THE INFLUENCE OF PEERS ON INVESTMENT DECISIONS: THE CASE OF UNIVERSITY UNDERGRADUATES IN KENYA

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the Research Project contains no material previously published or written by another person except where due reference is made in the Research Project itself.

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Abstract

People's choices often look like the choices made by those around them. Such peer effects have been analyzed across different fields. These have been motivated by concerns of herding and financial market instability which are all factors under the field of behavioral finance studies. This study is aimed at seeking to test how undergraduate students in Kenya make their investment decisions. It will thus be worth establishing whether the investors' decisions vary with each respondent's sourse of investment information.

The study then focuses on the factor of peer influences on the investment decion making of the sampled demographic In this study 206 individuals from three leading universities of Kenya completed questionnaires which were meant to determine the existence of their influences by their peers while making their investment decision. The study used a multinomial regression alaysis using the latest SPSS Software.The study finds out that indeed it is likely for university undergraduate students in Kenya to face influences by their peers when making investments. This information can be used further to inform the effectiveness of NSE and CME campaign on improving investment behavior and decisions making process among the young investors from the sampled demographics.

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List of Abbreviations

NSE - Nairobi Securities Exchange

MPT – Modern Portfolio Theory

EMH – Efficient Market Hypothesis

CMA – Capital Markets Authority

CHAPTER ONE

INTRODUCTION

Background of the study

Conventional finance focuses on rationality of investors in their decision making process with emphasis of theories such as the Efficient Market Hypothesis (EMH) and the Modern Portfolio Theory (MPT); Behavioral Finance has emerged to counter these theories by stating that investors are not so rational as presumed to be and other factors such as their cognitive and psychological characteristics will have a substantial impact on the investment decisions that they make.

This study is aimed at evaluating whether investor behavior and psychological conditions with special interest on peer influence, affect the investment decisions that a university undergraduate student will make. Behavioral finance is a relatively new field of inquiry that may help better understand the stock market.

This study has a special interest on university undergraduates studying in Strathmore University, Nairobi University and Kenyatta University. In the recent years NSE and CMA have had investment challenges that target the Kenyan youth in tertiary learning institutions with the aim of educating the youth on prudent process of investment decision in the capital markets. Therefore, the findings of this study can be used to I mprove the effectiveness of their campaign in promoting an informative education on good investments.

Behavioral Finance

"Behavioral finance is the study of how psychology affects financial decision making and financial markets". (Shleifer, 1997)

Behavioral finance is a field in finance that proposes mental schemes that contribute to stock market anomaly. A stock market anomaly or inconsistency is a state where the prices of stocks perform contrary to the notion of efficient markets; this means that the prices in stocks or securities should reflect all available information at a given point in time.

This field of study shows how psychological factors affect investor decisions.

The two building blocks of behavioral finance are

a. Limit to arbitrage which states that rational traders may experience restrictions to investing in stocks that would yield to arbitrage profits. These restrictions are brought about by less rational traders.
b. Psychology; these are systematic biases that result when people form "beliefs" (Barber, 2001)

Efficient Market Hypothesis

Behavioral finance goes beyond the efficient market hypothesis to state that investor characteristics, emotions and psychological behavior contribute to the stock prices in the market.

Efficient Market Hypothesis states that:-

(1) All available supply and demand information is used to determine today's price, and that when storage and interest costs are ignored,

(2) The best predictor of tomorrow's price is today's price, and

(3) Expected returns will be the same no matter when a commodity is priced.

Stock prices reflect all available information that is in the market.

Two Minds Framework

(Kahneman D. , 2003)In his paper "Maps of Bounded Rationality: Psychology for Behavioral Economics", uses a frame work of two minds to describe how an investor makes his decisions. His theory says that man has the intuitive and the reflective mind'. The intuitive mind are thoughts and preferences that come to mind quickly and without much reflection.

The reflective mind on the other hand is slow, analytical and requires conscious effort. Classical investors make their investment decisions based on the reflective mind, the mind that is rational and does what is right in relation to the trend of the market. On the other hand, Behavioral finance researchers, urged against this point of view stating that even investors have an emotional sense that can contribute to how they make investment decisions.

For Example, Take the fundamental value of stocks in Company x are Kshs. 30 then a group of irrational traders become pessimistic about the future prospects of company x, hence pushing the stock price to Kshs. 20. This means that the rational trader makes losses in the long run if more "bad news" is expected from the company's performance.

Problem Statement

Investor sentiments and psychology is something that cannot be quantified and their change could be very unpredictable as there is a wide range of factors that could influence how the investor could react to buying or shorting a certain stock in the market.

From (Josiah Aduda, 2012), these factors could range from influence from friends where most investors' trade according to what advice they take from close friends and family, on a scale of 1-5 this factor had 3.65.Popular opinion about the market is also another factor according to their study and this had 3.58. Recent trends in the movement of stocks in the NSE with 3.53. These are clearly herd behaviors that have a great impact in how an investor will decide on what investment portfolio to take. These decisions are not informed by reason but by irrationality of the investor.

The study by (Kotieno, 2005) incorporates other factors such as the objective of the investor, the level of income of the investor and a history of the background of the investor; whether they have any financial background, duration the investor would have for their investment and the level and thinking employed by the investor in their decision making process.

In this study we will include a factor that has rarely been looked at in previous studies. Peer influence among undergraduate students. Considering the studies that have been done in the area of behavioral finance and factors that would impact in an investor's decision making process, we answer the question whether peer influences has had an impact on the investment decisions of undergraduate students in Kenya.

Research objectives

This study is aimed at seeking to test how undergraduate students in Kenya make their investment decisions. It will thus be worth establishing whether the investors' decisions vary with each respondent's sourse of investment information.

The study then focuses on the factor of peer influences on the investment decion making of the sampled demographic.

Research questions

1. Is there a level of irrationality or behavioral influence that exists when making an investment decision?
2. Do peer influences affect the investment decisions of university undergraduate students in Kenya?

Justification of the Study

The findings are dedicated to helping investors make better financial decisions by making aware the concept of behavioral finance and peer influences that might largely contribute to the kind of decision the investor takes or foregoes and the kind of stocks they choose to invest in the Nairobi Securities Exchange. The investment decisions should not only be for the benefit of investment but also self-psychological satisfaction.

This information can be used further to inform the effectiveness of NSE and CME campaign on improving investment behavior and decisions making process among the young investors from the sampled demographics.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This will cover the theoretical review and empirical review of past studies on the topic of behavioral finance and studies that have been carried out in the past regarding investor decisions and their investment choices. The theoretical review will cover psychological biases as shown by (Kahneman A. T., 1974).

Theory of limited arbitrage and peer influence as a factor that can affect an investor's decision making process; the idea of limited arbitrage is credited to the two professors shleifer and Vishny (Shleifer, 1997)

On the empirical review, the study will focus on previous studies that have been carried out in the sector of behavioral finance and its effects on traded stocks in Stock Exchange markets.

Theoretical Review

Many economic and financial theories presume that individuals act rationally and consider all available information in the investment decision making process. Behavioral finance throws more light on why people buy and sell stocks and even why they do not buy stocks at all. (Le Bon, 1897), this book talks about crowd behaviors and how they have an impact on the psychology and the decision making process in an investors mind.

(Selden, 1912) Was one of the first to apply the field of psychology directly to the stock market; his book discusses the classic discussion of the emotional and psychological forces at work on investors and traders in the financial markets. These works together with others form the foundation of applying psychology in the field of finance.

(Festinger, 1956) Introduced a concept in social psychology: the theory of cognitive dissonance; when two contrasting thoughts and judgments are held by an investor such that cognitive dissonance is manifested, the investor will try to change their beliefs just so as to avoid a dilemma situation.

Research by (Geng, 2014) goes to a new level by detailing the likelihood of families entering the stock market based on the fact that their children, siblings or extended members of their families have been in the market before or have acquired an knowledge about investment and finance. His findings show that household investors' likelihood of entering the stock market within the next five years is about 30 % higher if their parents or children members had entered the stock market in the previous five years.

The Theory of Limits to Arbitrage

One of the key aspects of finance is arbitrage. (Shleifer, 1997)Defines arbitrage as "the simultaneous purchase and sale of the same or essentially similar security in two different markets for advantageously different prices". Such arbitrages require no capital and involve no risk.

In a market with irrational and rational traders; the rational traders will prevent the irrrational ivestors from influencing the stock prices by trading the mispriced securities, the concept of arbitrage as argued by (Herchberg, 2012). On the contrary to this, Researchers have sought to prove that investors are not always in a position to exploit these mispriced securities (Eaton, 2000).

The concept of limits to arbitrage was first introduced by the two professors Shleifer and Vishny in the paper on the same subject in 1997. (Shleifer, 1997)

This is one of the building blocks of behavioral finance that states that it may be difficult for rational investors to undo the disruption or confusion caused by less rational traders in a market.

(Ritter, 2003) In his paper on behavioral Finance, states that misvaluation of common investments is evident but making profits from these misvaluations is difficult

There are two main reasons that may cause an arbitrage opportunity not to be exploited by investors; the strategies designed to correct mispricing can be risky and costly. (Barberis, 2003) Identified four risks and cost that hinder exploitation of an arbitrage opportunity. These risks include fundamental risk and noise trader risk and costs are the implementation cost.

Behavioral Biases / Beliefs

Psychologists have shown about how people appear to form beliefs in practice. Six common errors of perception and judgments are identified by psychologist and they are examined in the article, by (Eaton, 2000)

These errors include the overconfidence error; Past studies show that people are often overconfidence in their judgments. (Lichestein, 1982)Proposed that people will often make wrong judgments and design a wrong probability of an event happening and make a comparison of the real time happenings when they occur to overestimate it. Less diversification is a factor that may result from an overly confident investor.

Anchoring error as described by (Ritter, 2003)proposes that when things change people will rarely change with them because of and possibly overreact, underweighting the long-term average. The conservatism bias they have already formed but if there is a long pattern, they will adjust to it. 'Post earnings announcement drift' is a phenomenon that is evident by anchoring; if companies report unexpected bad (good) earnings news they will generally result to unusually low (high) returns after the announcement of these news.

Aversion to ambiguity theory; People will often shy away from situations which they are uncertain of the outcome.

Innumeracy theory according to (Paulos, 1990) is where many investors will confuse between the nominal change and the real changes. Scholars will call this "money illusion"

(Kahneman D. &., 1979)In their academic journal on economics present a critique of the Expected Utility theory as a descriptive model that explains decision making under risk and instead introduces an alternative model known as the Prospect Theory.

(Thaler, 1980) Proposes that circumstances do exist where investors act in a manner that contradicts the common economic theory and therefore concludes in support of the Prospect theory developed by Kahneman and Tversky

Peer Influence: A factor that affects investors' decision making process

Peer groups are constantly evolving and many factors contribute to how peer groups are formed. The effects of these groups to an investor's decision making process, have been studied by many scholars over time. With changes in technology, then even the channels by which peer influence is manifested may have also changed.

Despite the large number of studies examining peer pressure, there are few that focus on testing the key features of peer pressure that may account for relations such as risk characteristics of individuals (Cohen, 2006).

Peer pressure is often regarded to as the extent to which behavior among friends is correlated (Johal, 2015). However, a different study proposes that it is the degree to which individuals feel actively pressured to think or act in certain ways that may not neccesarily be what they want. (Brown, 1986). The main feature of this definition is the element of *actively* being urged to do something.

Clearly, the central feature of most notions of peer pressure is that individuals are motivated to act and think in certain ways because they have been urged, encouraged, or pressured by a peer to do so. However, there are a number of related concepts from which peer pressure should be differentiated. (Darcy A. Santor, 2000) differentiated peer pressure from peer conformity, peer pressure represents an attitude or perception, whereas peer conformity represents a behavioral disposition.

A study was carried out to determine the level of correlation between peer effect and ethnicity when it comes to decision making process of an investor. This study was from (Mugerman, 2012). They concluded that increase in popularity of a certain fund to a certain ethnic group, increases the likelihood of an employee to acquiring that particular asset, however, it is important to consider that this will not be a constant fact in all demographics because culture of these ethnic groups will play a major role in the long term influence.

(Frydman, 2015) States that the main determining factor in peer selection is similarity, however, if individuals are of different characteristics, pressure will come in for similarity to exist. This similarity will contribute greatly to the investment decisions of these peer groups.

(Bursztyn, 2014)Introduces the notion of two driving factors to peer influence, that is, social learning and social utility. One will purchase an asset that their peers have purchased because they learn from their choices or because their possession of the asset directly or indirectly affects their utility of owning the same asset respectively.

(Taylor, 1997) indicates that there may be gender differences in the degree to which adoolescents are influenced by their peers, their study focuses on the school utility value. Therefore, adolescent perception of the types of behavior in which their friends engage may have either an adverse or positive effect on how they value school work for their future benefits. Interestingly, positive peer values were related to school utility value

(Gardner, 2005) conducted an experimental study on peer influence on risk taking behavior and concluded with the following findings about the peer related characteristics of individuals
First, risky investments decisions reduces with age of the investor. The peer effects on risk taking and risky decision making is stronger among adolescent youth than adults.

The ubove research by (Gardner, 2005), was conducted in a group of participants ranging from 13 to 24 years. The development of susceptibility to peer pressure follows an inverted u-shaped curve, increasing as the age of the participants increase from age 13 onwards.

Another hypotheses developed in this study (Gardner, 2005) is that participants who take more risk in their investments often tend to focus more on the benefits that will result from these decisions rather than the costs of their risky behavior. When the same participants are exposed to peers, the decision made is ven riskier compared to the decision taken when alone.

One of the widest studied element among peers is their nature of popularity,researchers have divided this characteristic into two distinct components, sociometric popularity and perceived popularity. Sociometric refers to the degree to which people think that they are liked by their

peers. Percieved is where individuals think that a given status is assigned to them by their peers. (Larson, 2009)

These two types are correlated to a certain degree given the type of peer being studied at that given time.

Determinants of risk taking

Everyday we are faced with situations where we are required to choose a given level of risk. From past laboratory and field experiments we can conclude that much has been studied and discovered about how risky decisions are made. For example when someone is faced with the a sure amount of cash or when faced with lotteries that pay different amounts with specific probabilities too

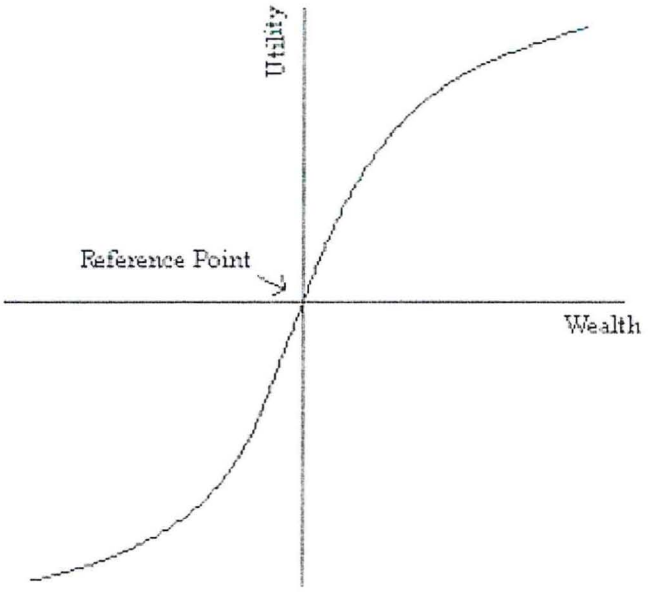
One scholar (Weber, 2011) proposes that decision making varies as a function of the decision maker, the decision domain and the decision context which are detailed in terms of who makes the decision is made and why.

Empirical Review

(Kahneman D. &., 1979)Found empirically that people underweight outcomes that are probable to occur compared to outcomes that are reached with certainty. Another thing is that people will generally discard components that are shared by all prospects under consideration.

Prospect theory shows us how people frame a decision involving uncertainty. Investors will look at choices in terms of potential gains or losses in relation to a specific reference point which is the purchase price. How they value gains and losses according to the S-shaped function are shown in the diagram below, people will feel more pain for a given loss than they feel the pleasure of a gain of the same amount.

Kahneman and Tversky value function



Source: Daniel Kahneman & Amos Tversky (1979), *"Prospect Theory: An Analysis of Decision under Risk" Econometrica*, Vol. 47.

The utility function is concave for gains meaning that people will be happy with a gain but twice as much gain will not make them twice as happy

The function is convex for losses meaning that people will be sad when they lose but twice a loss does not mean twice as sad for them

The loss function is steeper than that for gains. This means that people will feel more strongly about losses than they feel good about potential gains according to Kahneman and Tversky. This phenomenon is known as Loss Aversion.

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

This Chapter of the research project gives the research design that is used in the study. It also defines the research population and the sample size that the study is based on. The measures of data validity and reliability; data collection and analysis together with the research model in use are also detailed in this chapter.

Research Design

In this study, the approach of a descriptive research methodology approach is taken.
The first step, participants are required to complete a pretested questionnaire. Second step, Data from information collected from the questionnaires is then analyzed in the following chapter.

Population

The research is based on young students between the ages of 18 years to 24 years in major Universities in Nairobi, Kenya. These universities are Strathmore University, Nairobi University and Kenyatta University, Nairobi Campuses with equal probabilities of sample distributions in the three Universities.

The research is not limited to only one campus in an effort of curbing the biasness of exposure to the same environment and culture of an institution which can contribute to errors and biases.

According to the Kenyatta University Prospectus 2009-2015, the estimated average enrolment is 500 to 600 students for each school per year.

Sources from the Commission of university education of Kenya, the news letter dated January – May 2016 show that the number of undergraduate enrollment across all the universities in Kenya was 395,920 students in the year 2014. A challenge faced in getting this data is that the most recent data on the latest student enrollment number is not readily available. According to

the Commission of university education the rate of student enrolment was expected to grow by 20% from the year 2014 to 2015.

Based on these assumptions then the population size of the year 2015 is estimated to be

$$395,920 * 1.2 = 475,104$$

Sample Size

Convenience sampling is the sampling method used to get participants from the population used in this study. This is a form of sampling technique that relies on data collection from a population that is readily available to take part in the study. In this study, we focus on undergraduate students from three main universities in Kenya from the main campus centers.

This form of sampling will work to the advantage of this study because the main factor of interest is peer influences which will clearly be tested using a sample from each station (Kenyatta University, Strathmore University and Nairobi University) of research that closely relates among each other.

Margin of Error

This is a value that expresses the amount of random sampling error in a survey of result

The equation for calculating margin of error is shown below

$$\sqrt{(P(1-P) \div N)}$$

Where P is the sample proportion and N is the number of the random sample size.

The margin of error will be calculated as

(0.33*(1-0.33) =0.2211

√0.2211/206 = 0.03276

0.024889 * 1.96 (z* value using 95% confidence interval)

=0.064212 (6.4212%)

This means that 33% is sampled from each campus plus or minus 6.4212%.

Data Collection

In the study, use of Questionnaires is the primary forms of data collection methods. In the questionnaires, the respondents are required to state demographic information such as age, university of study, gender and area of study in campus. Key variables of study that are meant to test the factor of peer influences are measured on a 4 step index scale of

- Strongly disagree
- Disagree
- Agree
- Strongly Agree

Since the sample size consists of young adults, these questionnaires will be sent via emails, social media platforms and mobile devices to the respective respondents. The study uses surveymonkey.com as a platform for distributing these questionnaires.

Data Analysis

Analytical Model

The multinomial logistic regression analysis is done to explain the relationship between the nominal variables, we use this kind of regression analysis because the data collected from the questionnaires is categorical and not linear. The dependent variable is whether the respondent has faced any influence from their peers whereas the independent variables the source of investment decisions, whether or not they have been involved in any investment decision making.

Formulae for a simple regression model is shown below

$$y_i = a + b_1 x_1 + b_2 x_2 + e$$

y_i Is the (dependent variable); peer inclination of the student

$\boldsymbol{a}$ Is the constant or intercept

x_i Is independent variable

b_i Is the slope of the regression

$\boldsymbol{e}$ Is the error term

Correlation test

Using the data, a spearman correlation test was done;

1.correlation between the field of study and whether the respondent has any experience in the field of finance and investments. For prudence purpose.

2.correlation between the source of information on investments and the decision to make an investment.

3. correlation between influence by peers and the decision to making an investment

The data collected from the questionnaires was coded and entered in the latest SPSS version 17 for analysis. Frequency tables were used to present the findings which facilitated discussions and helped to draw conclusions.

The Regression Analysis and correlation tests were also done with with the SPSS Software as detailed in the chapter that follows below.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

Introduction

This part of the study looks at the characteristics of the population and in detail describes the influences of peers in investment decision making process of the population of study. The study goes ahead to describe the extent of this factor of behavioral finance by relating it to the risk preferences of the participants of this research.

Background characteristics of the study population

This study sought information from the three leading universities in Kenya, Strathmore University, Nairobi University and Kenyatta University.

Using SPSS Software the frequencies of each question were analyzed as shown below

Frequency Table

What is your gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	f	102	46.6	49.5	49.5
	m	104	47.5	50.5	100.0
	Total	206	94.1	100.0	
Missing	System	13	5.9		
Total		219	100.0		

What university do you study in?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strathmore	74	33.8	35.9	35.9
	Nairobi	72	32.9	35.0	70.9
	Kenyatta	60	27.4	29.1	100.0
	Total	206	94.1	100.0	
Missing	System	13	5.9		
Total		219	100.0		

What is your age bracket

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	9	4.1	4.4	4.4
	below 18 years	18	8.2	8.7	13.1
	18-22 years	113	51.6	54.9	68.0
	above 22 years	66	30.1	32.0	100.0
	Total	206	94.1	100.0	
Missing	System	13	5.9		
Total		219	100.0		

Have you ever put some money aside in expectation of a profit in future?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	104	47.5	50.5	50.5
	No	102	46.6	49.5	100.0
	Total	206	94.1	100.0	
Missing	System	13	5.9		
Total		219	100.0		

What field does your undergraduate course fall

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	20	9.1	9.7	9.7
	Business Science	78	35.6	37.9	47.6
	Social Sciences	18	8.2	8.7	56.3
	Arts and Languages	7	3.2	3.4	59.7
	Engineering	21	9.6	10.2	69.9
	Applied maths	22	10.0	10.7	80.6
	Other	40	18.3	19.4	100.0
	Total	206	94.1	100.0	
Missing	System	13	5.9		
Total		219	100.0		

Have been pressured into doing something that is out of your comfort zone

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	121	55.3	58.7	58.7
	No	85	38.8	41.3	100.0
	Total	206	94.1	100.0	
Missing	System	13	5.9		
Total		219	100.0		

source_of_information_about_investments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Social media	80	36.5	40.2	40.2
	classmates and friends	98	44.7	49.2	89.4
	Finacial brokers	21	9.6	10.6	100.0
	Total	199	90.9	100.0	
Missing	System	20	9.1		
Total		219	100.0		

Correlation Tests

Correlations (1)

			Do youhave any experience in Finance or investment	What field does your undergraduate course fall
Spearman's rho	Do youhave any experience in Finance or investment	Correlation Coefficient	1.000	.235**
		Sig. (2-tailed)	.	.001
		N	206	206
	What field does your undergraduate course fall	Correlation Coefficient	.235**	1.000
		Sig. (2-tailed)	.001	.
		N	206	206

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations (2)

			Have you ever put some money aside in expectation of a profit in future?	source_of_information_about_investments
Spearman's rho	Have you ever put some money aside in expectation of a profit in future?	Correlation Coefficient	1.000	-.014
		Sig. (2-tailed)	.	.840
		N	206	199
	source_of_information_about_investments	Correlation Coefficient	-.014	1.000
		Sig. (2-tailed)	.840	.
		N	199	199

The table above shows there is a negative correlation between the source of information about investments and the decision to making an investment for an undergraduate student. The strength of the correlation is however weak..

We fail to reject the null given that the P value is 0.840 which is greater than 0.05.

Correlations (3)

			Have you ever put some money aside in expectation of a profit in future?	Have been pressured into doing something that is out of your comfort zone
Spearman's rho	Have you ever put some money aside in expectation of a profit in future?	Correlation Coefficient	1.000	.136
		Sig. (2-tailed)	.	.051
		N	206	206
	Have been pressured into doing something that is out of your comfort zone	Correlation Coefficient	.136	1.000
		Sig. (2-tailed)	.051	.
		N	206	206

In the second objective on testing the influence of peers to investment decision making process of an undergraduate student, we find a positive correlation between these two variables, however the strength is weak at 0.136

Test of significance

We fail to reject the null hypothesis (H_0 =The investment decision made by an undergraduate student is to a certain degree influenced by the opinions received from their peers) given that the P value of 0.051 is greater than 0.05

Multinomial Logistic Regression Analysis

Case Processing Summary

		N	Marginal Percentage
Have been pressured into doing something that is out of your comfort zone	Yes	116	58.3%
	No	83	41.7%
Which of the following defines you best?	I will often do what my friends do	99	49.7%
	I will rarely do what my friends do	43	21.6%
	I will always do things my own way	57	28.6%
Have you ever put some money aside in expectation of a profit in future?	Yes	100	50.3%
	No	99	49.7%
source_of_information_about_investments	Social media	80	40.2%
	classmates and friends	98	49.2%
	Finacial brokers	21	10.6%
Valid		199	100.0%
Missing		20	
Total		219	
Subpopulation		17[a]	

a. The dependent variable has only one value observed in 5 (29.4%) subpopulations.

Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.

Intercept Only	120.457			
Final	44.163	76.293	5	.000

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	14.362	11	.214
Deviance	14.535	11	.205

Pseudo R-Square

Cox and Snell	.318
Nagelkerke	.429
McFadden	.282

Likelihood Ratio Tests

	Model Fitting Criteria	Likelihood Ratio Tests		
Effect	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	44.163[a]	.000	0	.
Defines_you_best	102.235	58.072	2	.000
Investment	54.328	10.165	1	.001
source_of_information_about_investments	47.288	3.124	2	.210

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

a. This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.

Parameter Estimates

Have been pressured into doing something that is out of your comfort zone[a]		B	Std. Error	Wald	df	Sig.	Exp(B)
Yes	Intercept	-1.760	.634	7.703	1	.006	
	[Defines_you_best=1]	3.201	.567	31.863	1	.000	24.564
	[Defines_you_best=2]	3.146	.597	27.771	1	.000	23.241
	[Defines_you_best=3]	0[b]	.	.	0	.	.
	[Investment=1]	1.171	.385	9.268	1	.002	3.225
	[Investment=2]	0[b]	.	.	0	.	.
	[source_of_information_about_investments=1]	-1.147	.702	2.671	1	.102	.318
	[source_of_information_about_investments=2]	-.614	.719	.729	1	.393	.541
	[source_of_information_about_investments=3]	0[b]	.	.	0	.	.

Parameter Estimates

Have been pressured into doing something that is out of your comfort zone[a]		95% Confidence Interval for Exp(B)	
		Lower Bound	Upper Bound
Yes	Intercept		
	[Defines_you_best=1]	8.083	74.651
	[Defines_you_best=2]	7.213	74.883
	[Defines_you_best=3]	.	.
	[Investment=1]	1.518	6.855
	[Investment=2]	.	.
	[source_of_information_about_investments=1]	.080	1.257
	[source_of_information_about_investments=2]	.132	2.216
	[source_of_information_about_investments=3]	.	.

a. The reference category is: No.

b. This parameter is set to zero because it is redundant.

Classification

Observed	Predicted		
	Yes	No	Percent Correct
Yes	107	9	92.2%
No	35	48	57.8%
Overall Percentage	71.4%	28.6%	77.9%

Interpretation

Model Fitting Information

The null hypothesis: There is no significant difference between the null model and the Final model. In this case, the null model has no independent variables.

From the model fitting information, the significant value is 0.000, since it is less than 0.05 we reject the null hypothesis and therefore the final model is fit for this test since it is more significant than the null model.

Goodness of fit

Null Hypothesis: The model is adequately fit

Our significant value is more than 0.05 for both the pearson value(0.214) and the deviance value(0.205), we therefore fail to reject the null hypothesis.

Pseudo R-Squared

This shows how much the two independent variables show deviation with the dependent variable.

This tests shows that there is a positive variation between the independent variables and the dependent variables at 0.318, 0.429, 0.282 respectively.

Likelihood ratio tests

The three independent variables and their significant levels

What defines a student best has a significant value of 0.00

Their decision on whether they have taken an investment decision has a significance value of 0.001

The source of their investment decision has a value of 0.210

This shows that the the first two variables are having significant impact on the peer inclination of the student.

Parameter Estimates

Taking the reference category as No, that means people who believe that they have no in any weay been influence this table is interpreted as follows

Students who will often do what their friends are doing will show preference of peer influences 3.201 times. The significant value in this case is 0.00 meaning that this is a significant variable.

Students who claim to rarely do what their friends do will show presence of peer influence 3.146 times with a significant value of 0.00, this is less than 0.05, therefore this is also significant

On investment decisions, students who have made investments show peer influence 1.171 times with a significance value of 0.002 which is less than 0.05. This is therefore significant.

The source of investment information, the first category shows a negative value of -1.147 but with a significant value of 0.120. This is more than 0.05, therefore there is no significant difference between the source of investment information and the peer inclination of these students.

Therefore, it is more likely that the investment decision making process of undergraduate students in Kenya is influenced by their peers given that those who have taken up investments are positively related their peer inclination.

The lottery experiment was introduced in this study so that we can test the investment tolerance of the students, whether they are averse, neutral or risky investors.

Lottery one captures the averse investors. Lottery two is the risk neutral investors and the third one represents the risky investor. It has been studied by (Lahno, 2014) that risk attitudes of investors has an impact on their pee influences.

The statistic of the collected data shows that 65% chose lottery one, 10% chose lottery two and 25% chose the third lottery. This clearly shows that the majority of university students are risk averse investors.

Psychological factors that influence investor decisions.

The next part of the questionnaire responses is detailed in the table below.

Totally disagree (1), Disagree (2), Agree (3) and totally agree (4)

QUESTION \ SCALE	1	2	3	4	total
I trust my initial feelings about people	2.0	5.0	46.0	153.0	**206.0**
I prefer to do something that challenges my initial thinking rather than something that require little thought	21.0	45.0	44.0	90.0	**206.0**
I consult with my friends/peers before making any investment decision	36.0	20.0	95.0	65.0	**206.0**
When it comes to trusting people I always rely on my "gut feeling"	22.0	28.0	42.0	114.0	**206.0**
My initial expressions of people are always right	20.0	50.0	106.0	30.0	**206.0**
I prefer consulting with someone about a problem than having to do a lot of thinking on my own	25.0	46.0	88.0	47.0	**206.0**

Interpretation of Findings

Peer influences exists and plays a part in investment decision making process. As already mentioned, there are some processes of psychology that impact on decisions involving financial investment. While it is clear that majority of investors take their time to think hard and for a long time before they make decisions on whether to engage in investment, the initial feeling of investors about an idea or individuals is significant.

While it is now clear that peer influence has a role to play in influencing investing strategies and investment decisions, such psychological processes are hugely compounded by a number of other variables. For instance, it is evident from the findings of this study that majority of those who engage in investments have some work experience in finance. Work experience creates confidence, and as (Tversky, 1975)describe, a situation where a person has worked over time, he develops overconfidence which may in turn see him undertake investments with high hopes of getting returns ultimately.

According to this study, experience in the field of finance is positively correlated to the field of study in the university. In this regard, those who have experience in the field of finance are more likely to be students taking a Business Studies or Applied mathematics related course.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter provides a synopsis of the study, conclusions and recommendations made with critical focus on the findings from the analysis.

Summary of Findings and Conclusion

This study sought to investigate the existence of peer influences among young undergraduate students in three major universities of Kenya as to establish the relationship between investor psychology and investment decision making process.

The Theoretical Framework that was developed by (Kahneman A. T., 1974) found out that people rely on a common set of heuristic principles when internally estimating probabilities to support judgment. Although these heuristics often lead to directionally correct and useful answers, certain predictable and severe systematic errors sometimes occur as a result of these heuristics

Data was collected from three major universities in Kenya of which we had 206 responses from the set of questionnaires sent via survey monkey platform. It has been identified that peer influences exists in investment decision making process of young undergraduate students in Kenya.

Limitation of Study

The study sample size was 206 respondents. This is a small sample size considering the entire population. If the sample size is such small, it might be difficult to tell whether the results occurred due to coincidence or not. It could be possible that a different sample size used could lead to a more affirmative results hence the limitation of this study.

The study used questionnaires only as a source of primary data, form of data collection has a few disadvantages which could be not present when using other forms of collection of data such as lab or field experiments.

The study was not able to carry out any experiment because of time constraints and availability of rooms to carry out the experiment to the participants.

Suggestions for further research

The research study was based on the findings of the data collected on a period of one month strategically at three universities. What would be the results of the findings be if the data were collected over a duration of more than one month? What if the data were collected over more than one year duration? Research needs to be conducted over the said period in order to realize differences in the findings.

A different research methodology needs to be used especially a different data collection tool from questionnaires. This is expected to either emphasize the findings or have a different perspective. What if oral interview was used? Would the findings be the same? The goal should be to understand, not just describe, judgment and decision processes.

The research used one tool of data collection. What would be the result if a lab or field experiment was conducted in addition to collection of questionnaires?

These are just a few ways of advancing the study above so that the researcher can arrive at unbiased and satisfactory conclusions and findings.

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Appendix 1:QUESTIONNAIRE

SECTION 1: INTRODUCTION

Thank You for taking your time to participate in this Survey.

My name is Gloria Mukami Mwenda, a student inStrathmore University taking a Bachelor of Business Sciences degree in Actuarial Science.

I am conducting a survey on the Influences of peers on the investment decisions taken by undergraduate students in Kenya.

The survey consisits of four sections and it should take ten minutes only to complete.

This information is collected solely for research work purposes.

SECTION TWO: ABOUT YOU

1. What is your gender?
    - Female
    - Male
2. What university do you study in?
    - Strathmore University
    - Kenyatta University
    - Nairobi University
3. What is your age bracket?
    - Below 18 years
    - 18-22 years
    - Above 22years

SECTION THREE: INVESTMENT PROFILE AND EXPERIENCE

4. Have you ever put some money aside in expectation of a profit in future?
    - Yes
    - No

5. Do you have any experience in the field of Finance?
    - Yes
    - No

6. What field does your undergraduate course fall
    - Business Science
    - Social sciences
    - Arts and languages
    - engineering
    - Applied mathematics
    - Other

SECTION FOUR: PRESENCE OF PEER INFLUENCES

7. Have you ben pressured into doing something that you feel is out of your comfort zone?
    - Yes
    - No
8. If Yes, how do you feel it affected you?
    - In a positive way
    - In a negative way
    - Both ways depending on the situation

9. What is your main source of information about investment decisions?
    - Social media
    - Classmates and friends
    - Close family members

10. Which of the following defines you best?
    - I will often do what my friends do
    - I will rarely do what my friends do
    - I always do things my own way

11. Imagine that you have a choice between choosing two lotteries. Which one would you pick?

    Lottery 1: If you win, you get 3000 KES. If you lose, you get 2000 KES.

    Lottery 2: If you win, you get 2000 KES. If you lose, you get 1500 KES.

    Lottery 3: If you win, you get 5000 KES. If you lose, you get 0 KES.

Please answer the following statements by ticking the choice (box) that best describes yourself on the scale totally disagree (1), Disagree (2), Agree (3) and totally agree (4)

QUESTION / SCALE	1	2	3	4
I trust my initial feelings about people				
I prefer to do something that challenges my initial thinking rather than something that require little thought				
I consult with my friends/peers before making any investment decision				
When it comes to trusting people I always rely on my "gut feeling"				
My initial expressions of people are always right				
I prefer consulting with someone about a problem than having to do a lot of thinking on my own				

THANK YOU FOR YOUR PARTICIPATION