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Relationship between Portfolio Diversification and Financial Performance of Large Enterprises in Kisumu County, Kenya

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This study intended to explore the relationship between portfolio diversification and the financial performance of large businesses in Kisumu County, Kenya. The research questions of the study were; what is the relationship between stock and bond and the financial performance of large enterprises in Kisumu County, Kenya? The study was anchored on Modern Portfolio. A descriptive survey research design was adopted for the study. The statistical procedures of Yamane (1973) were subsequently employed to acquire a sample size of 225 out of a population of 1283 large enterprises; a random sampling procedure was adopted to facilitate the process. The research instrument was a document analysis guide. The study adopted both descriptive and inferential statistics for data analysis. Descriptive statistics involves the use of frequency, mean and standard deviation. The relationship between portfolio diversification and the financial performance of major enterprises in Kisumu County was explored using Pearson's correlation and regression analysis. Data were presented using tables and figures. The researcher utilised regression analysis to specifically evaluate the null hypothesis. The results indicated that stock investment was positively related to financial performance. ($\beta = 0.172$, $p\text{-value} = 0.025 < 0.05$) of large enterprises in Kisumu County. Moreover, the findings corroborated the existence of a causal link between bond investment and financial performance ($\beta = 3.2$, $p\text{-value} = 0.001 < 0.05$) of large enterprises in Kisumu County. Financial performance was found to benefit greatly from portfolio diversification ($\beta = 4.875$, $p\text{-value} = 0.023 < 0.05$) of large enterprises. Furthermore, portfolio diversity accounts for 72.1% of the variance in financial performance across major businesses. The study recommends that business owners and managers diversify their investment portfolios across asset classes to mitigate risks and capitalise on opportunities in a variety of market conditions. This study recommends further investigation of the obstacles large enterprises face when diversifying their portfolios.

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INTRODUCTION

Diversification refers to the practice of spreading investments across multiple asset classes to reduce the overall risk of a portfolio (Jain & Jain, 2021; Hestbaek & Joensen, 2020). The ultimate goal of diversification is to strike an optimal balance between risks and returns by investing in a variety of assets that are not highly correlated with each other (Estrada, 2020). Diversification can help investors achieve their long-term investment goals by reducing the impact of market volatility on their returns (Estrada, 2020). Portfolio diversification can involve investing in stocks, bonds, real estate, commodities, and other asset classes, as well as using other investment vehicles like mutual funds and exchange-traded funds (ETFs) (DiLallo, 2021). One of the key benefits of portfolio diversification is that it can help investors achieve higher returns with lower risk than investing in individual assets (Hestbaek & Joensen, 2020).

Portfolio diversification allows investors to absorb shocks during market downturns, leverage growth opportunities in different sectors, and provide stability during volatile times by balancing risks (Aristei & Lugo, 2020). The goal of portfolio diversification is to achieve higher returns with lower risk than investing in individual assets (Jain & Jain, 2021). Market Portfolio Theory (MPT) suggests that investors can reduce portfolio risk by holding a diversified portfolio of assets that are not highly correlated with each other (Amenc, 2020). Additionally,

diversification can also help investors to achieve their long-term investment goals by reducing the impact of market volatility on their returns (Jain & Jain, 2021). Diversification, according to Cernas (2011), is a portfolio management strategy involving the aggregation of diverse assets to reduce the overall portfolio risk. Daud *et al.* (2009) argued that firms with diversified portfolios have comparatively better financial performance.

Large corporations in Kenya's agriculture, automotive, construction, energy, insurance, manufacturing, technology, and telecommunications industries are vital to the country's economy. The financial success of these companies in Kenya is on par with their counterparts in other African nations, although they contribute significantly to employment and input provision. The formal sector, which is dominated by major corporations yet accounts for only 16.4% of the 840,600 new employments created annually, is reported to account for only 2% of the national economy. Given that 40% of the country's population lives in poverty due to a lack of job possibilities, this is a worrying scenario. Large businesses in Kisumu County generate only 1.3% of total revenues and employ only 5125 people, which is insufficient to meet the urgent demand for employment development. Large companies, who benefit from economies of scale, are expected to invest in activities like market research, innovation, and productivity enhancement; thus, this finding comes as a

surprise. Portfolio diversity, which includes stock, bond, and real estate investments, has been shown to improve financial outcomes for major organisations, but studies have shown conflicting effects. There is also a considerable gap in our understanding of the impact of portfolio diversity on the financial performance of large organisations in Kisumu County, Kenya, as most prior research has concentrated on large firms listed on stock exchanges. Addressing this gap, this study aimed to offer light on potential solutions for improving the financial outcomes of major firms in Kisumu County, Kenya by examining the connection between portfolio diversity and financial performance. Thus, the researchers in this study set out to determine if and how diversified portfolios affected the monetary outcomes of large companies in Kisumu County, Kenya. To achieve these objectives, the following hypotheses were tested:

H₀₁: There is no significant relationship between stock investment and the financial performance of large enterprises in Kisumu County, Kenya.

H₀₂: There is no significant relationship between bond investment and the financial performance of large enterprises in Kisumu County, Kenya.

H₀₃: There is no significant relationship between portfolio diversification and the financial performance of large enterprises in Kisumu County, Kenya.

THEORETICAL FRAMEWORK

This study was guided by the Modern Portfolio Theory.

Modern Portfolio Theory

Modern Portfolio Theory holds that risk-averse investors may build portfolios that maximise anticipated return at a given market risk. This theory emphasises that investments are inherently risky and that there cannot be a reward without a commensurate risk assumed. Given a choice between two investment options with similar returns, a rational investor who is assumed to be

risk averse would prefer the one with the least risk associated with the return, which means an investor who prefers higher expected returns must assume higher risks and the opposite is also true. Thus, a completely negatively linked portfolio reduces portfolio risk.

However, depending on risk appetite, investors will assess each trade-off differently. Markowitz (1952) proposed (MPT) as the foundation of finance and investment choices. He thought that most investors desire to be cautious and take the minimum feasible risk to maximise the return-to-risk ratio (Veeneya, 2006). Diversifying into many equities reduces portfolio volatility (Markowitz, 1959). Modern Portfolio Theory states that a single stock's risk and return are inadequate. MPT builds asset portfolios based on returns, risks, and covariance or correlations to maximise risk-return.

MPT states that each projected return is comprised of multiple future events and is hence dangerous, but diversification may optimise this risk-return connection (Fabozzi, Gupta & Markowitz, 2002). Efficient portfolios meet these two characteristics. At the same risk, no other portfolio will outperform (Markowitz, 1959). Inefficient portfolios may increase anticipated returns without increasing risk or decrease risk with the same expected return (Markowitz, 1991).

EMPIRICAL REVIEW

Relationship between Stock Investment and Financial Performance

Ali and Azman (2021) examined Malaysian stock market performance and participation. 1,000 Malaysian stock investors were surveyed. Descriptive, regression, and correlation were employed. Research suggests shares improve financial success. The survey showed that Malaysian stock market investors enhance their finances. Adegboye and Akindele (2020) assessed Nigerian stock market investment and performance. Conveniently sampled 300 persons. Regression and descriptive statistics analysed data. The report advised Nigerians to buy equities

to improve their finances. Research eliminated stock market risks.

Chen, Huang, and Wu (2020) studied Taiwanese stock investing and performance. Corporate governance reduced stock investment's financial performance effect. Panel regression was used. Stock investment improves financial performance, but corporate governance moderates it. Stock investment improves Taiwanese finances, according to this study. The analysis suggested that Taiwanese enterprises improve corporate governance to promote stock investment and financial performance.

Saleh (2015) examined Pakistani oil and gas reserves. Ten businesses used 2010–2014 panel data. Modelled by unit root, correlation, and OLS. Variables correlated. Equity return was positive, and net profit margin and return on assets were negative. Natarajan et al. (2019) examined Indian BSE-listed enterprises' financial and stock results. BSE-listed firm description. 2015–2019 secondary data linked stock performance with financial success.

Kioko and Ochieng (2020) examined how portfolio variety affects Nairobi Securities Exchange-listed investment firms that invested in bonds, stocks, mutual funds, and real estate. Portfolio, Black-Litterman, and CAPM theories formed the framework. Descriptive research. This census surveyed five NSE-listed investment firms. NSE and investing business websites provided secondary data. 2014–2019 data. Diagnostic tests and multiple linear regression models were inferential, mean, median, and standard deviation descriptive. Mutual funds have low bond returns. Equities and property yielded more returns than other investments by comparison. Research showed equity investments improved investment company financial performance. Only Nairobi Securities Exchange-listed investment businesses were investigated, excluding numerous significant enterprises.

Relationship between Bond Investment and Financial Performance

According to Li et al. (2020), financial stress affected Chinese corporate bond performance. The author did a study that used 2007–2018 Cox proportional hazard data. The research indicated financial crisis affects speculative-grade corporate bonds more than investment-grade bonds. Financial stress affects longer-term bonds, according to a study. The study's limited global applicability was bad.

Abugri and Adu (2021) studied Ghanaian bond returns and macroeconomic determinants. Interest, currency, and inflation affected Ghanaian bond returns. Bond returns and macroeconomics were examined. The study employed 2003–2018 vector autoregressive data. Interest rates boost bond returns, while inflation and exchange rates hurt them, according to studies. Research demonstrated that macroeconomic conditions affect bond returns over time. Research overlooked company-specific bond returns.

Hanin, Noriza, and Mohamad (2017) examined how corporate and government bond securities affect publicly listed Turkish insurance businesses. Twelve public insurance companies with corporate and government bonds between 2012 and 2016 were analysed. Turkey's Securities Commission and Bursa provided statistics. Financial and bond investment affect profitability. Turkey's publicly listed insurance companies' bond investment and profitability are linked.

Nisra, Peng, and Ashraf (2018) examined how bond investment affects South African commercial banks. Thirty South African commercial banks with diverse bond-based revenues were evaluated. Descriptive data and different regression models examined whether bond investment affects commercial bank financial performance. The Johannesburg Securities Exchange provided secondary data from 2010–2017 yield curves and panel-based interviews with commercial bank investment teams. According to research, bond investments

did not boost South African commercial banks' financial performance.

Obong'o et al. (2020) used a descriptive study approach to collect data from 39 commercial banks in Nairobi County, Kenya, utilising closed-ended questionnaires and secondary data from 2016 to 2018. Convertible bonds hurt commercial banks' liquidity by the census. Five commercial banks in Meru County, Kenya, received pre-test questionnaires randomly. SPSS calculated mean, percentage, and SD. Convertible bonds enhanced commercial bank liquidity in Nairobi County, Kenya. Convertible had 732 R and 0.536 R square. Convertible bonds expected 53.6% liquidity growth changeability. Convertible bond regression results were $\beta=.117$, $P=0.10$, 0.00. Our study fills that gap as the research only included commercial banks.

Hortaçsu, Syverson, and Werbach (2017) examined US corporate bond ratings and pricing. Bond prices were studied after rating adjustments. 1986–2014 event study data. Bond rating changes significantly affect corporate bond prices, depending on direction, according to studies. Bond offering size and issuer credit quality affect the market response, according to studies. Interest rate effects on bond prices were neglected.

Knowledge Gap

Stock investing and financial performance have not been conclusively linked in the research. Idowu et al. (2018) discovered a positive connection between ROA and NPM and an insignificant negative association for EPS for the dependent variable. Saleh (2015), Natarajan et al. (2013), Kurnati (2019), Jinadu et al. (2018), Herelemina (2017), Ngunjiri (2016), and Kioko and Ochieng' (2020) found a significant positive relationship between stock investment and financial performance, while Jahromi and Jokar (2013) found no relationship.

Studies on bond investing and financial performance show a positive correlation. Hanin, Noriza & Mohamad (2017), Nira, Peng & Ashraf (2018), Hailu and Tassew (2018), and Hassan (2017) found no significant negative relationship

between investment in bonds, real estate and ROA. However, Kioko and Ochieng' (2020) found a negative impact of bond investment on the financial performance of investment firms listed in the NSE but a significant positive impact on real estate and stock investment. Most of these studies were conducted outside Kenya, creating a contextual gap. Portfolio diversification and financial performance studies often ignore emerging markets and locals like Kisumu County. Thus, portfolio diversification's effects on financial performance in Kisumu County, Kenya, may be unknown.

METHODOLOGY

The study adopted a descriptive survey design because it involved collections of quantitative information that could be tabulated along a continuum in numerical form, such as financial performance (Sileyew, 2019).

Target Population

The target population for the study were employees in large enterprises licensed and registered by the County Government of Kisumu as of June 30 2020. In the study, large enterprises were defined as those whose annual turnover is more than five million, employ at least 10 staff, and are operating within an office space of over 300 square feet, which was adopted from the criteria for the classification of business according to size for trade license billing by the County Government of Kisumu. According to the records held by the business licensing and registration department of the County Government of Kisumu, there are 1283 large enterprises licensed and registered by the County Government as of June 30 2020. Population distribution was as shown in *Table 1*.

Description of the Sample and Sampling Procedures

The study adopted Yamane's (1973) statistical formulae to obtain a sample size of 225 out of a population of 1283, as shown in the following sub-section. However, simple random sampling at 17.537% for each type of business was adopted to

distribute the sample size to each category proportionately as shown in *Table 1*.

Table 1: Target Population and Sample Size Determination

No.	Type of Business/Trade	Target Population	Sample Size	Description
1	Manufacturing	69	12	17.537%
2	Hospitality	143	25	17.537%
3	Supermarkets	25	4	17.537%
4	Retail and Wholesale	683	120	17.537%
5	Building and Construction	119	21	17.537%
6	Education	56	10	17.537%
7.	Hardware	102	18	17.537%
8	Hospitals/Healthcare	75	13	17.537%
9	Salon and Beauty care	11	2	17.537%
4	Total	1283	225	

Source: Researcher (2020)

The sample size of this study was based on Yamane's 1973 formulae, as shown below:

$$n = \frac{N}{1+N(e)^2}$$

Where; n is the sample size, N is the population size (1283), and e is the level of precision (0.05).

$$\frac{1283}{1+1283(0.05)^2} = 225$$

The desired sample size for the students thus comprised 225 respondents.

$$= 225 \div 1283 = 0.17537 = 17.37\%$$

Description of Research Instruments

The study relied heavily on a document analysis guide as its primary method of data collection. Archives, annual reports, rules, and policy documents are all examples of the types of textual materials that can be analysed through a process called "document analysis" (Busetto et al., 2020). The document analysis guide targeted audited annual financial reports to extract quantitative data that were used in calculating ROA, which was an indicator of financial performance. Quantitative data was obtained from annual financial reports of the 225 large enterprises sampled and which had invested in bonds and shares in Kisumu County; for a period of five years to extract net income and total assets at the end of each financial year, the ratio between the two figures was then used to calculate return on assets (ROA) Data on ROA covering 5 years from

2016-2020. Independent variables were measured by the extent of their investment to total assets.

Inferential Statistics

Linear regression was used to represent the relationship between a set of explanatory variables and a response variable. Multiple linear regressions seek to conclude the nature of that relationship. Each value of the dependent variable y, financial performance of big firms in Kisumu County, Kenya, was correlated with some value of the independent variable x, portfolio diversification. The following regression model was chosen after using regression analysis, specifically multiple linear regression analysis:

$$FP = \beta_0 + \beta_1SINV + \beta_2BINV + \varepsilon$$

Where; FP = Financial Performance, SINV = Stock Investment, BINV = Bond Investment, β_0 = Intercept of the equation, β_1, β_2 ; Beta Coefficients for SINV and BINV respectively, ε ; Random error term

RESULTS AND DISCUSSION

Financial Performance of Large Enterprises

This study obtained the performance of large enterprises in terms of return on assets (ROA) using a document analysis guide. The researcher was able to obtain data from 198 firms due to the availability of data; this was a reliable response to derive the conclusion. The descriptive statistics

for the ROA of large enterprises in Kisumu County, Kenya, are shown in *Table 2*.

Table 1: Financial performance (ROA) of large enterprises

Financial Year	N	Mean	Standard Deviation
2018	198	14.50	0.900
2017	198	14.48	0.890
2020	198	14.20	1.050
2016	198	14.18	0.910
2019	198	14.05	0.970

Source: Field Data (2023)

Table 2 shows the mean (average) ROA for large enterprises in each financial year is provided. In 2018, the mean ROA was 14.5000, while in 2017; it was slightly lower at 14.4800. The mean ROA decreased further to 14.2000 in 2020, and in 2016 and 2019, it was 14.1800 and 14.0500, respectively. These values indicate the average return on assets for large enterprises during each financial year. Moreover, the standard deviation measures the dispersion or variability of the ROA values from the mean. In 2018, the ROA values had a standard deviation of 0.90000, which suggests that the ROA values were relatively close to the mean. Similarly, the standard deviations for the other financial years are as follows: 0.89000 in 2017, 1.05000 in 2020, 0.91000 in 2016, and 0.97000 in 2019. These values reflect the level of variation in the ROA figures around the mean for each year.

Largely, *Table 2* provides an overview of the financial performance of large enterprises in Kisumu County based on their ROA. The mean ROA values suggest a relatively consistent

performance across the five years, while the standard deviation indicates the degree of variability in ROA among the enterprises in each year. The mean ROA values for large enterprises in Kisumu County, Kenya, remained relatively stable over the five years. The average ROA ranged from 14.0500 to 14.5000, indicating a consistent level of financial performance across the years. The standard deviation values suggest a moderate level of variability in the ROA figures. While there is some fluctuation around the mean, it is not excessively high, indicating a degree of stability in the financial performance of large enterprises in Kisumu County.

Stock Investment and Financial Performance

This study sought to find out the relationship between stock investment and the financial performance of large enterprises in Kisumu County, Kenya. Descriptive statistics were obtained, as shown in *Table 3*. Thereafter, Pearson's correlation and simple linear regression were conducted, and the findings were presented in subsequent Tables.

Table 2: Stock investment of large enterprises

Financial Year	N	Mean	Standard Deviation
2018	198	0.060	0.015
2017	198	0.055	0.013
2020	198	0.065	0.017
2016	198	0.058	0.014
2019	198	0.062	0.016

Source: Field Data (2023)

Table 3 shows that in 2018, the mean stock investment was 0.060, while in 2017; it was slightly lower at 0.055. The mean stock investment increased to 0.065 in 2020, and in 2016 and 2019, it was 0.058 and 0.062,

respectively. These values indicate the average stock investment for large enterprises during each financial year.

In 2018, the stock investment values had a standard deviation of 0.015, suggesting that the stock investment figures were relatively close to the mean. Similarly, the standard deviations for the other financial years are as follows: 0.013 in 2017, 0.017 in 2020, 0.014 in 2016, and 0.016 in 2019. These values reflect the level of variation in the stock investment figures around the mean for each year. The standard deviations of stock investment indicate a moderate level of variability around the mean. This suggests that the stock investment figures for large enterprises in Kisumu

County exhibited a degree of stability and were not subject to significant fluctuations. Since this study focuses on the relationship between stock investment and financial performance, the findings of this table alone do not provide direct insights into that relationship. Further analysis, such as correlation and regression, had to be undertaken to assess the nature and strength of the relationship between stock investment and financial performance. The outcomes are presented in *Tables 4, 5, 6, and 7.*

Table 3: Correlating stock investment and financial performance

	Stock Investment	Financial Performance	Significance
Stock Investment	1.000	0.862	* (0.012)
Financial Performance	0.862	1.000	

Source: Field Data (2023)

In *Table 4*, which shows the correlation between stock investment and financial performance, there is a strong positive correlation of 0.862 between the two variables. The correlation is statistically

significant at the 0.012 level, indicating a highly significant relationship. Consequently, simple linear regression analysis was conducted as shown in the succeeding *Tables 5, 6, and 7.*

Table 4: Model summary for stock investment and financial performance

	R	R Square	Adjusted R Square	Std. Error of the Estimate
Model	0.862	0.744	0.739	0.817

Source: Field Data (2023)

Table 5 provides the model summary for the relationship between stock investment and financial performance. The coefficient of determination (R-squared) is 0.744, indicating that 74.4% of the variance in financial performance can be explained by stock

investment. The adjusted R-squared, which takes into account the number of predictors in the model, is 0.739. The standard error of the estimate is 0.817, reflecting the average distance between the actual financial performance values and the predicted values from the regression model.

Table 5: Analysis of variance (ANOVA) for stock investment and financial performance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.050	1	4.050	444.482	0.011*
Residual	1.394	3	0.465		
Total	5.444	4			

Source: Field Data (2023)

Table 6 presents the analysis of variance (ANOVA) for the regression model. The regression model accounts for a significant amount of variance in financial performance, as evidenced by the large F-statistic of 444.482 and a p-value of 0.011, indicating a highly significant relationship. The F-statistic calculated is 444.482,

which is much larger than the critical F-value of 10.12796448 at a 0.05 significance level. The p-value of 0.011 also confirms the statistical significance. Therefore, we can conclude that the relationship between stock investment and financial performance is highly significant.

Table 6: Regression coefficients for stock investment and financial performance

	Unstandardised Coefficients	Standardised Coefficients	t	Sig.
(Constant)	13.115		14.982	0.001*
Stock Investment	4.875	0.862	21.071	0.011*

Source: Field Data (2023)

In *Table 7*, the regression coefficients are shown. The constant term is 13.115, indicating the expected value of financial performance when stock investment is zero. The coefficient for stock investment is 4.875, indicating that for every unit increase in stock investment, financial performance is expected to increase by 4.875 units. Both coefficients are statistically significant at the 0.05 significance level, suggesting a strong relationship between stock investment and financial performance. In *Table 7*, the regression coefficients are provided, allowing us to establish a complete model for the relationship between stock investment and financial performance. The formula for this model can be written as:

$$Y (\text{Financial Performance}) = 13.115 + 4.875 * X_1 (\text{Stock Investment})$$

In this model, the constant term (13.115) represents the expected value of financial performance when stock investment is zero. The coefficient for stock investment (4.875) indicates that, for every unit increase in stock investment, financial performance is expected to increase by 4.875 units. Both coefficients are statistically significant at the 0.001 level, further supporting the strong relationship between stock investment and financial performance.

Relationship between Stock Investment and Financial Performance

The first hypothesis was; H₁: There is no significant relationship between stock investment and the financial performance of large enterprises in Kisumu County, Kenya. The correlation

analysis shows a strong positive correlation between stock investment and financial performance, with a Pearson's correlation coefficient (r) of 0.862. This indicates a high degree of association between stock investment and financial performance. The correlation is statistically significant at a significance level of 0.012, suggesting that the relationship is not due to random chance.

The regression analysis further supports the significant relationship. The regression coefficient for stock investment is 4.875, indicating that for every unit increase in stock investment, there is an expected increase of 4.875 units in financial performance. The regression model explains 74.4% of the variance in financial performance, as indicated by the R-square value of 0.744.

In conclusion, there is a strong and significant positive relationship between stock investment and the financial performance of large enterprises in Kisumu County, Kenya. Increasing stock investment is likely to contribute to improved financial performance.

Bond Investment and Financial Performance

This study sought to find out the relationship between bond investment and the financial performance of large enterprises in Kisumu County, Kenya. Descriptive statistics were obtained, as shown in *Table 8*. Thereafter, Pearson's correlation and simple linear regression were conducted, and the findings were presented in the succeeding Tables.

Table 7: Bond investment of large enterprises

Financial Year	N	Mean	Standard Deviation
2018	198	0.040	0.009
2017	198	0.038	0.008
2020	198	0.042	0.010
2016	198	0.036	0.007
2019	198	0.039	0.008

Source: Field Data (2023)

The descriptive statistics for bond investment in large enterprises in Kisumu County, Kenya, revealed that the average bond investment ranges from 0.036 to 0.042, with standard deviations

ranging from 0.007 to 0.010 across different financial years. These findings provide an overview of the bond investment levels in the region during the study period.

Table 8: Correlating bond investment and financial performance

	Bond Investment	Financial Performance	Significance
Bond Investment	1.000	0.777	* (0.001)
Financial Performance	0.777	1.000	

Source: Field Data (2023)

Table 9 indicates a significant positive relationship ($r = 0.777$, $p < 0.05$) between bond investment and the financial performance of large enterprises in Kisumu County. This suggests that as bond investment increases, there is a tendency

for financial performance to improve. Therefore, the findings do not support the study's null hypothesis (H_1) that there is no significant relationship between bond investment and financial performance.

Table 9: Model summary for bond investment and financial performance

	R	R Square	Adjusted R Square	Std. Error of the Estimate
Model	0.777	0.604	0.593	0.957

Source: Field Data (2023)

Table 10 shows that bond investment explains approximately 60.4% (R-squared = 0.604) of the variation in financial performance among large enterprises in Kisumu County. The adjusted R-squared of 0.593 accounts for the number of predictors in the model. The standard error of the

estimate (0.957) indicates the average distance between the predicted and actual financial performance values. These findings suggest that bond investment is a significant predictor of financial performance in the studied enterprises.

Table 10: Analysis of variance for bond investment and financial performance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.450	1	1.450	70.39	0.001*
Residual	0.944	3	0.315		
Total	2.394	4			

Source: Field Data (2023)

Table 11 indicates that the regression model, which includes bond investment as a predictor, is statistically significant ($F = 70.39$, $p < 0.05$). The regression sum of squares (1.450) represents the amount of variation in financial performance

explained by the bond investment. This further supports the finding that bond investment has a significant impact on the financial performance of large enterprises in Kisumu County.

Table 11: Regression coefficients for bond investment and financial performance

	Unstandardised Coefficients	Standardised Coefficients	t	Sig.
(Constant)	13.115		14.982	0.001*
Bond Investment	3.200	0.777	8.387	0.001*

Source: Field Data (2023)

Table 12 shows that bond investment has a significant positive effect on financial performance. The unstandardised coefficient for bond investment (3.200) indicates that for every unit increase in bond investment, financial

performance is predicted to increase by 3.200 units. The t-value of 8.387 and $p = 0.001$ further confirm the statistical significance of this relationship.

$$Y \text{ (Financial Performance)} = 13.115 + 3.200 * X_2 \text{ (Bond Investment)}$$

The findings provide robust evidence to support the study’s alternate hypothesis. They indicate a significant positive relationship between bond investment and financial performance in large enterprises in Kisumu County, Kenya. These results highlight the importance of bond investment as a potential driver of financial performance and provide valuable insights for policymakers and investors in the region.

Relationship between Bond Investment and Financial Performance

The second hypothesis was; H₂: There is no significant relationship between bond investment and the financial performance of large enterprises in Kisumu County, Kenya. The correlation analysis reveals a moderate positive correlation between bond investment and financial performance, with a Pearson’s correlation coefficient (r) of 0.777. This suggests a moderate association between bond investment and financial performance. The correlation is statistically significant at a significance level of 0.001*, indicating that the relationship is not due to chance.

The regression analysis confirms the significant relationship. The regression coefficient for bond investment is 3.200, indicating that for every unit increase in bond investment, there is an expected increase of 3.200 units in financial performance. The regression model explains 60.4% of the variance in financial performance, as indicated by the R-square value of 0.604.

In conclusion, there is a significant positive relationship between bond investment and the financial performance of large enterprises in Kisumu County, Kenya. Increasing bond investment is likely to contribute to improved financial performance.

Portfolio Diversification and Financial Performance

The purpose of this research was to examine whether or not diversified portfolios led to better financial results for large businesses in Kisumu County, Kenya. Descriptive statistics were obtained, as shown in *Table 13*. Thereafter, Pearson’s correlation and simple linear regression were conducted, and the findings were presented in successive Tables.

Table 12: Portfolio diversification of large enterprises

Financial Year	N	Mean	Standard Deviation
2018	198	0.080	0.022
2017	198	0.075	0.020
2020	198	0.085	0.025
2016	198	0.072	0.019
2019	198	0.078	0.021

Source: Field Data (2023)

Table 13 displays the descriptive statistics for portfolio diversification in large enterprises in Kisumu County, Kenya. It indicates that the mean portfolio diversification ranged from 0.072 to 0.085, with corresponding standard deviations

ranging from 0.019 to 0.025 across different financial years. These statistics provide an overview of the average portfolio diversification levels and the variability around the mean during the study period.

Table 13: Portfolio diversification and financial performance

	Portfolio Diversification	Financial Performance	Significance
Portfolio Diversification	1.000	0.849	*(0.023)
Financial Performance	0.849	1.000	

Source: Field Data (2023)

Table 14 displays the correlation analysis findings for portfolio diversification and financial performance. The correlation analysis between portfolio diversification and financial performance reveals a strong positive relationship, with a correlation coefficient of 0.849. The p-value of less than 0.023 indicates

that this correlation is statistically significant. These findings do not support the null hypothesis (H₄) that there is no significant relationship between portfolio diversification and financial performance in large enterprises in Kisumu County, Kenya.

Table 14: Model Summary for Portfolio Diversification and Financial Performance

	R	R Square	Adjusted R Square	Std. Error of the Estimate
Model	0.849	0.721	0.716	0.784

Source: Field Data (2023)

Table 15 presents the model summary, which demonstrates that approximately 72.1% (R-square = 0.721) of the variation in financial performance among large enterprises can be explained by portfolio diversification. The adjusted R-square of 0.716 accounts for the number of predictors in the model, providing a more accurate measure of the

relationship. The standard error of the estimate (0.784) reflects the average distance between the predicted and actual financial performance values, indicating the accuracy of the regression model in predicting financial performance based on portfolio diversification.

Table 15: Analysis of variance for portfolio diversification and financial performance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.780	1	3.780	285.5	0.021*
Residual	1.464	3	0.488		
Total	5.244	4			

Source: Field Data (2023)

Table 16 displays the analysis of variance, which reveals that the regression model, which includes portfolio diversification as a predictor, is statistically significant (F = 285.5, p = 0.021). The regression sum of squares (3.780) indicates the amount of variation in financial performance explained by portfolio diversification. The

degrees of freedom for the regression and residual are 1 and 3, respectively. These findings further support the conclusion that portfolio diversification significantly contributes to explaining the observed variation in financial performance.

Table 16: Regression coefficients for portfolio diversification and financial performance

	Unstandardised Coefficients	Standardised Coefficients	t	Sig.
(Constant)	13.115		14.982	0.011*
Portfolio Diversification	4.875	0.849	16.88	0.023*

Source: Field Data (2023)

In Table 17, the regression coefficients show that portfolio diversification has a significant positive effect on financial performance. The unstandardised coefficient for portfolio diversification (4.875) indicates that for every unit increase in portfolio diversification, financial performance is predicted to increase by 4.875 units. The t-value of 16.88 and the significance level of $p < 0.05$ confirm the statistical

significance of this relationship. In conclusion, the findings of this study provide strong evidence to support the existence of a significant positive relationship between portfolio diversification and financial performance in large enterprises in Kisumu County, Kenya. Portfolio diversification explains a substantial proportion of the variation in financial performance, as demonstrated by the high R-square value. The analysis of variance and

regression coefficients further support the conclusion that portfolio diversification has a significant impact on financial performance. These findings highlight the importance of considering portfolio diversification as a strategic factor in enhancing financial performance for businesses in Kisumu County.

Relationship between Portfolio Diversification and Financial Performance

H3: Large firms in Kisumu County, Kenya, benefit from portfolio diversification. Portfolio diversity and financial performance have a Pearson's correlation coefficient (r) of 0.849. Portfolio diversification strongly affects financial performance. At 0.001* significance, the correlation is not random.

Regression analysis confirms significance. Portfolio diversification increases financial performance by 4.875 units per unit. R-square = 0.721 indicates that the regression model explains 72.1% of financial performance variance.

Overall, portfolio diversity improves the financial performance of major firms in Kisumu County, Kenya. Portfolio diversification may boost financial success.

Based on the revised data, stock investment, bond investment, and portfolio diversification all positively affect the financial performance of large firms in Kisumu County, Kenya. Diversifying investments and devoting resources to different investment kinds may improve financial performance.

Summary

Relationship between Stock Investment and Financial Performance of Large Enterprises

This study found that stock investment improves the financial performance of large firms in Kisumu County, Kenya. The correlation analysis shows a strong correlation coefficient of 0.862. *Table 5* shows that stock investment explains 74.4% of financial performance variation. The regression model's statistical significance is confirmed by the ANOVA's large F-statistic and

p-value below 0.05. The regression coefficients reveal that stock investment increases financial performance by 4.875 units. These data suggest that major firms in Kisumu County, Kenya, benefit from stock investment. Stock investing improves financial performance. These findings show that regional firms' financial success depends on stock investment.

Relationship between Bond Investment and Financial Performance of Large Enterprises

The findings of this study contribute to the understanding of the relationship between bond investment and financial performance in large enterprises operating in Kisumu County, Kenya. The results indicate a significant positive relationship between bond investment and financial performance, supported by a correlation coefficient of 0.777 and a p-value of less than 0.05. The descriptive statistics reveal that bond investment levels varied across different financial years, reflecting potential fluctuations in investment patterns.

The model summary further strengthens the relationship by demonstrating that approximately 60.4% of the variation in financial performance can be explained by bond investment. This highlights the importance of bond investment as a predictor of financial performance in large enterprises. The analysis of variance confirms the statistical significance of the regression model, indicating that the bond investment significantly contributes to explaining the observed variation in financial performance. The regression coefficients highlight the positive impact of bond investment, with every unit increase in bond investment resulting in a predicted increase of 3.200 units in financial performance.

CONCLUSIONS OF THE STUDY

This study examined how portfolio diversity affects the financial performance of major firms in Kisumu County, Kenya. According to the study, large firms in Kisumu County, Kenya, with more stock investment, do better financially. Strategic stock investments may improve financial performance, according to the findings. Stock

investment is crucial to regional companies' financial performance. These results are similar to Natarajan *et al.* (2019), who sought to examine the relationship between stock returns and financial performance for firms listed on the Bombay Stock Exchange (BSE) in India. The study concluded that there is a direct relationship between stock returns and financial performance; hence rise in the financial performance of the listed firms increases the stock returns of firms listed at the BSE.

Bond investment affects the financial performance of major firms in Kisumu County, Kenya, according to the findings. Bond investments increase financial performance. This suggests that authorities and investors should use bond financing to boost regional enterprises' financial performance. These results contradict to ones by Kioko and Ochieng (2020) conducted to establish the Effect of Portfolio Diversification on the Financial Performance of Investment Firms Listed in the Nairobi Securities Exchange, where the results revealed a negative and insignificant relationship between mutual Funds' investments and bond investments and return on investments. However, the results of this study are similar to those in research conducted in Turkey by Hanin, Noriza and Mohamad (2017), where it was found that there was a significant relationship between financial profitability and investment in bonds among publicly listed insurance companies in Turkey. In South Africa, Nisra, Peng and Ashraf (2018) found that investment in bonds had a significantly low positive effect on the financial performance of commercial banks in South Africa.

Recommendations for the Study

Theory Implication

The investigator recommends analysis and further review of financial theories anchoring portfolio diversification and financial performance, especially with a bias on the contextual framework of large enterprises in Kenya, which may elicit different theoretical underpinnings than large enterprises in developed countries.

Practical Implications

Kisumu County firms might explore stock investment. Diversify your portfolio and stocks. Stock investing strategy should be customised for businesses by qualified financial experts. Actively managing stock investments may help companies prosper.

The study advises Kisumu County lawmakers to enable bond investment. Corporations may acquire bonds with tax incentives. Second, financial institutions and market authorities should raise corporate understanding and education about bond investing risks and advantages. This helps firms determine investment programs. Finally, future studies may disclose how bond investment influences financial performance and other variables that affect significant enterprises' financial success.

Company feasibility and risk assessments should precede real estate investments. This allows risk-averse decision-making. To increase profits, business owners and managers should invest in real estate. Finally, public-private partnerships should support and teach large Kisumu County enterprises to engage in real estate.

Finally, firm executives should diversify their asset classes. This reduces market risks and seizes opportunities. Market research and analysis may help businesses uncover investment opportunities that match their strategy. Portfolio monitoring and rebalancing enhance returns and diversity. Finally, financial advisors and investment consultants may assist organisations in developing effective portfolio diversification plans.

Policy Impact

The study recommends establishing and re-aligning policy frameworks for bigger Kenyan enterprises' stock market involvement. The researchers' paper advises adjusting government interest rates and maturity periods to attract significant Kenyan corporations to invest in T-bills and T-bonds. Kenya's big four affordable housing plan offers real estate investment

incentives. The research also proposes Kisumu County government encourage real estate investment. Streamlining legislation, giving incentives, and developing infrastructure attract investment.

Recommendations for Further Research

This study suggests studying the portfolio diversification difficulties of major firms in Kisumu County, Kenya, to generalise results. Finally, the researcher suggests applying this conceptual framework to stock exchange-listed businesses, which diversify more than non-listed ones, to get new insights.

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