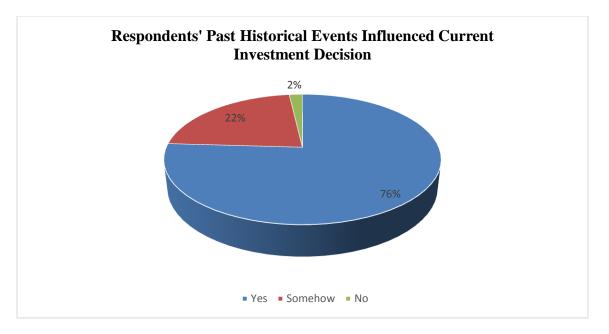
 Table 2: Past Historical Events Influenced the Current Investment Decisions

Responses	Frequency	%age
Yes	41	75.93
Somehow	12	22.22
No	1	1.85

Total	54	100

The discoveries in table 2 suggest that 75.93% of the respondents agreed that their current investment decisions in the real estate sector in Nairobi County are influenced by past historical event; 22.22% of the respondents have somehow been influenced by the past historical events on their current investment decisions whereas the least of the respondents which translates to (1.85%) do not have past historical events influencing their current investment decisions. This indicates that most of the respondents relied on their past historical events in making the current decisions on their investments. Figure 2 below further shows the findings on the past historical events that influenced the respondents' investment decisions.





Source: Researcher (2017)

The respondents were also asked to describe the performance of their investment for the last four

years. The following table shows the descriptive statistics of their responses.

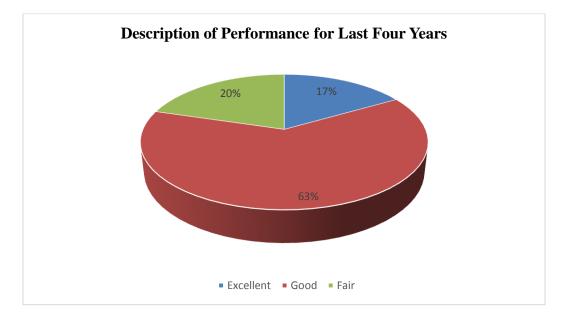
Responses	Frequency	%age
Excellent	9	16.67
Good	34	62.96
Fair	11	20.37
TOTAL	54	100

 Table 2: Descriptive Statistics-Description of Performance for Last Four Years

Source: Researcher (2017)

The discoveries in table 3 suggest that most of the respondents (62.96%) have had a good performance on their investment for the past four years. The findings further revealed that 20.37% had fair performance on their investments in Real Estate in Nairobi County while excellent performance was observed at 16.67%. The discoveries clearly showed that most of the respondents had a relatively encouraging performance from their investments in real estate in the last four years. Figure 3 below further shows the findings on the description of performance of the respondents for the last four years.

Figure 3: Description of Performance for Last Four Years



The respondents were also asked if their Real Estate Companies consult investment experts before investing in real estates. The following table shows the descriptive statistics of their responses.

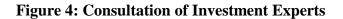
Table 3: Consultation of Investment Experts

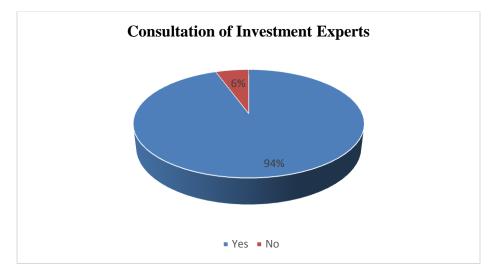
Responses	Frequency	%age
Yes	51	94.44
No	3	5.56
TOTAL	54	100

Source: Researcher (2017)

The discoveries in table 4 suggest that most of the respondents (94.44%) usually consult investment experts before making investment decisions. However, 5.56% indicated that they do not consult investment experts before making investment decisions on real estate. The findings

assuredly show that most of the respondents usually consult investments experts before making investments decisions in the real estate. Figure 4 below further display the findings on the consultation of the investment experts before making investment decisions.





Source: Researcher (2017)

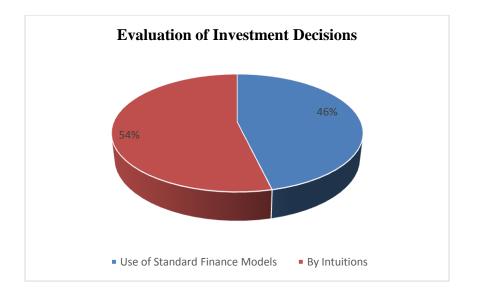
The respondents were also asked on how they evaluate their investment decisions. The following table shows the descriptive statistics of their responses.

Responses	Frequency	%age
Use of standard financial models	25	46.29
By intuitions	29	53.71
TOTAL	54	100

Source: Researcher (2017)

The findings in table 5 suggest that there is a relative balance of the evaluation of the investment decisions by the use of the standard finance models and the use of intuitions, although most of the respondents (53.71%) indicated the use of the intuitions when evaluating investment decisions. On the other hand, 46.29% showed the use of standard finance models play a major role when evaluating the investments to undertake. Figure 5 below further reveals the findings on the evaluation of the investment decisions by use of standard finance models and intuitions.

Figure 5: Evaluation of Investment Decisions



Source: Researcher (2017)

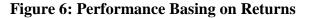
The respondents were also asked on how they can rate their performance of investment decisions based on the returns. The following table shows the descriptive statistics of their responses.

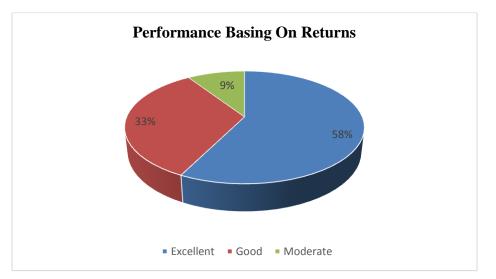
Table 5 : Rating of Investment Decisions Based on Re	turns
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Responses	Frequency	%age
Excellent	31	57.41

Good	18	33.33
Moderate	5	9.26
TOTAL	54	100

From the findings in table 6, the respondents (57.41%) indicated excellent performance based on the returns from their investment in the real estate, while 33.33% showcased good performance as per the returns on their investments on the real estate investment and a relative low respondents (9.26%) indicated a moderate performance on the returns of their investment decisions in the real estate. Figure 6 below further indicates the findings on the rating of the performance of the real estate investment decisions basing on the returns.





Source: Researcher (2017)

The respondents were also asked if they were still consulting financial and investment analysts regardless of the expertise and skills they have in real estate investment. The following table shows the descriptive statistics of their responses.

Table 6: Consulting Financial and Investment Analysts Basing on Experience in Real

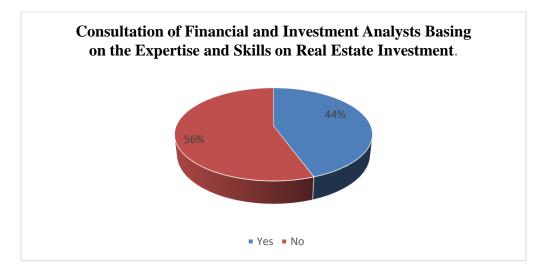
Estate

Responses	Frequency	%age
Yes	24	44.44
No	30	55.56
TOTAL	54	100

Source: Researcher (2017)

According to the findings in table 7, the respondents (55.56%) showcased that the more the expertise and skills in the real estate investment, the less they consult the financial and investment analysts. Nevertheless, 44.44% still consult the financial and investment analysts regarding the real estate investment decisions. Figure 7 below further demonstrate the findings on the consultation of the financial and investment analysts basing on their skills and expertise in the real estate investment.

Figure 7: Consultation of Financial and Investment Analysts Basing on the expertise and skills on real estate investment



Behavioral Factors

The researcher sought to learn how the participants have put their behavioral factors into consideration on their investment decisions. The respondents were asked to use a 5-point Likert scale to indicate how they agreed with statements describing behavioral factors in real estate. The Table 8 below shows the descriptive statistics of their responses. The discoveries from Table 8 indicate that respondents agreed that the behavioral factors have largely impacted on their investment decision-making. This is consistent with Barberis & Thaler (2003) who argued that investors should put into consideration behavioral factors alongside the financial factors in order to make objective decisions that will help them maximize on the investment returns.

 Table 7: Descriptive Statistics-Behavioural Factors

Be	havioural factors.	MEAN	STD
			DEV.
1.	Herd behavior	3.92	.759
	Given a chance to invest in property in the county, to what		
	extent will your decisions to invest be affected by other		

	inv	restors' decisions?		
2.	An	choring	3.68	.852
	a.	To what extent do you consider making reference to the		
		purchase price when making investment decisions		
		about the property to own?		
3.	Ov	erconfidence	3.64	.254
	a.	How many times do you consider your knowledge and		
		skills more important in deciding on the kind of		
		investment to undertake?		
	b.	To what extent do you believe in your knowledge and		
		skills to help you perform better than other rival firms?		
			3.92	.504
4.	Re	presentativeness	3.36	.810
	a.	How many times do you use performance index of		
		property investment in one particular area to predict the		
		performance of investment in the entire county?		

From the findings, it is apparent that the respondents largely agree that behavioral factors have been incorporated in the investment decision making. Of the four behavioral factors studied in this project, the findings showcased that herd behavior and overconfidence have been largely incorporated in the investment decisions. This is in line with Waweru et al. (2008) who observed that investors tend to be influenced by other investors and knowledge and skills they possess on the related investment. Anchoring and representativeness also follow suit on the behavioral factors that influence the investors' decision making. This is in sharp contrast to Winchester et al. (2011) who argued that investors find it complex process in deciding the long term investments for reasons such as inadequate financial resources, inability to regulate their finances and inconsistency of information.

Effect of Behavioral Factors on Investment Decisions in Real Estate Sector

The researcher desired to know the respondents' view on how the behavioral factors had affected investment decisions in the real estate sector. The respondents were asked to use a 5-point Likert scale to rate statements describing how behavioral factors impact on the investment decisions. The Table 9 below exhibits the descriptive statistics of the responses obtained.

Table 8: Descriptive Statistics-Effect of behavioral Factors on Investment Decisions in RealEstate Sector

Particulars	Mean	Std Dev.
The past historical events influence your current investment decisions	3.88	.572
Fundamental analysis of the information from the company	3.92	.666
Advice, recommendations and forecast from professional investors	3.64	.569
Focus on popular property	3.56	.821
Own intuition of the future performance	3.52	.918
Property price changes	3.60	.816
Over-reaction to changes in price	3.80	.601
Under-reaction to changes in price	3.34	.764

Source: Researcher (2017)

From the findings, the respondents agreed that behavioral factors have impacted on the investment decision making. For instance, the past historical events have made the investors to decide on their current investment decisions. This is consistent with Ricciardi and Simon (2000) findings that elaborated that the past historical events give a trend on the investments in terms of returns and sustainability thus influence the critical investment decisions. According to Chavali

and Mohanraj (2016), investors usually use the behavioral factors to make fundamental and technical analysis on their investment decisions. For instance, when investors use their own intuition, have psychological forecast or react to the price changes, there will be no need for the investors to consult the investment analysts or financial analysts before making their investment decisions.

Correlation Analysis

Correlation analysis was performed so as to examine the extent of the relationship between key

variables of the study. The following table shows the correlation matrix.

Table 10: Correlation	Matrix
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	Investment	Representative	Anchoring	Overconfidence	Herd
	Decision				Behaviour
Investment	1	0.21	0.16	0.32	0.31
Decision					
Representative		1	0.21	0.36	0.26
index					
Anchoring			1	0.27	0.41
Index					
Overconfidence				1	0.12
Index					
Herd					1

Behaviour			
	. (0045)		

As illustrated in table 10 above, there is a positive and moderate correlation between investment decision and representative index (Pearson coefficient=0.21), investment decision and anchoring index correlate positively (Pearson coefficient=0.16), investment decision and overconfidence index correlate positively (Pearson coefficient=0.32) and investment decisions and herd behaviour index, too, correlate positively (Pearson coefficient=0.31), meaning that the investment decision on the investors by the representative, have also been affected by the modest level of the anchoring, overconfidence and herd behaviour.

Regression Analysis

The general desire of the study was to establish the effect of behavioral factors on investment decisions in the real estate sector in Nairobi County. In order to establish the relationship between the investment decision and behavioral factors of real estate investment, a composite index of investment decision was regressed on the indices of representativeness, anchoring, overconfidence and herd behaviour. The findings are as presented in table 11 below:

Model Summary

Table 9: Regression Summary

				Std.	Error	of	the
Model	R	R Square	Adjusted R Square	Estim	ate		
1	.817 ^a	.667	.619	.2500	0		

a. Predictors: (Constant), representativeness, anchoring, overconfidence, herd behaviour

Source: Researcher (2017)

The multiple R for the regression was 0.817, suggesting that there is a strong positive correlation between the values that the model predicts and the actual values of the dependent variable. The R Square was 0.667, meaning that about 66.7% of the variation in the real estate investment can be explained by the variation in the extent to which they are influenced by the behavioral factors. The *Multiple R* and the *R Square* suggest that behavioral factors have an influence on the investment decisions of the real estate investment.

Analysis of Variance

To establish if the regression model is significant, the researcher used the F test of significance of a regression model. Table 12 below shows the result of the F test of a regression model.

Model		Sum of Squares		Mean Square	F	Sig.
1	Regression	2.628	4	.876	14.014	.000 ^a
	Residual	1.312	49	.062		
	Total	3.940	53			
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Table 10: Analysis of Variance

a. Predictors: (Constant), representative, anchoring, overconfidence, herd behaviour

b. Dependent Variable: Investment Decisions

Source: Researcher (2017)

Table 12 shows that the F test statistic used to test the significance of the regression model has a significance value of 0.00. Considering the model was tested for significance at the 0.05 level, a significance value of 0.00 means that, if the null hypothesis were true, there is no way the researcher would have obtained the kind of data that was obtained in this study. Therefore, the

regression model is statistically significant, indicating that behavioral factors have affected the investment decisions in the real estate sector.

Regression Coefficients

After establishing the relevance of the regression model, the next step was to examine the coefficients of the regression model. Table 13 below shows the coefficients of the regression model.

Table 11: Regression Coefficients

Model		Unstandard	Unstandardized			
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.218	.396		3.073	.006
	Representative	.129	.181	.162	.712	.484
	Anchoring	.361	.202	.462	1.788	.088
	Overconfidence	.436	.314	.506	1.925	.015
	Herd Behaviour	.403	.282	.475	1.826	.067

Dependent Variable: Investment Decisions

Source: Researcher (2017)

The researcher employed the t-test of a regression coefficient to determine whether the coefficients of the regression model were significant predictors of the dependent variable. The regression coefficients were tested for significance at the 0.05 level. As table 13 shows, none of the four regression coefficients is significant because the significance values of the t-test statistics for both coefficients are more than 0.05. Therefore, taken individually, none of the coefficients of the regression model is a significant predictor of investment decisions in real estate.

Conclusion

The R Square figure was 0.667 and this means that about 66.7% of the variation in the real estate investment decisions can be explained by the variation in the extent to which they are influenced by the behavioral factors. The significance value of the F-test statistic falls below the significance level at which the regression model was tested for significance, meaning the regression model is significant and it predicts the study's independent variable. The coefficient of representative behavior is 0.129, and it means that, for every unit change in the representativeness index, the investment decision of the real estate changes by 0.129. Thus, representativeness has an impact on the real estate investment decisions because it allows the investors to use current information in the market to make decisions concerning the investment decisions. This finding agrees with Obong'o, S. et al. (2016) who found representativeness to be significantly interconnected to the performance of real estate.

The coefficient of anchoring is 0.361, and this means that, for every unit change in the anchoring behavior index, the investment decisions are effected by 0.361. Therefore, anchoring behavior influences the investment decisions as the investors make references to a given reference point such as the purchase price of the property. The coefficient of overconfidence behavior is 0.436, and it means that, for every unit change in the overconfidence index, the investment decision of the real estate changes by 0.436. Thus, overconfidence has an impact on the real estate investment decisions because it allows the investors to incorporate their knowledge and skills on the particular investments when deciding the investment decisions to undertake.

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The coefficient of herd behavior is 0.401, and it means that, for every unit change in the herd behavior index, the investment decision of the real estate changes by 0.401. Thus, herd behavior has an impact on the real estate investment decisions because it allows the investors to interpret and apply information on their disposal in making investment decisions by following decisions undertaken by other investors; otherwise it leads to various investment anomalies. From the analysis, it is evident that investment decisions in the real estate are not only influenced by financial factors but also by the behavioral factors. Specifically, the study revealed that herd behavior, overconfidence, representativeness and anchoring play greater role in influencing investors to undertake various risks in the real estate in Nairobi County. The study ranked overconfidence as the superior behavioral factor in influencing investment decisions in the real estate sector in Nairobi County among other behavioral factors such as herd behavior, representativeness and anchoring.

The study findings from the analysis conclude that investors should consider both the financial and behavioral factors when making investment decisions in the real estate as they aspire at maximizing their returns on investment.

Recommendation for Policy and Practice

From the findings, it is very clear that the behavioral factor analysis forms an integral part in analyzing investment decisions made by investors in the real estate sector. Nevertheless, it should not be used in isolation; but alongside the standard finance models in order to make realistic investment decisions.

Limitations of the Study

This study did not consider comprehensively all the behavioral factors that influence the investment decisions in the real estate sector due to resource constraints in terms of time and finance. It would be important if all behavioral factors were considered in order to determine the magnitude of their influence the decision making of the real estate investment.

REFERENCES

- Anthony, M. K. (2009). Effect of Investor Psychology on Real Estate Market Prices in Nairobi, Kenya. *Journal of Finance* 23. 122 – 134.
- Barberis, N., Thaler, R. (2003). A Survey of Behavioral Finance. Handbook of the Economics of Finance
- Barberis, N. (2013). Psychology and the Financial Crisis of 2007-2008. *Financial innovation: too much or too little*, 15-28.
- Bernstein, P.L. (1996). Against the Gods: The Remarkable Story of Risk. John Wiley and Sons, New York
- Chavali, K. and Mohanraj, M. P. (2016). Impact of demographic variables and risk tolerance on investment decisions, *Journal of Finance*, 43-57
- Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. *Handbook of mixed methods in social and behavioral research*, 209, 240.
- Fromlet, H. (2001). Behavioral finance-theory and practical application: Systematic analysis of departures from the homo oeconomicus paradigm are essential for realistic financial research and analysis. *Business economics*, 63-69.
- Gounaris, K.M., Prout, M.F. (2009). *Repairing Relationships and Trust: Behavioral Finance and the Economic Crisis.* Journal of Financial Service Professionals, 23-37
- Hunter, J. E., Schmidt, L. and Judiesch, M. K. (1990). *Individual differences in output variability* as a function of job complexity. Journal of Applied Psychology, Vol 75(1), Feb 1990, 28-42

- Johnson, M., Lindblom, H., Platan, P. (2002).*Behavioral Finance: And the change of investor behavior during and after the speculation bubble at the end of the 1990s.* Master's Thesis in Finance, Lund University.
- Kahneman, D., Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. Econometrical, 4-24
- Kishore, R. (2004). Theory of behavioural finance and its application to property market: a change in paradigm. *Australian Property Journal*, *38*(2), 105.
- Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Mugenda, O. M. & Mugenda, A. G. (2003). *Research Methods: Quantitative and Qualitative Approaches. Nairobi*: African Centre for Technology Studies.
- Obong'o, S. M., Nyakundi, W. A., & Vitalis, M. (2016). Influence of Behavioural Factors on Real Estate Performance in Kisii Town, Kenya. *International Journal of Social Sciences and Information Technology*, 2(3), 138-154.
- Ricciardi, V. and Simon, H. K., (2000). What is Financial Behaviour? Business, *Education and Technology Journal*, 1-8.
- Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach*. Fourth edition. John Wiley &Sons Inc.
- Shapira, Z and Venezia, I. (2001). *Patterns of behavior of professionally managed and independent investors.* Journal of Banking and Finance,vol. 25, issue 8, 1573-1587.
- Roll, R., Schwartz, E., & Subrahmanyam, A. (2007). Liquidity and the law of one price: the case of the futures-cash basis. *The Journal of Finance*, *62*(5), 2201-2234.
- Olsen, R. A. (1998). "Behavioral Finance and its Implication for Stock-Price Volatility." *Financial Analysts Journal*. March/April:10-17.
- Shiller, R.J. (2000). Irrational Exuberance. Princeton University Press.
- Statman, M. (2010). *Behavioural Finance and Investment Management*: Handbook of Finance, Hoboken California.
- Waweru, N. M., Munyoki, E. and Eliana, E. (2008). The Effect of Behavioural Finance in Investment Decision Making: A survey of Institutional Investors Operating at the *Nairobi Stock Exchange*, International. *Journal of Business and Emerging Markets*, 24-41.

Winchester, D.D., Huston, S.J., Finke, M.S. (2011). Investor Prudence and the Role of Financial Advice. *Journal of Financial Service Professionals*, July 2011.