The Availability Heuristic Effect on Financial Performance of Small and Medium Enterprises in Nairobi, Kenya: The mediating role of Investment Decisions

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Abstract

Heuristic behavior is an integral part of decision-making process which heavily influences the investor's financial performance. This study sought to examine the direct effect of the Availability heuristic, on financial performance and also analyze the mediating effect of investment decisions on the relationship between Availability heuristic and financial performance of the SMEs in Nairobi County. A sample size of 382 SMEs was selected using stratified sampling approach. Data was collected using self-administered, structured questionnaires and items were grounded on a five-point Likert scale with data analysis being done using descriptive and inferential statistics. The hypotheses were tested using multiple regression models for the direct relationship and Haves model was used to test the mediation relationship. The regression results showed that availability heuristics positively and significantly predicts the Financial performance of SMEs (β = .129, p < .05) and this relationship is partially mediated by Investment decisions ($\beta =$.093, p < .001, CI = 0.035, 0.162). Theoretically, the study supported the incorporation of the key heuristic factor (availability), and investment decisions, where the outcome of the results indicated the significant relationship in achieving financial performance of SMEs. The future researchers ought to focus on the challenges that the investors face in the process of making investment decisions.

Keywords: Heuristic behavior, Availability heuristic, Investment decisions, financial performance

INTRODUCTION

Financial performance is the process of measuring the results of a firm's policies and operations in monetary terms over a certain period of time (Jayawardhana, 2016). Profitability is an indicator of how a company's financial performance is relative to its total cost assets.

Small and Medium Enterprises (SMEs) plays a central role in most economies across the world since they inject entrepreneurial skills, innovation and employment into the businesses which measures their financial performance (Kinyua, 2014). Eniola & Entebang (2016) found out that unfavorable government policies influence negatively on SMEs financial performance with decreasing issuance of total credit by both commercial and merchant banks to SMEs. When it comes to investment most people are seen to make their decisions based on emotions, feeling, fantasy, mood and sentiments which end up affecting investment decisions (Statman, Fisher & Anginer, 2008).

Availability heuristic is a judgmental heuristic in which a person evaluates the probability of events by availability of information that is, by the ease with which relevant instances come to mind (Statman, Fisher & Anginer, 2008). Due to lack of access to the latest technology in data analytics, the investment decisions in SMEs

are based on the manager's experience and personal judgment (Kourtidis, *et al.*, 2011). Mentality of the owner/managers is an important aspect of their personality characteristics however no prior study has made any attempt to examine its possible impact on the financial performance of their businesses.

Investment Decision relates to the decision made by the investors or the top level management with respect to the amount of funds to be deployed in the investment opportunities (Lambert, 2012). Due to lack of access to the latest technology in data analysis, the investment decisions in SMEs are based on the owner/manager's experience and personal judgment (Kourtidis, *et al.*, 2011). The decision makers in SMEs are influenced by different behavioral heuristics like representativeness, anchoring, overconfidence and availability heuristic. Dolan *et al*, (2012) assert that decision making in large organizations are a planned processes supported by data analytics, but small and medium enterprises cannot afford to invest in recruiting experts to analyze data. The decision makers in SMEs are influenced by different behavioral heuristics.

Financial performance of SMEs depends on individual investors decisions that are prone to behavioral judgment and decision-making errors. Despite the dynamics that led to the rapid growth of the SME sector, and the numerous efforts by government to assist the development of this sector; the SMEs sector is notoriously volatile and experiences a high degree of business closure and shrinkage due to the investment decision making process (Van Den Berg, 2004; Eriksson and Kuhn, 2006). One critical aspect of SME in Kenya that needs to be explored in detail is the behavioral decision pattern of the investors, which largely affects the financial performance in this sector. From the generalized model of investor attitude and behavior, we focus our study on investors' decision behavior, which pinpoints issues of investors' decision making from behavioral finance theory perspective. The decision makers in SMEs are influenced by behavioral biases like availability heuristic (Simonsohn et al., 2008). This implies that SMEs are limited in their ability to create long-term sustainable investment decisions and may also be responsible for the greatest number of job and wealth losses (Ahwireng-Obeng, 2003).

Research Hypotheses

The study hypothesized that:

- H_{o1} Availability heuristic has no significant effect on financial performance of SMEs in Nairobi County, Kenya.
- H₀₂ An Investment decision does not mediate the relationship between availability heuristic and financial performance of SMEs in Nairobi County, Kenya.

Theoretical review

This study was grounded by Heuristic theory and Modern portfolio theory. Keynes, (1936) and Fisher, (1930), both argued that investments are made until the present value of expected future revenues, at the margin, is equal to the opportunity cost of capital. Kahneman and Tversky, (2013) observed that, irrational people used heuristics in their decision making because they fail to judge the perfect probability. Heuristics are useful if time is limited (Waweru *et al.*, 2014) and limited information (Tversky and Kahneman, 2013). Therefore, irrational people do not collect all information, they just follow some mental shortcuts that make their decision making process easier, simple and efficient. Generally, heuristics is quite valuable as well as useful when time is limited (Waweru *et al.*, 2014), but most times they lead to biases (Ritter, 2003). Historically, Kahneman and Tversky were

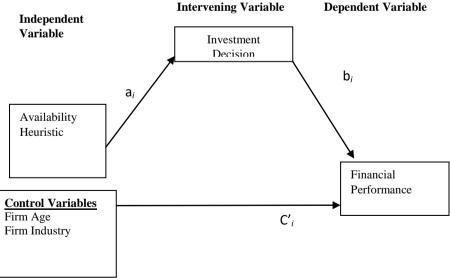
the first researchers who studied the factors that belong to heuristics and then the impact of heuristics on investors' investment decisions. Shah and Oppenheimer (2008) suggest that although current theories of heuristic processing do suggest that people simplify how they make judgments and decisions these theories rarely explain how these processes reduce the amount of effort required.

Modern portfolio theory is an investment framework for the selection and construction of investment portfolios based on the maximization of expected returns of the portfolio and the simultaneous minimization of investment risk (Markowitz, 2010). Heuristic rules work well under most circumstances, but in certain cases lead to systematic cognitive biases -Daniel Kahneman (Parikh, *et al.*, 2011).

A number of recent studies have been carried out on the various behavioural finance factors which have influenced investment decisions. Kengatharan and Kengatharan, (2014) examined the influence of behavioural factors on investment decision and performance in Colombo securities exchange. The study hypothesized that heuristic factors, prospect factors, market factors and herding factors has significant influence on investment decisions in Colombo. Cross sectional data was collected through the use of questionnaires. The results of descriptive statistics of the study showed that heuristic factors such as an individual believe in their skills and knowledge of stock can help in outperforming market, dependence on previous experience and forecast on the stock price changes in future all had high impact on investment decision. Regression analysis showed an inverse significant relationship between overconfidence and investment decision while availability had a positive significant relationship with investment decision which is in line with this study.

Conceptual Framework

This study sought to determine the mediating effect of investment decision on the relationship between Availability heuristic and financial performance of SMEs in the Nairobi County. The Financial performance is the dependent variable of which its outcome depends on the availability heuristic (independent variable) and the intervening variable which is the essence of investment decision of the



SMEs.Figure 2: Conceptual Framework

METHODOLOGY

The study adopted positivist philosophy and embraced an explanatory research design and stratified random sampling techniques to select the SMEs and Industry respectively. Data were collected by use of a closed-ended questionnaire which was self-directed to a sample size of 382 respondents a selection of a target population of 64,443 SMEs in the County of Nairobi, Kenya using (Borg and Gall, 2014) formula. Positivists argue that there exist cause-effect association in nature between phenomena, which are predictable with certainty (Garson *et al.*, 2012).

Regression models

 β_0 is the Constant; *FA* is the Firm age (covariate); *FI* is the Firm industry (covariate); *FP* is Financial Performance (DV); *AVA* is the Availability heuristic(IV); *IND* is the Investment Decision (mediator variable).

Measures

Financial performance of the study

This is the act of determining the outcomes of a firm's rules and operations in monetarist terms within a certain time frame (Jayawardhana, 2016). Seven items were used in measuring the financial performance adopted from (Al-Matari, *et al.*, 2014) with a few adjustments to suit the present research. Every problem was measured on a Likert scale of 1–5 ranging from 5- Strongly agree to 1 - Strongly disagree. The items encompassed; profitability of new ventures, knowledge, and ability of staff to study the market, the current financial responsibilities of the firm, assets being financed by the owners, assets being financed by debt, acceptable profits as a percentage of revenue, part of the total revenue generated by the firm goes to pay interest.

Availability heuristic

This variable of the study was measured by examining the respondents' extent of agreement with the five point likert scale statements on each of the items. Six items focused on Availability heuristic out of which the first three were adopted from (Waweru *et al.*, 2014) and the last three were adopted from (Kudryavtsev, *et al.*, 2013) with few modifications to suit the current study, these include preference to buy locally available stock, when to source for commodities, investment information available in the sector, consideration of past trends of business and sourcing for commodities after the customer asks for them, considering information from close friends and relatives as the reliable reference of choosing the type of venture to invest in. The respondents were required to score their level of agreement with each statement on how behavioural factors affect investment decisions.

Investment decisions

Five items were used to measure investment decision variable adapted from (Pachur, *et al.*, 2012) and also adapted two items from Scott and Bruce, (1995) with a few adjustments to suit the present study. Each problem was measured on a Likert scale of 1–5; 5- Strongly agree, 1- Strongly disagree. These items include being

risk-averse on investment, satisfaction on investment decisions and relying on information gathered in groups, having a workable investment plan, regular monitoring of returns on investment, diversification of investment depending on the returns, satisfied with our investment decisions like buying and holding of goods.

Covariates

To eliminate the effect of covariates, the study controlled two variables (firm age and the industry type). Firm age comprises the number of years of work that the enterprise has existed. The firm age was controlled because previous studies have found a positive relationship with financial performance (Kumar & Rao, 2015). Firm age was measured using the number of years which the enterprise has been functioning that is the ordinal scale ranging from 1 to 4 (Akben-Selcuk, (2016). Schuckert, *et al.*, (2018) indicates that older firms with longer operating histories make it easier for the investors to estimate their projected future cash flows and therefore help in investment decisions. The industry is the category of business the SMEs fall in. Three industries were identified, manufacturing industry, Merchandising industry and Service industry. The industry was measured by the respondent's answer on which category they fall in.

RESULTS

Findings show a response degree of 92.6%, which is above the standard thresh-hold of 50% as suggested by several researchers. The outcomes point out that 59.3% of the respondents was of male gender and 40.1% were of female gender. Regarding the level of education, 20.3% of the respondents had attained primary education, 25.4% had acquired secondary education, and 45.8% studied up to tertiary level while 8.5% had no education. This indicates a high literacy level among the SMEs Owners/Managers which has consistently been viewed as a type of credential that contributes to informed investment decisions and therefore high financial performance. On the period of operation, the results displayed that the enterprises which have been in existence for less than one year are 28.8%, between 2-3 years were 37.3%, 4-5 years were 22% and the SMEs in Nairobi county are volatile and do not exist for long due to decisions made by the Owners/Managers which affects the financial performance of the businesses.

The results showed that the SMEs who employed less than 5 employees were 49.2%, those who have employed between 6 and 10 employees were 33.9%, while those who have more than 11 employees were 16.9%. This means that 49.2% of the SMEs in Nairobi County fall under the small enterprises. The study further checked on the results of the industry from which the SMEs operate and found that 22% operates the manufacturing industry, 33.9% operate the merchandising industry and 44.1% of the respondents operate in the service industry.

Statistical analysis

Table 1 summarizes the means; standard deviations; reliability and correlation results for the variables of this study. The findings show that Availability heuristic has the highest mean of 4.32, standard deviation being .489 and the Investment decision has the smallest mean of 4.04 while the standard deviation is .678. Besides, the scale reliability was within the accepted value, since the Cronbach' Alpha was above .7 for all the variables. The results on correlation disclosed that availability heuristic was positively linked with Financial performance with the highest relationship of r = .314, p < .01, the investment decision was also positively

and significantly related to the financial performance with r=.323, p < .01. Control variables (firm age and firm industry) also had significant relationship with financial performance (r=0.235, p<0.05 and r=0.612, p<0.05) respectively.

N=340				Correlatio	n	
Variable	Reliability.	М.	SD.	1	2	3
FPAVE	.815	4.1895	.60573	1		
AVAVE	.813	4.3212	.48859	.314**	1	
INDAVE	.893	4.0433	.67791	.323**	.394**	1

Table 1: Reliability, Means,	Standard Deviations, and	Correlation results
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** Correlation is significant at the 0.01 level (2- tailed).

Hypothesis testing

The hypotheses tested the effect of Anchoring Heuristic on financial performance of Small and Medium Enterprises in Nairobi County, Kenya. The results in Table 2 showed that the predictors explained 51.7% of the variations on financial performance, R-squared = 0.517, Adjusted R-squared = .508. The results also showed the coefficient of determination as significant as shown by F = 103.79, p <0.001. From the control variables, firm age was not significant but in the industry (β = 0.591, p< 0.05) the results showed that it significantly influences the firm performance.

The 1st hypothesis (Ho1) states that Availability Heuristic has no significance on the Financial-Performance of SMEs in Nairobi County, Kenya and from the findings in table 2 below, the null hypothesis is rejected. The findings reveal that Availability Heuristic has positively and significantly effected Financial-Performance, β =0.129, p < 0.001, where (p-value = 0.000 which is below $\alpha = 0.05$). Since there is the low p-value associated with the t ratio, the null hypothesis is rejected.

	Unstandardized		Standardized			Collinearity Statistics	
	Coeffi	cients	Coefficients				
	β	S. Error	Beta	Т	Sig.	Tolerance	VIF
(Constant)	2.368	.136		17.454	.000		
Operational years	.060	.032	.084	1.897	.059	.934	1.070
Industry	.400	.030	.591	13.321	.000	.934	1.070
AVAAVE	.144	.052	.129	2.797	.005	.683	1.463
Summary statistics R R Square Adjusted R Square Std. Error of	.719 .517 .508 .424						
the Estimate Durbin- Watson ANOVA (F stat) Sig	1.996 103.79 .000						

Table 2: Coefficients of estimates

Dependent Variable: Financial Performance

Mediational testing

The study used Hayes 4 model to achieve the mediational effect and performed regression analysis on the Availabilty heuristic using PROCESS macro version 3.2 (Hayes, 2018). MacKinnon's (2012) four-steps were followed to study the mediation effect. The study pursued to determine:

- 1. The power of Availability Heuristic on Investment-decision indicated as path "ai" (Figure 1)
- 2. The influence of Investment Decisions on Financial-performance, path "bi" (Figure 1).
- 3. The effect of Availability Heuristic on Financial-performance while controlling for Investment Decisions, path Ci' (Figure 1).
- Lastly, the indirect path between Availability Heuristic and Financial-performance via Investment Decisions (ai×bi). The bias-revised percentile bootstrap method decides whether the last condition is satisfied. Covariates (Firm Age, Firm Industry) were all included in the analysis.

Step 1, indicated as Table 3 (Model 1), established that Availability Heuristic significantly predicts financial performance with β =.525, p<.05. In step two, presented as (Model 2), Investment-Decisions were found to statistically and significantly affect financial performance with, β =.178, SE =.039, p <.05. Moreover, in the same Model 2, the third step was tested while regulating for Investment-decisions, B=.165, SE = .055, p < .001. Besides, the research findings from the table 3 indicates that investment decisions had a positive and significant mediating effect on the performance B = .093, SE = .032, P<.001 with both confidence intervals being non zero for availability heuristic (CI=0.035, 0.162) therefore fulfilling the fourth step. The implication of the findings showed that that the study is consistent with partial mediation since both the lower limit confidence interval and the upper limit confidence interval were above zero.

Based on the above results, the hypothesis of this research was supported by the study findings.

Predictors	Model 1 (INDAVE)		Model 2 (FP)		Model 3		Model 4	
			2(11)		a1×b1		-1	
	β	PV	β	PV			β	Pv
Constant	1.667	(.000)	1.059	(.000)			1.356	(.000)
Firm age	065	(.114)	0.075	(.012)			.064	(.037)
Industry	.072	(.073)	.360	(.000)			.373	(.000)
AVAAVE	.525	(.000)	.165	(.001)	.525 ×	=.093	.258	(.000)
INDAVE			.178	(.000)	.178			
INDAVE	-	-	.1/8	(.000)			-	-
R	.408		.675				.650	
R2	.167		.456		CI =	.162	.423	
					.035			
F	22.398		70.175					
Sig.	(.000)		(.000)				(.000)	

 Table 3: Mediating Effect of Investment Decision on the relationship between

 Availability heuristic and Financial Performance of SMEs in Nairobi County.

Level of confidence for all confidence intervals in output: 95

Number of bootstrap samples for percentile bootstrap confidence intervals: 5000.

DISCUSSION

The outcomes from this study disclosed that investment decision has a partial mediational effect on the link between availability heuristic and Financial performance of the Small and medium enterprises. This was brought about by the fact that the investors prefer sourcing new stock locally rather than travel far and also sourcing the products after the customers ask for them. The investors also rely on information gathered in groups to support each other in investment ideas considering past profitability when making new investment decisions. This is in line with Pompian, (2011) who argued that Investors give more weight on easily available information therefore, investors prefer to buy the local stock than international stock and consider the information from their close friends and relatives as the reliable reference for their investment decision. The regression results established that Availability heuristic has a positive and significant effect on financial performance.

CONCLUSION

This paper provides a research model of understanding the meditational role of investment decisions on the relationship between availability heuristic and financial performance on SMEs. The study ratifies that availability heuristic association between investors and business opportunities can be used to shape and reinforce SME financial performance. These findings can help the investor fraternity to develop strategies that can outpace competitors in decision making, therefore, improving their financial performance of SME.

RECOMMENDATIONS

This paper confirmed what has already been established by other scholars that availability heuristic has a significant direct effect on financial performance and Investment decisions of Small and Medium Enterprises. Moreover, the study brings in new knowledge that the Investment Decisions can mediate the association between availability heuristics and financial performance of the SMEs. Besides, the individual investors who may benefit directly from the findings of this study, the small and medium enterprises can use these findings as locus for analysis and prediction of the trends of the investment market. Our results have positive and significant practical implications for individual investors; securities organizations; and the study of behavioral finance. Specifically, these findings demonstrate that the anchoring heuristics intensely affect Investment decisions hence affecting the financial performance. Decision-makers should be conscious of the heuristic behavioral biases. Investors can also use the study to understand the power of representativeness heuristics on personal investment decisions and also to come up with models that relate the critical factors of heuristics to have informed investment decisions. Besides, both local and international financial governing authorities; the government; and supervisory agencies are probable to have a better understanding of the SMEs by appreciating the behavioral nature and investment decision patterns of the investors in this sector. Lastly, this paper is unique in the emerging economies, examining the mediating mechanism of Investment decisions on the association between availability heuristic and financial performance using the greatly demanding method of PROCESS macro for analysis.

This study pulls an overall picture of the impact of availability Heuristic on the financial performance and also the mediating effect of the investment decisions on

the association between anchoring Heuristic and the financial performance within Nairobi County. The future researchers ought to focus on the challenges that the investors face in the process of making investment decisions. A study could also be done to assess the effect of other factors that could affect SME investment decisions apart from the heuristic factors reflected in this study.

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