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Influence of Portfolio Diversification on Growth in Wealth of Investment Groups in Kenya

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Abstract
This article assessed the Influence of portfolio diversification on growth in wealth of investment groups in Kenya. In research methodology, the study adopted cross sectional survey design. The design also adopted a descriptive and correlational approach that aided on drawing conclusions on the research objectives. The population of interest was composed of investment groups registered by Kenya Association of Investment Groups as availed by the directory. The population comprised of the 4020 groups registered by the Association as at December 2015. The sample size of this study was calculated using the formula for finite population. Since the population is not homogenous. Stratified random sampling was then used in allocation of samples proportionate to size of the strata that were divided into small, medium and large investment groups. The research instrument was a questionnaire. Analysis of the data was done using (SPSS). Regression and correlation analysis was done to test the relationship between the study variables. Group size was used a moderating variable. The study findings indicated that there was a positive and significant relationship between portfolio diversification and growth in wealth of investment groups. The study concluded that portfolio diversification is key to growth in wealth of investment groups. The study therefore recommends that investment groups need to diversify their portfolio to create the investment groups wealth.
Keywords: Portfolio diversification, growth in wealth, investment groups in Kenya.

1.0 Introduction

Investment groups are known by different names all over the world. They are referred to as Rotating savings and credit organization (ROSCAS), Merry go rounds and "Chama" in Africa most parts of Africa, solidarity groups in Europe and South America, Christmas clubs and saving circles in the USA Mehta, Garguillo & Brown, (2011). An investment group is defined as "Any collection of individuals or legal persons in any form whatsoever including but not limited to; societies registered under the Societies Act, Partnerships and Limited Liability Companies, whose objective is the pooling together of capital or other resources with the aim of using the collated resources for investment purposes" (KAIG 2012). The more widely used word for Investment Group or Club in Kenya is "Chama" (Kiswahili for group).

Investment clubs make up the backbone of the Kenya's economy and play a vital role in the development of the capital markets and property development, creation of employment amongst other things (FSD Kenya, 2012). In the Vision 2030 under the financial services sector of the economic pillar, capital mobilization to raise funds for investment is expected to play a critical role in the anticipated economic growth. Investment groups play a critical role in resource mobilisation and experience has shown that group approaches to saving can help members save more efficiently and get quicker access to a larger amount of pooled resources than if one saves on their own Gakigi and Njeru (2015). Investment groups as noted by Wainaina (2012) are such realistic, credible vehicles that can lead individuals to collectively save, mobilise local capital, invest and generate wealth. In Kenya Lately, there has been a huge uptake of the Investment groups' concept by the government, youth, men and women in Kenya as noted by Ogutu (2014).

1.1 Statement of the Problem

Investing in groups' concept is a model that has been embraced by the Government of Kenya for sustainable development as indicated by Uwezo fund, Youth Enterprise Fund, Women Enterprises Fund and Matatu SACCOs. The ministry of labour, Social security and services continued to improve livelihoods and social economic empowerment of the people of Kenya by registering 35,000 self- help groups that continue to benefit from funding opportunities. The ministry of interior and coordination of national government facilitated disbursement of Ksh 3.2 Billion from Women enterprise fund to all 290 constituencies. The Ministry of devolution through the Uwezo fund issued interest free loans to 14,986 youth groups, 26,838 women groups and 977 groups of persons with disability in 290 constituencies totalling to Ksh 5,354,400,000 (GOK 2015). The purpose of forming investment clubs according to Malkamaki (2008) study was business orientation 72.6%, to buy assets 35%, to exchange business ideas and network 26% and to receive lump sum finance 17.2%. Capital

Markets Authority (CMA) observed that Investment groups have morphed into financial machines that have initiated multi-billion-shilling projects in various sectors of the economy and that Chamas and SACCOs control an estimated Kshs.100 Billion in bank deposits. Despite this importance, most of these groups have failed to grow their wealth which has threatened their sustainability. According to KAIG (2013), many Investment groups that are not successful will fail within their first year or so of operation. The reasons for this according to Gichane, (2012) include among others; lack of member commitment, failure to come up with new investment strategies, lack of capital, lack of proper guidance in investing, the lack of investing knowledge, differences over investment strategy and risk appetite.

Ogutu (2014) did a study on Influence of Investment Groups on Creation of Small and medium Size Enterprises in Nairobi County and found that investment groups highly influence the formation of small and medium enterprises (SMEs). SMEs hold the key to rapid technological development and full employment offers a means whereby new employment opportunities can be created (GoK, 1999). This shows that investment groups play a critical role in economic growth. Gakigi and Njeru (2015) did a study on performance of investment groups, their study focused on challenges affecting their performance specifically organisation structures, goal setting and legal frame work as the variables of study. Johnson, malkamaki and zarazua (2009) focused on the role played by informal savings groups in the financial markets in Kenya. FSD Kenya (2008 and 2010) studies highlighted the role of played by investment groups in poverty alleviation and their untapped potential. Icharia (2014) did a study on factors influencing wealth creation in investment groups in Kenya, this study only focused on strategic planning and management as factors influencing wealth creation.

Agrawal et al., (2002; Adeyemo and Bamire, (2005); Deji, (2005); Asher, (2007); Ogsi, (2001) observed that lack of growth in wealth threatens sustainability. (Gichuru 2014) did a study on investment groups that focused on strategic planning aspects only. Olado (2012) in his thesis on financial practice as a determinant of growth in wealth only focused on SACCOs which do not use the same model as investment groups. By reviewing the previous studies no study has been done on the determinants of growth in wealth of investment groups in Kenya and this study will fill this research gap by specifically focusing on portfolio diversification. It is against this background that this study assessed the influence of portfolio diversification on growth in wealth of investment groups. If Investment groups build wealth this will have far reaching effects on economic growth of the country and this study aims to contribute to this. The study focused on investment groups which are registered by KAIG which is the umbrella body and 364 groups were selected using stratified random sampling.
In view of the above review the following study was investigated:

1.1.1 Research Objective

To establish the influence of portfolio diversification on growth in wealth of investment groups in Kenya.

1.1.2 Hypothesis

H01: Portfolio diversification has no significant influence on growth in wealth of investment groups in Kenya.

2.1 Theoretical Framework

2.1.1 Modern Portfolio Theory

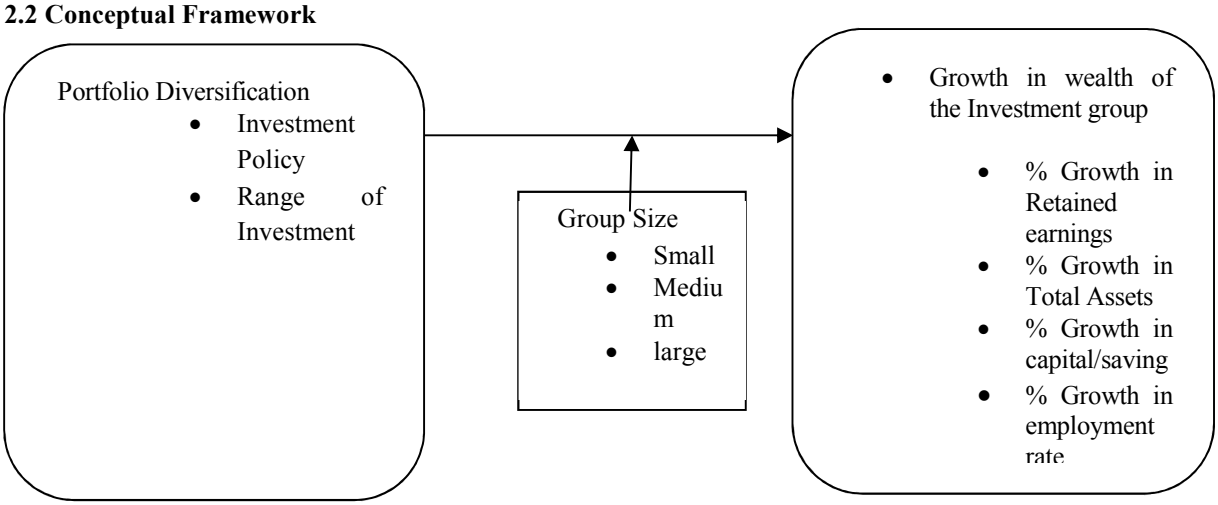
This model was developed by Harry Markowitz (1952, 1959). His major contribution was that of showing the relationship between risks and returns unlike earlier research that treated the two separately. He showed that the expected risk measure of returns was the variance of expected returns by assuming that Investors seek to maximize one period expected utility subject to diminishing marginal utility, estimating their portfolio risks on the basis of variability of portfolios return that is variance or standard deviation of returns only. He also assumed that investment alternatives are represented by distribution of expected returns over some holding period and that Investors base decisions on expected returns and risks. For all levels of risks, investors prefer higher returns to lower returns given the level of risk or given the level of expected rate of return they prefer lower risks than higher risks. According to this theory, the expected return to a portfolio is the weighted average of expected return for individual investment in the portfolio. Standard deviation of a portfolio is the covariance of the rates of return for all the pairs of assets in the portfolio as shown below. Covariance of return is the degree to which returns of the asset and another asset move together relative to their individual mean values over time. Balancing risk and returns is a cornerstone of modern portfolio theory. Markowitz's (1952) seminal work derived measures for calculating expected returns and expected risk of a portfolio. He presented variance as a meaningful measure of risk, and created a method of calculating the overall portfolio risk taking into account the imperfect correlation of price movements between assets. Variance is a statistical measure of how widely disbursed a set of probability outcomes are around its mean value.

When combining multiple assets that are less than perfectly correlated, the combined variance of the portfolio reduces. Markowitz's work into calculating these measures at a portfolio level allows today's investors to quantify the relationship between risk and return rather than relying on the investor's best guess. Markowitz makes a number of important assumptions (Reilly and Brown, 2009): Each asset has a set of probable outcomes which can be thought of as a probability distribution. Investors aim to maximise their single period utility of

wealth. Investors are risk averse that is, they have diminishing marginal utility of wealth. Investors can estimate risk based on the variability of returns. Investors only base their investment decisions on the first and second moments of the distribution expected return and variance. For any given level of risk (or variance), the investor prefers a higher expected return. Similarly, for any given expected return, the investor prefers a lower level of risk. Markowitz (1952) proposed a set of quantitative tools for prescribing how investors should combine their financial assets to maximize return for a given risk as measured by the standard deviation thus emphasizing on the nature and mix of assets to be held. A central aspect of MPT is that every investor should hold an optimal portfolio that is well diversified. Diversification requires that investors randomly choose the assets they invest in. The theory has been criticized on the ground that investors evaluate an investment opportunity based on the value they are likely to get and not how it affects their overall wealth. Many investors do not know their total portfolio risk or the interrelationships among the assets and consider many factors other than risk diversification in building up their portfolio. The development of MPT and the Capital Asset Pricing Model (CAPM) provided a theoretical framework that could be applied to meet the challenges of performance measurement. Treynor (1965), Sharpe (1966), and Jensen (1968) were the first to realize the potential applications of MPT and CAPM for investment performance. The Treynor index is calculated using excess returns on the fund where the excess return on the fund is scaled by the beta of the fund and not the funds' standard deviation of returns. The Jensen‟s Alpha is a reward to risk measure which borrows from the capital asset pricing model (CAPM) and it assumes that every investor holds a diversified portfolio therefore only the non-diversifiable market-related risk affects portfolio performance. Jensen‟s Alpha uses only systematic risk for scaling a portfolio's return.

The Sharpe ratio is a risk-adjusted measure developed by the Nobel Laureate William Sharpe. The Sharpe ratio is determined using standard deviation and excess returns to come up with the reward per unit of risk. In theory, any portfolio with a Sharpe index greater than one is performing better than the market benchmark. Unlike the other measures of performance above, the Sharpe ratio does not make any assumptions about the nature of the distribution of the portfolio returns and therefore it can be used even when the portfolio returns do not follow a normal distribution. According to Pandey (2005) an efficient allocation of capital is the most important finance function in the modern times. It involves decisions to commit the firm's funds to the long term assets. Investment decisions are of considerable importance to the firm since they tend to determine its value by influencing its growth, profitability and risks. Investment decisions require special attention because of the following reasons: they influence the firm's growth in the long run, they affect the risks of the firm, they involve commitment of large amount of funds, they are irreversible or reversible at substantial loss and they are among the most difficult decisions to make. In conventional financial theory, investors are assumed to be rational wealth maximisers, following basic financial rules and basing their investment strategies purely on the risk return consideration as the factors expected to influence investment decisions (Baker et al, 1977). In this study, portfolio theory was used to examine the effect of portfolio diversification on the growth in wealth of investment groups.

2.2 Conceptual Framework



2.3 Review of literature on Variable

2.3.1 Portfolio Diversification

In order to achieve growth there is need for investors to develop an optimal portfolio of assets that will maximize his rate of return subject to his risk preference. Informed decision making on investment would help avoid risky,

low return yielding assets. Njiru (2006) observed that through proper risk management and portfolio management process an investor is able to maximize his returns through proper asset allocation and constant performance evaluation of his portfolio of assets. According to Markowitz portfolio theory (1952, 1959), CAPM theory by Sharpe (1964), Litner (1965), Mossin (1966), it's possible to establish an optimal portfolio of assets that will maximize returns and minimize risk subject to an investor's utility function. This is done by combining risk free assets and risky assets and then operating on a security market line or the capital market line at the point of tangency with the Markowitz efficient frontier if the market is at equilibrium. If the investor is a risk averse his utility curves will be steeper thus settling at a point with lower expected returns and risks compared with a risk averse investor. According to Icharia (2012) investment groups have diversified their investments from buying shares at the Nairobi Securities Exchange (NSE) to making other capital intensive investments in real estate, export and import business, among others.

Construction of a portfolio based upon the investor‘s objectives, constrains, preferences for risk and return and liability (Merton, 1973). Evaluation of the portfolio is done by continuous overview of the market conditions, company‘s performance and investor‘s circumstances, (Campbell, 2002). Portfolio management process according to Merton (1973) entails a six stage process, that is: Determine optimal investment mix followed by creating a customized investment policy statement, and then Selecting an investments, after which Monitoring of progress is necessary. These processes are explained as follows: Merton (1973) explains and Identifies goals and objectives as the stage under which several questions like: When will an investor need the money from his/her investments? How much does the investor have in terms of saving? Among other questions that may be of relevance. This is necessary as it will assist in properly identification and determination of optimal investment mix (Merton, 1973) argues that it involves asset allocations which eventually create an optimal mix. This step represents one of the most important decisions in a portfolio construction, as asset allocation has been found to be the major determinant of long-term portfolio performance (Campbell, 2002). The third stage which is creating a customized investment policy statement, which is necessary after the optimal investment mix, is determined. This help to formalize the goals and objectives in order to utilize them as a benchmark to monitor progress and future updates (Campbell, 2002). After all the above is done, selection of investment is done so as to customize portfolio with a view of matching the optimal investment mix. For this to succeed there is need for monitoring the progress so that the mix of asset classes stays in line with investor‘s unique needs, the portfolio will be monitored and rebalanced back to the optimal investment mix (Fama,1992). Risk and return is a key element in evaluating a portfolio. Risk refers to the probability that the return and therefore the value of an asset or security may have alternative outcomes (William, 1964). Return-yield or return differs from the nature of instruments, maturity period and the creditor or debtor nature of the instrument and a host of other factors. The efficiency of the profitability position or operating activities can be identified by studying the following factors. Gross profit margin ratio: Dividend policy is determined in the general body meeting of the company, for equity shares at the end of the year. The dividend payout ratio is determined as per the dividend paid. Dividend policies are divided into two types (Tobin, 1958):-Stable dividend policy, unstable dividend policy. Capital structure of a company that necessitates portfolio management.

Portfolios or combinations of securities are thought of as helping to spread risk over many securities may specify only broadly or nebulously. Auto stocks are, for examples, recognized as risk interrelated with fire stocks, utility stocks display defensive price movement relative to the market and cyclical stocks like steel, and so on. This is not to say that traditional portfolio analysis is unsuccessful. It is to say that much of it might be more objectively specified in explicit terms. They are: Determining the objectives of the portfolio and Selection of securities to be included in the portfolio. Normally this is carried out in four to six steps (Fischer, 1972). Before formulating the objectives, the constraints of the investor should be analyzed within the given frame work of constraints, objectives are formulated. Then based on the objectives securities are selected. After that risk and return of the securities should be studied. The investor has to assess the major risk categories that he or she is trying to minimize. Compromise of risk and non-risk factors has to be carried out. Finally relative portfolio weights are assigned to securities like bonds, stocks and debentures and the diversification is carried out. The key tenet of modern portfolio theory is that if one wishes to increase the performance and reduce the risk in an overall investment portfolio, they should combine investments that are non-correlated with one another. The traditional theory of finance assumes that people are guided by reason and logic and therefore view investment decisions through the transparent and objective lens of risk and return.

2.3.2 Group Size

Mugenda and Mugenda (2012), define moderating variable as a variable that has an effect on the relationship between the independent and dependent variables, but is not related to or affected by the independent variable. Moderating variables tend to be demographic in nature and come between other variables and moderate their relationships. The moderating variable is a variable that has an effect on the relationship between the independent and dependent variables, but it is not related to or affected by the independent variable. The moderating variable will came between other variables and moderated their relationships. Studies on the impact

of size on performance yield mixed findings. A positive relationship is expected from this relationship because large oranisations are able to develop financial, human and technical capacities that can enhance efficiency and foster performance. From the wider asset base it can be argued that large organisation interms of size like banks can be able to source funds at competitive rate and lend it to its customers at favorable interest rates enabling them make high returns (Wepukhulu 2016). This position was also supported by Pasiouras and Kosmidou (2007) who posit that larger banks might have a wide range of products and loans diversification than smaller banks leading to improved returns and performance. Ayadi and Boujelbene, (2012) in their study of bank performance in Tunisia between 1995 -2005, find a significant positive relationship between bank size and return on average assets; a prove that even investment groups would enjoy economies of scale when they grow their asset base. Similar, findings are made by Sinkey and Greenawalt, (1991) that larger banks are more profitable than smaller ones.

The demographic characteristics of the group which is group size in this study can influence the growth in wealth and hence will moderate the cause effect relationship between the dependent and independent variables in the study. The investment groups are divided into the large investment groups, Medium investment groups and small investment groups. The classification was based on the asset base. The large investment groups are the ones with an asset base of over 20 Million, the medium are the ones with an asset base of over 1 million and below 20 million and the small are the ones with an asset base of below 1 million.

2.3.3 Growth in wealth

The dependent variable of the study was growth in wealth. One of the objectives of any business organization is to maximize shareholders wealth. Pandey (2010). All firms, including Investment groups, are established to achieve certain goals which mainly are to maximize wealth for the shareholders. Investment groups' wealth is the accumulation of enough capital (retained earnings) to finance non withdrawable capital funded assets, provide cushion to absorb losses and impairment of members' savings. Specifically, institutional capital is intended to absorb their operational losses (Ndiege, et al., 2013). John Pender, (2012) define wealth comprehensively, as the stock of all assets, net of liabilities, that can contribute to the well-being of an individual or group. Wickham (1998), views business growth from four interdependent perspectives: financial, strategic, structural and organisational. This study will focus on financial growth of the investment group and how it is influenced by the study variables. Wickham (2006) defines financial growth in wealth as the development of the business as a commercial entity. It is concerned with increases in turnover, the costs and investment needed to achieve that turnover, and the resulting profits. It is also concerned with increases in the assets of the business. This study utilises measures of financial growth as proposed by Wickham (2006), particularly: Changes in total assets; Changes in capital; Changes in turnover; and Changes in profit.

Strategic growth relates to changes that take place in the way in which the organisation interacts with its environment as a coherent strategic whole. Primarily, this is concerned with the way the business develops its capabilities to exploit the market. According to Wickham (2006) it is associated with the profile of opportunities which the business exploits and the assets, both tangible and intangible, it acquires to create sustainable competitive advantages. Structural growth relates to the changes in the way the business organises its internal systems, in particular, managerial roles and responsibilities, reporting relationships, communication links and resources control systems (Wickham). This study utilises measures of structural growth as proposed by Wickham (2006), that is: Changes in number of employees; and Changes in the size and/or location of business premises. Organisational growth relates to the changes in the business's processes, culture and attitudes as it grows and develops. It is also concerned with the changes that must take place in the owner's role and leadership style as the business moves from being a 'small' to 'large' firm (Wickham, 2006). For the purpose of this study the organisational growth dimension is looked at in terms of group governance.

3.1 Methodology

A research design is the logical sequence or blue print that connects the empirical data to a study's initial research questions and ultimately to its conclusions (Yin, 2003). This study employed a mixed research design. A cross-sectional survey research design provides a quick and accurate means of accessing information about the population and more appropriate where there is a lack of secondary data as observed by (Oso and Onen 2005). The design also adopted a descriptive and correlational approach that aided on drawing conclusions on the research objectives. This research strategy was preferred because it allows for the collection of data through questionnaires administered to the respondents and that the data collected by this design can be used to suggest possible reasons for particular relationships between variables and produce models for these relationships (Saunders and Thornhil, 2007). The population for this study comprised of all investment groups registered by KAIG as at December 2015. For purposes of establishing a more comprehensive population register of IGs KAIG database was used. This enabled to draw a representative sample since Kenya Association of Investment groups is the body that brings together investment groups in Kenya. The population comprised of the 4020 groups registered by the Association as at December 2015.

While generally, the larger the sample, the more representative the scores on the variables were with regard to the population scores, researchers, as a rule of thumb, recommend a minimum sample size of 15 in experimental/exploratory research, 30 in correlational research and 100 in survey research (Borg and Gall, 2007; Scott & Wild, 1986; Lenth, 2001; Ader, Mellenbergh, & Hand, 2008). A minimum sample size of 10% for large populations or 20% for small populations is considered adequate for descriptive surveys (Gay & Diehl, 1992). The list of investment groups to be availed by KAIG was comprehensive as it contains all relevant details of the group including size, type of investment, physical and telephone contacts. The sample size of this study was calculated using the formula for finite population as proposed by Israel (2009). Since the population is not homogenous, stratified random sampling was then be used in allocation of samples proportionate to size of the strata.

Where:

n= desired sample size

N= Population

e = margin of error at 5% (standard value of 0.05)

The sample size for the study was calculated as:

The proportionate sample size of each stratum was computed using the following formula

Where: N=Number of investment groups (population)

N1…Nn = proportionate population in each strata

Pn= proportion of sample to be selected in each strata

Table 1.0 Sampling Distribution

Strata	Source	$N_{1..n}$	P_n
Small IGs	KAIG	3136	284
Medium IGs	KAIG	552	50
Large IGs	KAIG	331	30
Total		**4020**	**364**

The research instrument was a questionnaire. Analysis of the data was done using descriptive statistics and inferential statistics using Statistical Package for Social Scientists (SPSS) and regression models were fitted and hypothesis testing carried using multiple regression analysis in the multivariate analysis.

3.2 Operationalisation of the study Variable

Table 1.1 Operationalization of Study Variable

Variable	Indicators	Operationalization	Measurement scale	Hypothesis
Portfolio diversification	Investment Policy range of investments	• Alertness to profit opportunities • Availability of investment policy • Source of investment information	5 point Likert type scale	H_{02}: Portfolio diversification has no significant influence on Growth in wealth of Investment Groups in Kenya
	Diversification of Investments portfolio	Real Estate Commercial Paper Retail Business Venture Capital Equity Shares Treasury Bonds Preference Shares Treasury Bills Corporate Bonds Farming as a business Fixed Deposit	ratio scale	

4.1 Results and Discussion

4.2 Results of Reliability Tests

Reliability is a measure of the degree to which a research instrument yields consistent result or data after repeated trials (Mugenda and Mugenda, 2003). Reliability in research is influenced by random error. Reliability was tested using Cronbach's coefficient Alpha. Cronbach's Alpha measures how well a set of items or variables,

measure a single uni-dimensional latent construct that is a coefficient of reliability or consistency. Reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more reliable is the test. A threshold of a Cronbach Alpha of 0.7 and above is acceptable (Cronbach, 1951). Cronbach Alpha was used to test the reliability of the proposed constructs. The findings indicated that, portfolio diversification had a coefficient of 0.776.

Table 1.2 Cronbach's Alpha

Variable	Number of Items	Cronbach's Alpha	Comment
Portfolio Diversification	5	0.776	Accepted

4.3 Sampling Adequacy

To examine whether the data collected was adequate and appropriate for inferential statistical tests such as the factor analysis, regression analysis and other statistical tests, two main tests were performed namely; Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. For a data set to be regarded as adequate and appropriate for statistical analysis, the value of KMO should be greater than 0.5 (Field, 2000). Findings in Table 1:0 showed that the KMO statistic was 0.616 which was significantly high; that is greater than the critical level of significance of the test which was set at 0.5 (Field, 2000). In addition to the KMO test, the Bartlett's Test of Sphericity was also highly significant (Chi-square =1621.044 with 231 degrees of freedom, at $p < 0.05$). The results of the KMO and Bartlett's Test are summarized in Table 1:0. These results provided an excellent justification for further statistical analysis to be conducted.

Table 1.3 KMO and Bartlett's Test

Test	Value	
Kaiser-Meyer-Olkin measure of sampling adequacy.		0.616
Bartlett's test of sphericity	Approx. Chi-square	1621.044
	Df	231
	sig.	0.000

4.4.1 Factor Analysis

Factors are a smaller set of underlying composite dimensions of all the variables in the data set, while loadings are the correlation coefficients between the variables and the factors (Mugenda & Mugenda, 2012). Factor analysis can be applied in order to explore a content area, structure a domain, map unknown concepts, classify or reduce data, illuminate causal nexuses, screen or transform data, define relationships, test hypotheses, formulate theories, control variables, or make inferences. Factor loading assumes values between zero and one, of which loadings of below 0.3 are considered weak and unacceptable (Nachmias & Nachmias, 2008). The pilot study assumed factor loadings of 0.4 as acceptable. Most of the indicators in the study had at least factor loading greater than 0.4. The indicators that had factor loadings less than 0.4 were expunged as shown in table 1.4. The idea in factor analysis is finding a set of latent variables that essentially contain the same information with the manifest variables. From factor analysis, the indicators under investigation were placed under precision and the correct variables they belong to and built confidence on retention of indicators to their respective variables

Table 1.4 Factor loadings matrix

Element	Component 1	Component 2	Status
Our group carries out an appraisal of value addition to the portfolio before investment decision is made	0.597		Retained
Our group has a substantial investments in the financial markets	0.655		Retained
Long term investments are more preferred by our group members	0.635		Retained
Investment in Government securities highly preferred by our group	-0.201		Expunged
The group often sets aside funds to take advantage of unexpected investment opportunities	0.631		Retained
It is possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares	0.674		Retained
Our group regularly invests in mutual funds	-0.525		Retained
Short term investments are more preferred by our group	-0.530		Retained
Growth in Profit after tax		0.498	Retained
Growth in total Assets		0.550	Retained
Growth in Number of employees		0.784	Retained
Growth in retained profits		0.561	Retained
Growth in capital		0.488	Retained
Growth in loans borrowed		0.369	Expunged

4.4.2 Descriptive analysis of Growth in Wealth

The study sought to investigate the growth in wealth in the investment groups as a dependent variable influenced by determinants of growth. The respondents' perception on their groups' performance in relation to wealth growth was sought by asking the respondents their level of agreements to various items as shown in table 1.5. On profit growth, 0% of the respondents strongly disagreed that their Profits have been growing steadily since the group began while 35% just disagreed. On the other hand, 47% agreed that Profits have been growing steadily since the group began and 7% of the respondents strongly agreed with the statement. 11% of the respondents were however neutral to the question. Majority (47%) of the respondents were in agreement as also implied by the modal class which was found to be 4. The mode of 4 implies that on average, the investment groups in Kenya agree that their Profits have been growing steadily since the group began. The respondents were also asked about steady growth in their groups total assets. To this, 1% of the respondents strongly disagreed that their Total assets have been growing steadily since the group began while 9% just disagreed. On the other hand, 67% agreed that their Total assets have been growing steadily since the group began and 8 of the respondents strongly agreed with the statement. 15 of the respondents were however neutral to the question. Majority (67%) of the respondents were in agreement as also implied by the modal class which was found to be 4. The mode of 4 implies that on average, the investment groups in Kenya agree that their Total assets have been growing steadily since the group began. On average, the investment groups in Kenya agree that their retained profits have grown steadily since the group began. This is implied by the modal class of 2 from the responses on their level of agreement on steady growth of their retained earnings. Majority (43%) of the respondents were in agreement. Only 1% of the respondents strongly disagreed that their Retained profits have grown steadily since the group began while 43% just disagreed. On the other hand, 38% agreed that their Retained profits have grown steadily since the group began and 8 of the respondents strongly agreed with the statement. 10 of the respondents were however neutral to the question. Regarding borrowing, 12% of the respondents strongly disagreed that the amounts of loans borrowed by their group have increased since the group began while 45% just disagreed. There were 29% of the respondents who however agreed that the amount of loans borrowed by the group have increased since their group began and 7% of the respondents strongly agreed with the statement. There were a 7% of the respondents who were neutral. Majority (45%) of the respondents were in disagreement as also implied by the modal class which was found to be 2. The mode of 2 implies that on average, the investment groups in Kenya agree that the amount of loans borrowed by their group have increased since the group began. Only 7% of the respondents strongly disagreed that their number of employees has increased since the group begun while 18% just disagreed. On the other hand, 36% agreed that their number of employees has increased since the group begun and 9 of the respondents strongly agreed with the statement. 30 of the respondents were however neutral to the question. Majority (36%) of the respondents were in agreement as also implied by the modal class which was found to be 4. The mode of 4 implies that on average, the investment groups in Kenya agree that their number of employees have increased since the group begun.

Table 1.5 Elements of growth in wealth

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Modal class
Profits have been growing steadily since the group began	0%	35%	11%	47%	7%	4
Total assets have been growing steadily since the group began	1%	9%	15%	67%	8%	4
Retained profits have grown steadily since the group began	1%	43%	10%	38%	8%	2
The amount of loans borrowed by the group have increased since the group began	12%	45%	7%	29%	7%	2
The number of employees have increased since the group begun	7%	18%	30%	36%	9%	4

To further measure growth in wealth the respondents were asked to state actual measures of profits after tax, retained profits, total assets, capital, borrowed loans and number of employees for the years 2010 to 2015 presented in table 1.6. The actual entries per year were then used to calculate annual growth rates for the indicators and further used to calculate the mean growth rates for each indicators growth. The results for the descriptive analysis for the averages are presented in table 4.10 below. The researcher sought to determine the growth in wealth in the investment groups. The mean growth in profit after tax was found to be 1.505 implying that on average the investments group have over 100% growth rates in profits after tax. The variability of the growth rate across the groups is however high with a standard deviation of 11.997, a minimum of -0.571and a maximum of 199.241. The mean growth in retained profits was found to be 14.406. On average the investment group also experience over 100% growth rates retained profits which also have high variability of the growth

rate across the groups with a standard deviation of 217.918, a minimum of -0.908 and a maximum of 3541.001. All the other indicators also experience high growth rates above 100% except capital and number of employees that showed averages of 44.5% and 6.1% growth rates respectively. The growth in number of employees had the lowest dispersion of 0.105 across the groups

Table 1.6 Growth in wealth

	Minimum	Maximum	Mean	Std. Deviation
Mean growth in Profit after tax	-0.571	199.241	1.505	11.997
Mean growth in retained profits	-0.908	3541.001	14.406	217.918
Mean growth in total Assets	-0.333	499.250	2.745	31.991
Mean growth in capital	-0.321	26.865	0.445	2.178
Mean growth in loans borrowed	-0.977	29.498	1.040	2.945
Mean growth in Number of employees	-0.117	0.667	0.061	0.105

4.5 Descriptive Analysis for Portfolio diversification

The researcher sought to determine the portfolio of investments the groups had invested on. The findings shown in figure 4.8 below indicate that real estate was the main portfolio of investment in the groups forming 44% (126) of the responses, followed by service business at 26% (73), product business at 14% (40), equity shares at 9% (26), and farming at 9% (26) while commercial paper formed the least responses as shown in figure 4.4 below.

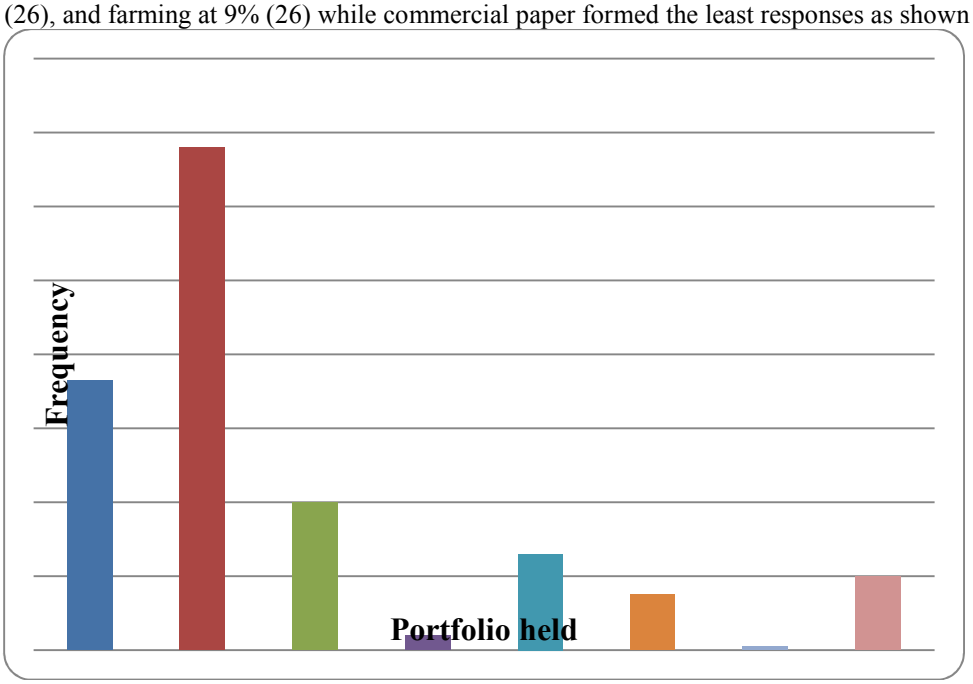


Figure 4. 3: Portfolio of investments

Table 4.15 is a frequency table showing analysis of various indicators used to measure portfolio diversification. A large percentage (71%) of the respondents strongly disagreed that investment in Government securities is highly preferred by their group while 13% just disagreed. On the other hand, 5% agreed that investment in Government securities is highly preferred by their group and 7% of the respondents strongly agreed with the statement. 3% of the respondents were however neutral to the question. The modal class which was found to be 1 to imply that on average, the investment groups in Kenya strongly disagreed that investment in Government securities is highly preferred by their group. The study also sought to find put the possibility of reducing risks of investing in stock shares. Only 1% of the respondents strongly disagreed that it is possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares. There were 38% who agreed that it is possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares and 49% of the respondents were in strong agreement. 12% of the respondents were however neutral to the question. Majority (49%) of the respondents were in agreement as also implied by the modal class which was found to be 5. The mode of 5 implies that on average, the investment groups in Kenya agree that It is possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares. On further analysis, there were only 7% of the respondents who strongly disagreed that long term investments are more preferred by their group members while 2% just disagreed. On the other hand, 24% agreed that long term investments are more preferred by their group members and 64% of the respondents strongly agreed with the statement. 3% of the respondents however remained neutral to the question. Majority (64%) of the respondents

were in agreement as also implied by the modal class which was found to be 5. The mode of 5 implies that on average, the investment groups in Kenya agree that Long term investments are more preferred by their group members. Regarding the groups carrying out appraisals, 1% of the respondents strongly disagreed that their group carries out an appraisal of value addition to the portfolio before investment decision is made while 0% just disagreed. However, 38% agreed that their group carries out an appraisal of value addition to the portfolio before investment decision is made and 61% of the respondents strongly agreed with the statement. Majority (61%) of the respondents were in agreement as also implied by the modal class which was found to be 5. The mode of 5 implies that on average, the investment groups in Kenya strongly agree that their group carries out an appraisal of value addition to the portfolio before investment decision is made. Only 4% of the respondents considered strongly disagreed that their group has a substantial investments in the financial markets with 18% just agreeing. There was also 52% of them who agreed that their group has substantial investments in the financial markets and 11% of the respondents strongly agreed with the statement. 14% of the respondents were however neutral to the question. The modal class which was found to be 4 implying that the majority (52%) of the respondents was in agreement.

This further implies that on average, the investment groups in Kenya agree that their group has substantial investments in the financial markets. Majority (77%) of the respondents were in strong disagreement that their group regularly invests in mutual funds while 5% just disagreed. On the other hand, 12% agreed that their group regularly invests in mutual funds and 1% of the respondents strongly agreed with the statement. 5% of the respondents were however neutral to the question. The mode of 1 implies that on average, the investment groups in Kenya agree that their group regularly invests in mutual funds. Majority (68%) of the respondents also strongly disagreed that Short term investments are more preferred by their group while 7% just disagreed. Regarding the same item, 8% agreed that Short term investments are more preferred by their group and 13% of the respondents strongly agreed with the statement. 4% of the respondents were however neutral to the question. The mode of 1 implies that on average, the investment groups in Kenya agree that Short term investments are more preferred by their group.

On setting aside funds to take advantage of unexpected opportunities, only 1% of the respondents strongly disagreed that their group often sets aside funds to take advantage of unexpected investment opportunities while 2% just disagreed. On the other hand, 48% agreed that their group often sets aside funds to take advantage of unexpected investment opportunities and 46% of the respondents strongly agreed with the statement. 4% of the respondents were however neutral to the question. Majority (48%) of the respondents were in agreement as also implied by the modal class which was found to be 4. The mode of 4 implies that on average, the investment groups in Kenya agree that their group often sets aside funds to take advantage of unexpected investment opportunities.

Table 4. 15 Portfolio Diversification

	Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**	**Modal class**
Investment in Government securities highly preferred by our group	71%	13%	3%	5%	7%	1
It is possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares	1%	0%	12%	38%	49%	5
Long term investments are more preferred by our group members	7%	2%	3%	24%	64%	5
Our group carries out an appraisal of value addition to the portfolio before investment decision is made	1%	0%	0%	38%	61%	5
Our group has a substantial investments in the financial markets	4%	18%	14%	52%	11%	4
Our group regularly invests in mutual funds	77%	5%	5%	12%	1%	1
Short term investments are more preferred by our group	68%	7%	4%	8%	13%	1
The group often sets aside funds to take advantage of unexpected investment opportunities	1%	2%	4%	48%	46%	4

Keeping in mind the objective to accomplish growth, there is requirement for investors to build up an ideal portfolio of assets that will expand their rate of return subject to their risk preference. Informed decision making on investment would help avoid risky, low return yielding assets. Njiru (2006) in line with the findings of the study observed that through appropriate risk management and portfolio management, investors can boost his returns through legitimate resource allocation and constant performance assessment of their portfolio of assets. It's possible to establish an optimal portfolio of assets that will maximize returns and minimize risk

subject to an investor's utility function. This is done by combining risk free assets and risky assets and then operating on a security market line or the capital market line at the point of tangency with the Markowitz efficient frontier if the market is at equilibrium. As indicated by Ikaria (2012), the study found out that the investment groups have enhanced their investments by making short term investments and have substantial investments in the financial markets.

Correlation Test Results

The study sought to establish correlation between the dependent variable and each of the independent variable. The dependent variable for the study was growth in wealth while the independent variables were financial literacy, portfolio diversification, capital structure and group governance. Correlation which is a statistical technique employed to show the strength of pairs of variable is used to examine the association between the independent variables above with the dependent variable. The correlation test was conducted at the 5% level of significance with a 2-tailed test. Thus, the significance critical value is 0.025 above which the association is deemed to be insignificant and vice versa. The strength of the correlation is measured based on the Pearson correlation scale. The correlation coefficient ranges from -1.0 to +1.0 and the closer the coefficient is to +1 or -1, the more closely the two variables are related. A correlation of +1 implies that there is perfect positive linear relationship between variables (Sekran, 2003). The findings illustrated in table 4.22 below show that, financial literacy, portfolio diversification, capital structure and group governance have a positive and significant association with growth in wealth of the investment groups.

The correlation coefficient for financial literacy to growth in wealth is 0.608 with a significance value of 0.000 which is less than 0.025 at the 5% level. The coefficient for the association between portfolio diversification and growth in wealth is 0.543 with a p-value of 0.000 which is also less than 0.025. From the table also, the correlation coefficient for the association between capital structure and growth in wealth is 0.389 with a p-value of 0.000 less than 0.025 depicting a significant correlation between the variables. High growth firms require additional financing for expansionary purposes, hence are more likely to go for debt finance, thus positive correlation between growth and debt, (Chieyoe, M. T. 2012). Finally, the correlation coefficient for the association between group governance and growth in wealth is 0.308 with a p-value of 0.000 which is less than 0.025 indicating a significant relationship between group governance and growth in wealth.

Table 1.9 Correlation Test Results

		Growth in wealth	Portfolio diversification
Growth in wealth	Pearson's ρ	1	0.543**
	Sig		0.000
	N	308	308
Portfolio diversification	Pearson's ρ	0.543**	1
	Sig	0.000	
	N	308	308

Influence of Portfolio diversification on Growth in wealth

Table 4.26, present a summary of regression model results. The value of r and r2 are .543 and .295 respectively. This shows that there is a positive linear relationship between portfolio diversification and growth in wealth. The r2 is the coefficient of determination which indicates that explanatory power of the independent variables is 0.295. This means that 29.5% of the variation in the variable growth in wealth is explained by the variation of the variable portfolio diversification in the model $y = \beta 0 + \beta 1x1$. The remaining 70.5% of the variation in the dependent variable unexplained by this one predictor model but by other factors.

Table 4. 26 Model summary table for growth and portfolio diversification

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.543[a]	0.295	0.293	0.837

a. Predictors: (Constant), portfolio diversification

Table 4.27 shows the results of the Analysis of Variance ANOVA on the variables portfolio diversification and growth in wealth. The test reveals that portfolio diversification has significant effect on the growth in wealth. The P value is actually 0.000 which is less than 5% level of significance implying that the coefficient of portfolio diversification is at least not equal to zero

Table 4. 27 ANOVA table growth and portfolio diversification

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	**Regression**	90.880	1	90.880	128.501	0.000b
	Residual	217.120	307	0.707		
	Total	308	308			

a. Dependent Variable: Growth
b. Predictors: (Constant), portfolio diversification

The study further determined the beta coefficients of portfolio diversification. Table 4.28 shows the results of coefficient of portfolio diversification as 0.539 which helps to generate the model y=0.000+0.539X1 for growth in wealth versus portfolio diversification this model implies that every unit increase in the measure of portfolio diversification leads to a 0.539 increase in the level of the growth in wealth. Since the p value of the t statistic of portfolio diversification is equal to zero which is less than 0.05, it implies that the coefficient of portfolio diversification is statistically significant.

Table 4. 28 Coefficients table for growth and portfolio diversification

Model		Unstandardized β	Std. Error	Standardized β	T	Sig.
1	(Constant)	-0.047	0.050		-0.932	0.352
	Portfolio diversification	0.539	0.050	0.543	10.787	0.000

a. Dependent Variable: Growth

Test for Normality

The regression model is fitted based on the assumptions that the residuals follow a normal distribution. The figure 4.6 clearly shows a normal distribution curve. The curve is not skewed to either side of the plot implying a normal distribution with a mean of 0.000 and a standard deviation of 0.998.

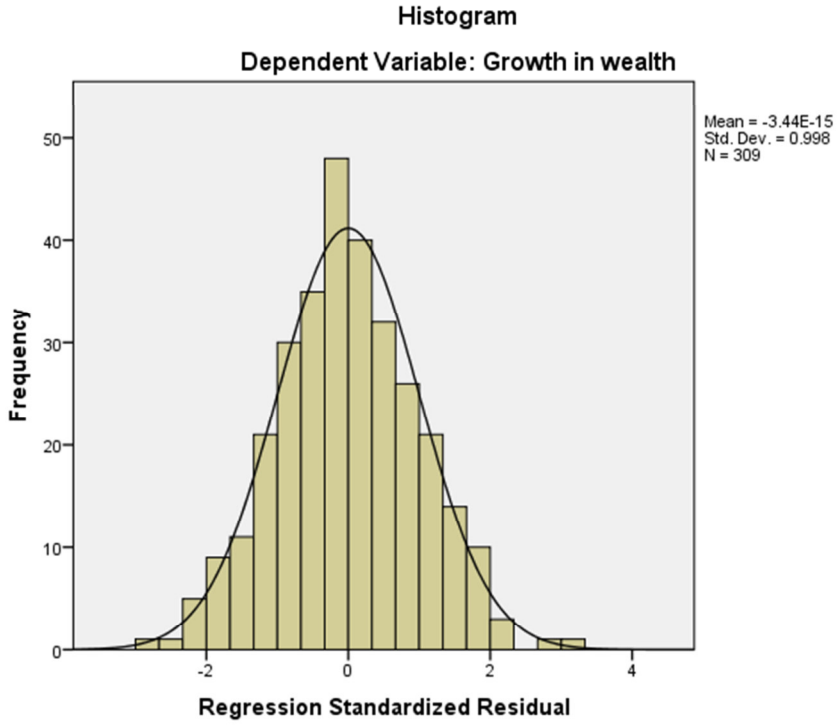


Figure 4. 5: Normality Histogram

For further normality histogram, table 4.35 represents key statistics for this test. The Kolmogorov-Smirnov normality test for the standardized residuals is significant with a significance of 0.095 which is greater than 0.05 hence fail to reject the null hypothesis that data is not normally distributed. This implies that the residuals follow a normal distribution as required for a linear regression.

Table 1.13 Normality Test

	Kolmogorov-Smirnov	Df	Sig.
Standardized Residual	0.047	308	.095

*. This is a lower bound of the true significance.

Test for Autocorrelation

It is also required that the residuals should not be auto correlated. Autocorrelation implies that adjacent observations are correlated. If the regression model violates the assumption of no autocorrelation then the predictors may be significant even though the model will have underestimated the standard errors of the predictors. The Durbin Watson value is 1.968, the upper limit for 1 predictors excluding the intercept and 310 sample size at 0.05 level of significance is 1.82019 and the lower limit is 1.80725. Durbin-Watson statistic should be in the range of 1.5 and 2.5 an indication that there is no concern of autocorrelation (Velnampy, 2011). A Durbin Watson table is depicted in (Appendix V). The calculated Durbin Watson value 1.917 is higher than the upper limit so we conclude that the residuals are not auto correlated. The Darbin Watson results are shown in table 4.36 below.

Table 1.14 Autocorrelation

Durbin-Watson statistic	Tabulated lower limit	Tabulated Upper limit
1.917	1.80725	1.82019

Test for homoscedasticity

The fitting of OLS models assume that the residual terms of the model has constant variance thereby exhibit homoscedasticity. A situation where the variance of the error term is not constant is referred to as heteroscedasticity. The fitted model was therefore examined to confirm that it meets the assumption of homoscedasticity of OLS models. A presentation of the residuals of the model showed on a scatter plot against the predicted values shows a virtual position of homoscedasticity as in figure 4.7. The residuals are randomly distributed ad do not depict any pattern of increase or decrease implying constancy. The line of best fit is constant at zero with a zero gradient which shows that the residuals are constantly equal to zero with increasing predictions of growth in wealth.

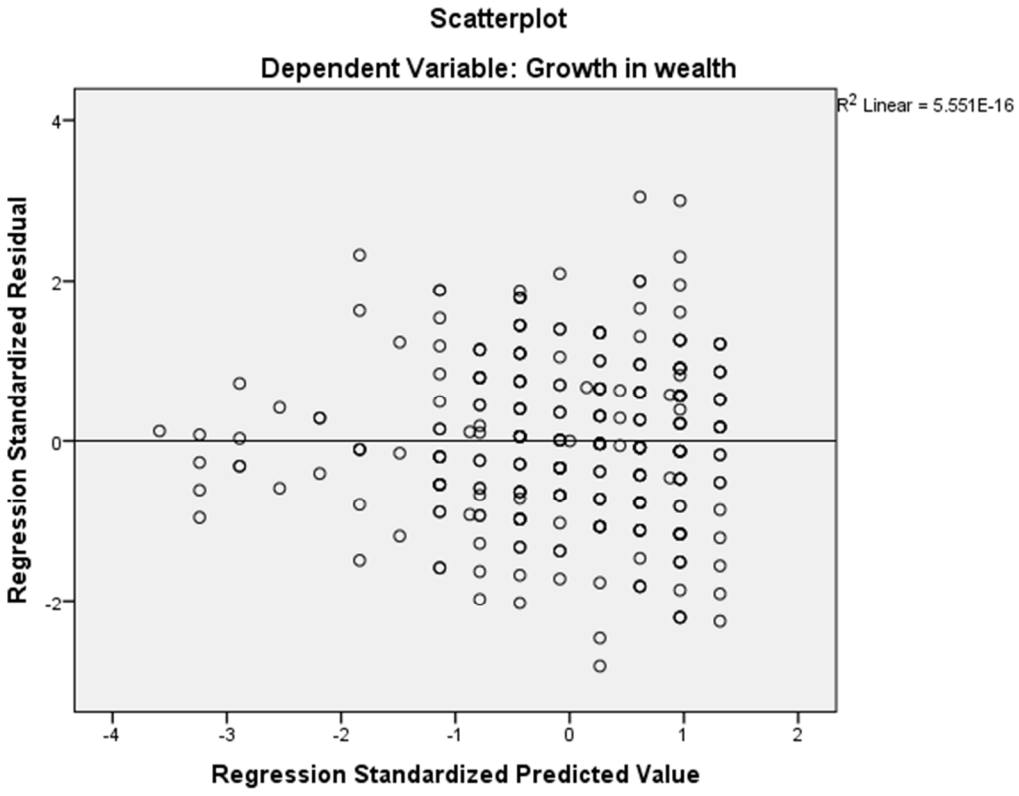


Figure 4. 6: Standardized residual scatter plot

Hypothesis Testing

The result from the regression analysis was used to test the null hypothesis of the study and conclusions drawn for the objectives. The hypotheses were tested at 5% level of significance basis to either accepted or reject them. If the calculated t-value was greater than the critical value, then the alternative hypothesis was accepted.

Table 1.16 Hypothesis test summary table

Hypothesis	Estimate	P-value	Conclusion
H_{02}: Portfolio diversification has no significant influence of on growth in wealth of investment groups in Kenya.	$\beta_2 = 0.539$	0.000	Reject H_{02}

H02: Portfolio diversification has no significant influence of on growth in wealth of investment groups in Kenya.

The p-value of the t-statistic for this variable was found to be 0.000 which is less than 0.05. The null hypothesis was rejected and the alternative hypothesis was accepted thus concluding that Portfolio diversification has a significant influence of on growth in wealth of investment groups in Kenya.

Considering the moderation effect of groups size on the relationship between portfolio diversification an performance

The study also analyzed the moderating influence of group size on the relationship between performance and portfolio diversification. This model involved generating a transformation variable as an interaction variable between group size and portfolio diversification and performing a 3 stage stepwise regression analysis.

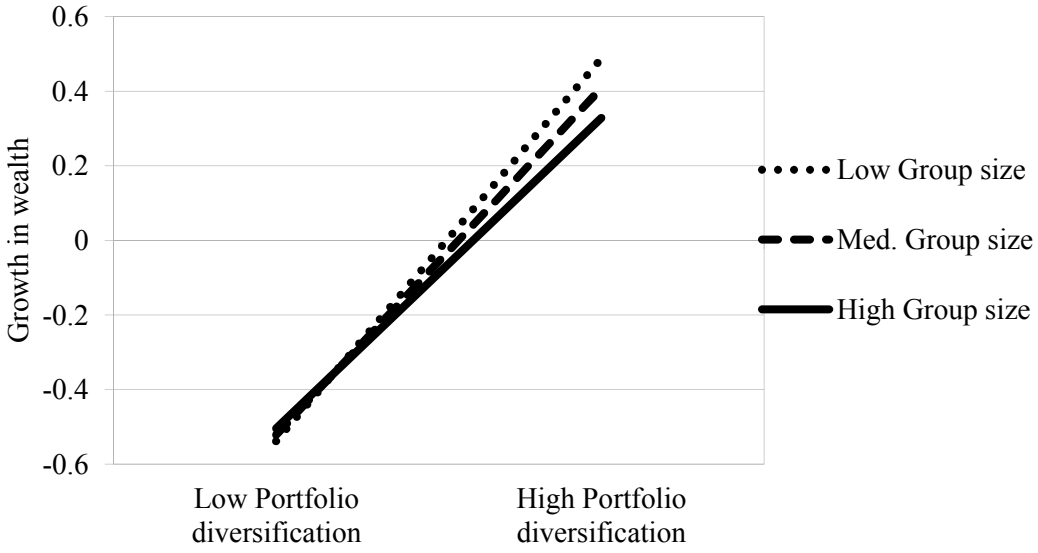
Table 4.7 shows the summary of the Moderated multiple regressions to not the moderating effect group size on the relationship between portfolio diversification and performance. Model 1 results produced an R-square of 0.311 implying that the variation in the independent variable in the model explains 31.1% of the variation in wealth growth in investment firms. The second model was found to have an R-square of 0.317. This shows that the variance of growth explained in the 2nd model is 31.7%, with an R-square change of 0.013. The R-square change in the second step is however insignificant as shown by the change in F that has a p-value of 0.138 which is greater than 0.05. the P-value of the change in F being greater than 0.05 implies that the direct inclusion of the moderating variable group size has no significant change in the R-square and no significant improvement on the model from model one to model 2. The third model was fitted adding the interaction variable of the moderator and other portfolio diversification. The third step of the MMR modeling had an R-square of 0.375 implying that the variation in wealth growth explained in the 3rd model is 37.5%. Model three is an improvement of the first two model with a significant positive change in the R-square. The change in R-square for model three is 0.053 which is significant as shown by the P-value of the F-change which was found to be less than 0.05. The p-value of the F-change is 0.000.

Model	R	R Square	Adjusted R Square	Std. Error	R Square Change	F Change	df1	df2	Sig. F Change
1	.558a	0.311	0.309	0.825	0.311	114.903	1	254	0.000
2	.563b	0.317	0.312	0.823	0.006	2.217	1	253	0.138
3	.612c	0.375	0.367	0.789	0.057	23.101	1	252	0.000

Table 4.8 shows the coefficient estimates of the three step MMR regression. From the table, model two shows that group size has insignificant direct influence on performance with a p-value of 0.138 which is greater than 0.05. Model three however shows that there is a positive influence of group size on growth in wealth with a p-value of 0.03 which is less than 0.05. The coefficient estimate of the interaction variable in model three also has a p-value which is less than 0.05 that confirms the moderating effect of group size.

Model	Variable	Unstandardized β	Std. Error	Standardized β	T	Sig.
1	(Constant)	-0.0305	0.0516		-0.5921	0.5543
	Portfolio diversification	0.5452	0.0509	0.5581	10.7193	0.0000
2	(Constant)	-0.0102	0.0532		-0.1923	0.8477
	Portfolio diversification	0.5406	0.0508	0.5534	10.6353	0.0000
	Size	0.0082	0.0055	0.0775	1.4891	0.1377
3	(Constant)	-0.0565	0.0519		-1.0885	0.2774
	Portfolio diversification	0.4646	0.0512	0.4757	9.0676	0.0000
	Size	-0.0157	0.0072	-0.1486	-2.1672	0.0312
	Portfolio diversification intersection Group size	-0.0242	0.0050	-0.3415	-4.8063	0.0000

The conclusion from the fitted model also shows that the moderating variable group size has a positive moderating effect on the relationship between portfolio diversification and growth in wealth. Increasing the group size would increase the rate of influence that portfolio diversification has on wealth growth. A graphical presentation from the model is shown in figure 4.9. It shows that with high group size, increases in portfolio diversification results into higher and faster influence to increase growth in wealth than in cases of low group size.



Summary, Conclusions and Recommendations

Introduction

This is the final chapter for the research thesis. The researcher has already done data interpretation and established the findings as per the research objectives. This chapter contains the recommendations of the study and areas of further researcher. The researcher has arranged the findings as per research objectives and concluded as per research objectives. The study sought to establish the influence of portfolio diversification on growth in wealth of investment groups in Kenya.

Influence of Portfolio diversification on Growth in wealth of Investment Groups in Kenya

This research objective was to determine the influence of portfolio diversification on growth in wealth of investment groups in Kenya. The importance of portfolio diversification in growth in wealth was evident from the findings. Various analytical methods were used to arrive at the findings. These methods included descriptive statistics, correlation analysis and regression analysis. The findings indicated that portfolio diversification contributed to growth in wealth of investment groups in Kenya. For groups which had diversified, their growth was remarkably high.

This observation was arrived since data showed that most of the groups invested in risk investments, most groups preferred long-term investments, investment appraisal was done, groups also set funds aside to take advantage of investment opportunities. The coefficient for the relationship between portfolio diversification and growth in wealth is 0.543 with a p-value of 0.000 which is also less than 0.05. Portfolio diversification also showed a significant influence on growth in wealth in the regression model with the coefficient (B1 = 0.543, t = 10.787, p= 0.001) indicating a positive effect on growth in wealth. The study had a hypothesis that portfolio diversification influences growth in wealth of investment groups in Kenya. The results revealed that portfolio diversification was statistically significant in explaining growth in wealth of investment groups in Kenya. This implied that the null hypothesis that portfolio diversification does not influence growth in wealth of investment groups in Kenya failed to be accepted and the alternative hypothesis failed to be rejected.

Conclusion

The study found that portfolio diversification influence growth in wealth of investment groups. If the investment groups diversify their portfolio, they would grow their wealth and thrive. Having a diversified portfolio grows wealth to the investment groups. Groups that had diversified their investments grew more wealth. Group size has a positive significance influence on financial literacy and growth in wealth of investment group.

Recommendations

The recommendations were made regarding the influence of portfolio diversification on growth in wealth of investment groups in Kenya. Based on the findings of the study, Conclusions were arrived at the influence portfolio diversification. With respect to the study findings presented in the above section, the study recommends as follows; Based on the inferential analysis, the study concluded that portfolio diversification significantly influences the growth of wealth in investment groups in Kenya positively. The study also concluded that portfolio diversification significantly influences the growth in wealth of investment groups in Kenya. The

conclusion was based on the inferential analysis results of the study for the objective that found portfolio diversification to have a significant positive influence on the growth in wealth of investment groups in Kenya. The study concluded that the groups carried out an appraisal of value addition to the portfolio before investment decision is made. The groups had substantial investments in the financial markets and long term investments were more preferred by the group members in the groups. However, investment in government securities was not highly preferred by their groups and the groups often set aside funds to take advantage of unexpected investment opportunities. The study concluded that the groups did not regularly invest in mutual funds and short term investments were not preferred by the groups.

Areas of Further Research

Despite following an exhaustive research method and carrying out rigorous data analysis, however, the study experienced limitations which serve as suggestions for future research as follows: From a methodological point of view, the sample and context is considered a limitation. This study was limited to the assessment of the determinants of growth in growth in wealth in the investment groups in Kenya. The investment groups studied only included those investment groups registered by KAIG. Thus, there is need for more studies to be conducted on determinants of growth and growth in wealth using for instance the views of the employees to assess the relationship that exists. Further research could be conducted in other investment groups apart from those listed by KAIG. In addition, the moderating effect of other variables such as size and group structure could be considered. Lastly, to measure the influence of determinants of growth and growth in wealth, times series data could be considered and utilized in a future study. A research can also be carried out using panel data to determine changes in asset value over time across the investment groups.

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Appendix 1 Durbin Watson tables

Critical Values for the Durbin-Watson Test: 5% Significance Level
T=200,210,220,...,500, K=2 to 21
K includes intercept

T	K	dL	dU	T	K	dL	dU	T	K	dL	dU
290	7	1.76539	1.8498	300	15	1.71385	1.90885	320	3	1.80408	1.82922
290	8	1.75825	1.85704	300	16	1.70667	1.91623	320	4	1.79775	1.83559
290	9	1.75106	1.86434	300	17	1.69946	1.92365	320	5	1.79139	1.84199
290	10	1.74384	1.87169	300	18	1.69221	1.93111	320	6	1.785	1.84844
290	11	1.73659	1.87909	300	19	1.68494	1.93863	320	7	1.77857	1.85494
290	12	1.72929	1.88655	300	20	1.67764	1.94619	320	8	1.77211	1.86147
290	13	1.72196	1.89405	300	21	1.6703	1.95379	320	9	1.76563	1.86804
290	14	1.71459	1.90161	310	2	1.80725	1.82019	320	10	1.75911	1.87466
290	15	1.70718	1.90921	310	3	1.80076	1.82672	320	11	1.75256	1.88133
290	16	1.69975	1.91686	310	4	1.79422	1.83329	320	12	1.74598	1.88804
290	17	1.69227	1.92456	310	5	1.78766	1.83991	320	13	1.73937	1.89478
290	18	1.68477	1.93232	310	6	1.78105	1.84657	320	14	1.73272	1.90156
290	19	1.67722	1.94012	310	7	1.77441	1.85328	320	15	1.72605	1.9084
290	20	1.66964	1.94798	310	8	1.76774	1.86003	320	16	1.71935	1.91527
290	21	1.66204	1.95587	310	9	1.76104	1.86683	320	17	1.71262	1.92218
300	2	1.80398	1.81735	310	10	1.7543	1.87368	320	18	1.70585	1.92913
300	3	1.79726	1.8241	310	11	1.74753	1.88058	320	19	1.69906	1.93613
300	4	1.79051	1.83088	310	12	1.74072	1.88751	320	20	1.69225	1.94316
300	5	1.78371	1.83773	310	13	1.73389	1.89449	320	21	1.6854	1.95024
300	6	1.77689	1.84463	310	14	1.72703	1.90152	330	2	1.81335	1.8255
300	7	1.77003	1.85157	310	15	1.72012	1.90859	330	3	1.80724	1.83162
300	8	1.76313	1.85856	310	16	1.71319	1.91571	330	4	1.80111	1.83779
300	9	1.75619	1.8656	310	17	1.70622	1.92286	330	5	1.79495	1.844
300	10	1.74921	1.87269	310	18	1.69923	1.93006	330	6	1.78876	1.85024
300	11	1.74222	1.87983	310	19	1.69221	1.93731	330	7	1.78252	1.85653
300	12	1.73518	1.88702	310	20	1.68516	1.94459	330	8	1.77627	1.86286
300	13	1.7281	1.89425	310	21	1.67807	1.95192	330	9	1.76999	1.86923
300	14	1.72099	1.90152	320	2	1.81037	1.82291	330	10	1.76367	1.87563