



Vol. 7, Iss. 1 (2026), pp 396 – 419, September 27, 2026. www.reviewedjournals.com, ©Reviewed Journals

INVESTMENT LITERACY AND FINANCIAL WELL-BEING OF WOMEN-OWNED SMALL AND MEDIUM MANUFACTURING ENTERPRISES IN NAIROBI CITY COUNTY, KENYA

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Accepted: August 21, 2026

DOI: <https://doi.org/10.61426/business.v7i1.577>

ABSTRACT

The study examined how investment literacy based on risk-return understanding, investment instrument knowledge, and portfolio diversification affected the financial well-being of the women-owned manufacturing Small and Medium Enterprises. A sample of 153 enterprises was selected from a population of 153 registered women-owned manufacturing SMEs located in Nairobi City County. Primary data collection was carried out using a structured questionnaire. Secondary data was collected from published works of recognised institutions. The data analysis was done using quantitative and cross-sectional research design and descriptive statistics, SPSS version 31, Pearson correlation, and multiple linear regression, was added to the descriptive statistics analysis. According to the results, risk-return awareness and knowledge of investment instruments were critical determinants of financial well-being of women-owned SMEs operational in Nairobi City County. However, the study found that time value of money awareness and portfolio diversification knowledge were not critical determinants of the financial well-being of women-owned SMEs in Nairobi City County. The study recommended that the organisations need to benchmark with other more successful SMEs in other sectors to establish how to best to integrate the awareness of inflation; understanding of compounding; and long-term financial planning into their operations so as to enhance their financial well-being. Additionally, these organisations need to investment in boosting their portfolio diversification knowledge by attending seminars and courses so as to determine how best to apply asset spread; product/ income stream diversification; and risk-mitigation strategies in order to enhance their financial well-being.

Keywords: Risk and Return, Investment Instruments, Value of Money, Portfolio Diversification

CITATION: Olweny, S. A., & Musau, S. (2026). Investment literacy and financial well-being of women-owned small and medium manufacturing enterprises in Nairobi City County, Kenya. *Reviewed Journal International of Business Management*, 7 (1), 396 – 419.

INTRODUCTION

Women-owned Small and Medium Enterprises (SMEs) constitute a critical pillar of global economic growth because they generate income, drive industrial growth and innovation, and contribute to employment creation (Lusardi & Mitchell, 2020). The World Bank estimated that more than 90% of the businesses globally are SMEs which creates over 50% of global jobs, especially in developing economies, where they act as drivers of inclusive development and poverty reduction ("Small and Medium Enterprises (SMEs) Finance," 2023). Manufacturing SMEs are strategically involved in value addition, industrialization, and diversification of the economy in the sector. Increasingly, investment literacy among SME owners has been considered an important aspect in bolstering national economies because it facilitates effective capital utilization by these enterprises, encourages reinvestment, enhances enterprise output, and supports sustainable employment and industrial output (Abdallah et al., 2025). The growing participation of women-owned manufacturing SMEs has thus been of critical concern in influencing gender inclusive economic growth and community development.

For an enterprise, financial well-being refers to a condition in which the enterprises meet its financial commitments, withstand financial shocks, and maintain confidence in its future financial position (Lusardi & Mitchell, 2020). Manufacturing operations involve significant risk, operational challenges and cycle times and market risk exposure at high levels. As such, for women-owned manufacturing SMEs, financial well-being is of utmost importance (Cunningham & Viljoen, 2021). In this proposed study, financial well-being is conceptualized as the financial sustainability of women-owned manufacturing SMEs. Financial sustainability is the capacity of the enterprise to sustainably generate and retain sufficient financial resources to support ongoing operations and to meet operational and strategic goals, including growth, without enduring financial distress, and is the ultimate goal of any enterprise (Kulshreshtha et al., 2023). This ability to provide operational certainty to the enterprise and financial viability is especially important during times of high competition and business uncertainty.

Investment literacy is a core financial capability that influences the mode of capital allocation decisions, risk management, and long-term financial sustainability by entrepreneurs (Muñoz Céspedes et al., 2023). In the case of women-owned capital-intensive manufacturing SMEs, investment literacy impacts the level of efficiency and the type of investments, financing methods, and business protective investments and opportunities that the owner can make (Zvirikuzhe, 2022). While financial literacy includes the capacity to use and comprehend basic finance theories, investment literacy is more advanced and entails risk-reward, time value of money, diversification of portfolios, and the functioning market investments (Lusardi & Mitchell, 2020).

In the Nairobi City County industrial ecosystem, Women-owned Small and Medium Manufacturing Enterprises (SMMEs) are pivotal to job creation, value addition, and inclusive economic growth. According to the International Centre for Research on Women, 153 women-owned small and medium manufacturing enterprises which are operating within the Nairobi City County are registered with the KAM ("Women in Manufacturing (WIM) program," 2024). These enterprises are spread across various subsectors like food and beverages (55), textiles and apparel (11), metal fabrication (8), plastics (10), Leather and Footwear (3) woodwork (13), pharmaceuticals (31) and Electronics and Electricals (22) ("Women in manufacturing: Mainstreaming gender and inclusion in Kenya," 2020). This heterogeneity makes them more active in the manufacturing value chain, more resilient to sector-specific shocks, and more responsive to new market changes (Njenga, 2024). In the proposed study, SMME is the analysis unit, and the response unit will be the woman owner, who is the central figure in strategic, operational, and financial decision-making.

Statement of Problem

Women-owned SMEs are fundamental employment opportunities, inclusive industrial development, and economic growth in Kenya. In Nairobi City County, about 31% of the registered SMEs estimated to be

women-owned, and these businesses are of vast importance in employment creation and the sustenance of numerous households, particularly in large urban centres of the country like Nairobi (FSD, 2023; Kenya Association of Manufacturers (KAM), 2023). Over the years, Nairobi City County has also seen a remarkable surge in women entrepreneurs contributing positively to the local supply and manufacturing chains and positively influencing value addition and local supply chains. Therefore, the participation of this group of entrepreneurs is of great importance to the objectives of industrialization, reduction of poverty, and achievement of women-added economic development in Kenya.

Despite the increasing number of SMEs that are women-owned in manufacturing industry, most of them still face a weaker financial sustainability, poor potential for reinvestment, and high turnover rates (Githaiga & Bula, 2023). Financial mismanagement, the lack of investment literacy, and inadequate liquidity are the fundamental contributors to the closure of over 60% of SMEs owned by women within their first-five years of operation as they create a cycle of poor reinvestment potential (Wanjiru, 2023; FSD, 2023). Moreover, about 19% of the women entrepreneurs in single ventures have risk-return trade-offs, TVM, and long-term investment instruments (Githaiga & Bula, 2023). Because of poor investment literacy, entrepreneurs cannot make evaluations of a capital project, income stream, financial buffer, or reinvestment decisions.

In Kenya, one of the most well-known cases illustrating the risk of poor investment decisions is Keroche Breweries Limited, founded by Tabitha Karanja. The company was financially distressed because of its innovation, rapid growth, and poor risk–return evaluations along its growth spiral (“Envestreet Financial,” 2025). Challenges included cash flow shortages, tax liabilities, and financing pressures that undermined sustainability (Nyakundi, 2025). According to Taskinsoy (2020), the rapid expansion of business without proper risk-return analysis and inadequate liquidity buffers heightened vulnerability. Even though external market and regulatory factors worsened the situation for Keroche Breweries Limited, it still highlighted the importance of investment literacy in ensuring prudent capital allocation and long-term financial stability.

This problem is more serious in the manufacturing industry, where proper financial decisions are needed for capital-intensive investments, establishing long production cycles, and managing market volatility. Low investment literacy correlates with a bad pricing approach, underinvestment in technology, and dependency on informal financing options, all of which lower competitiveness and the business's survival (Odunga, 2024; Lusardi & Mitchell, 2020). Even though there may be investment literacy programs in Kenya, but they tend to be general, lacking a focus on gender-based barriers or the financial needs of manufacturing enterprises.

Consequently, there exist limited research that examine how investment literacy influences the financial well-being of manufacturing SMEs which are owned by women and are operating within the Nairobi City County, particularly within its more industrialized sub-counties (County Annual Development Plan (CADP), 2022). Addressing this gap was critical in developing practical training, policy interventions, and financial support systems that can empower such women in their entrepreneurship while enhancing their resilience.

Objectives of the Study

The main purposes the research was to investigate the effect of investment literacy on SMMEs owned by women found within the Nairobi City County, Kenya. The specific objectives were;

- To examine the effect of risk and return awareness on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County.
- To determine the effect of knowledge of investment instruments on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County.
- To evaluate the effect of the awareness of the time value of money on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County.
- To assess the effect of knowledge of portfolio diversification on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County, Kenya.

The study was guided by the following research hypotheses;

- **HO₁:** Risk and return awareness have no significant effect on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County.
- **HO₂:** Knowledge of investment instruments has no significant effect on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County.
- **HO₃:** Time value awareness has no significant impact on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County.
- **HO₄:** Portfolio diversification knowledge has no significant effect on the financial well-being of small and medium sized manufacturing enterprises owned by women operating in Nairobi City County.

LITERATURE REVIEW

Theoretical Review

Modern Portfolio Theory (MPT)

Developed by Harry Markowitz (1952), Modern Portfolio Theory (MPT) provides the foundational framework crucial in understanding how entrepreneurs make informed investment decisions when facing uncertain conditions (Kaya, 2024). The theory states that rational investors neither examine risk and return evaluations as separate decisions nor view the portfolio as a collection of unique investments for which the return on each investment is isolated. However, these investors view each investment in terms of the total risk and return of the portfolio (Kaya, 2024). By investing in a portfolio of assets characterized by differing degrees of risk, they can achieve diversification, which, in turn, helps them in controlling the risk and maximize the expected return.

In this study, Modern Portfolio Theory is extended to describe the resource-allocation choices of women-owned manufacturing SMEs beyond merely investing in the operational cost and market reach. For instance, investment-literate entrepreneurs often act as “portfolio managers” of their enterprises by distributing funds among several alternative uses, such as acquiring machines, upgrading technologies, diversifying products, controlling, and working capital (Petzel, 2021). Through investment literacy, entrepreneurs are able to make rational decisions in terms of trade-offs that exist among risky and unstable high-return projects and safe and stable investments.

Efficient Market Hypothesis (EMH)

Advanced by Eugene Fama (1965), the financial markets incorporate information so effectively that consistent outperformance is unattainable. Therefore, investors having access to a similar information, they are able to obtain and process it, and make decisions based on it, resulting in a change in security prices (Nunes, 2025). However, due to the rising incorporation of information into the prices of securities, it is virtually intolerable for any market participant to generate any irregular returns. According to Bakri et al. (2024), EMH traditionally assumed that all market participants have the same level of access to relevant information and can use it rationally. Although this view has since changed, leading to a viewpoint of the EMH has less to do with one's access to market information and more to do with one's understanding of the market (Bakri et al., 2024).

For manufacturing SMEs operating in Nairobi City County and are owned by women, EMH can be applied not because of the available data that the markets are fully efficient, but rather because the market requires the ability to engage with different tiers of available markets. This means that an entrepreneur would first need to acquire the ability to represent, process, and manipulate financial data, as well as analyze different possible investments and react to the voices of the markets (Colasante & Riccetti, 2021). Investment literacy is what empowers an entrepreneur to engage in informed investments rather than naked speculation or tipping, as it

helps one to examine the implications of interest rates, inflation, and the respective risks and returns of different financial vehicles.

Modigliani-Miller Theory

Advanced by Modigliani and Miller (1958), the Modigliani–Miller Theory describes the effect of the enterprise's financing, investing decisions, and their sustainability and enterprise value. (Abate & Kaur, 2023). The theory initially stated that, assuming all the market conditions are perfect, the firm's value does not depend on how a firm is financed, but rather the value of the firm's investments. However, this theory was broadened to also include the effects of taxation, the borrowing cost, and other financial limitations. (Weber, 2021)

With regard to the proposed study, the Modigliani-Miller theory is relevant due to the reasoning behind the theory's focus on the potential of rational means of funding. This reinforces the entrepreneur's investment literacy but also helps to exemplify the business's value. It is evident that Women-owned Manufacturing SMEs face the dilemma of whether to reinvest the profits, fund the firm externally, buy capital, or increase the enterprise's production (Brusov & Filatova, 2023). Such decisions require investment valuation, which defines the financing and investment decisions. This also helps to define the capital cost and value of the business.

Signalling Theory

Originally developed by Spence in 1973, Signalling Theory explores how economic agents convey credible information to reduce the extent of asymmetry of information amid parties, especially in a condition where one party holds more information than the other (Yudha et al., 2024). Based on the theory, signals are visible actions or outcomes indicating the quality, strength, or performance of the individual or an entity (Connelly et al., 2025). In the SMEs context, businesses with entrepreneurs who have a better understanding of their firm's performance, investment capacity, and risk profile than external financiers, such as banks, suppliers, and investors. Signals conveyed through financial behaviour and investment decisions are thus very significant in influencing external beliefs about enterprise credibility and feasibility.

In the case of women-owned manufacturing SMEs, investment literacy improves the capacity to transmit favourable and trustworthy financial signals, which indicate financial sustainability. External stakeholders can infer financial discipline, stability, and long-term viability when entrepreneurs make informed investment choices, manage risk prudently, and reinvest profits in alignment with this (Wang, 2024). The signals can be in the form of better financial reports, timely repayment of loans, systematic reinvestment plans, and diversified sources of income, which minimize perceived risk and increase trust.

Empirical Review

Risk–return awareness has acknowledged extensively within the empirical literature as a central component of investment literacy that shapes financial outcomes. In a systematic review conducted by Akims, Avedi, and Josephat (2023) examined the connection that sandwiched investment decision-making and financial literacy in Nigeria and Kenya with a special focus on risk–return trade-offs. The review found that small business owners and individuals who knew how to balance the risks and returns involved in investments were able to invest their resources efficiently, did not take up too many high-risk positions, and were able to stay financially stable (Akims et al., 2023). Their study concluded that having a good understanding of the risks and returns helps in balanced financial investments and also helps in stabilizing the financial position of the individual and the business in the long-term. The study did, however, rely on secondary data and generalized the data across the SMEs without taking into consideration the women-owned manufacturing businesses.

Similarly, Alsuwaidi, Ahmad, and Khalid (2024) looked at financial risk tolerance and financial well-being and used structural equation modelling on a sample of 257 participants. The study found that individuals who were aware of the risk and return also demonstrated better financial planning, better financial management,

and high confidence in the future (Alsuwaidi et al., 2024). Although the study was methodologically rigorous, but its focus was solely on the emerging adults rather than the entrepreneurs managing capital-intensive enterprises. Thus, the research could not entail the complete picture of the role of risk and return awareness on reinvestment, on the purchase of machines, and on the management of working capital in manufacturing SMEs.

Knowledge of investment instruments constitutes a critical dimension of investment literacy, influencing how entrepreneurs mobilize, distribute, and control money to ensure their business continues to operate. Most empirical literature cites knowledge of formal financial products, which include savings, insurance, credit, treasury, bonds, stocks, and leasing, to better financial agility and strategic decisions.

In a systematic review of studies conducted in Nigeria and Kenya, Akims et al. (2023) found that businesspersons with greater investment and financial instrument knowledge are more inclined to utilize formal financial systems, effectively balance different sources of financing, and have their finances remain liquid. Their review suggested that knowledge of financial products aids in better financing of the business and lessens the need to finance a business through informal financing channels (Akims et al., 2023). However, their study utilized secondary sources and focused only on SMEs, which limited the understanding of gender and sectoral nuances, especially for manufacturing enterprises that have a greater need for long-term financing.

Understanding the TVM is critical for investment literacy regarding both future capital allocation and future sustainability of the business. The existing studies showed that business owners who grasp the concepts of compounding, discounting, opportunity costs, and capital budgeting methods are in a better position for evaluating investment options and ensuring business sustainability.

Karanja and Wanjiru (2022) examined the use of TVM in capital budgeting for SMEs and described a survey of 150 entrepreneurs in Nairobi City County. They found that enterprises that reflected on discounting and compounding methods in their project evaluations enjoyed better capacity for reinvestment, cash flow management, and developed better long-term financial goals (Karanja & Wanjiru, 2022). In this regard, entrepreneurs who did TVM calculations for net present value (NPV) and payback periods, were unlikely to pursue expansion plans that were deemed economically unfeasible. However, Karanja and Wanjiru (2022) noted a stark absence of TVM calculations in women-owned businesses and did not separately analyze the manufacturing SMEs, which are more capital-intensive and require more robust intertemporal financial planning.

The degree of knowledge on portfolio diversification is a critical component of investment literacy that informs how entrepreneurs operate. Entrepreneurs' financial stability improves through the means of risk concentration on multiple assets, revenue streams, and financing alternatives. Market diversification principles are theoretically understood to strengthen an enterprise, thus, reducing susceptibility to market shocks.

In a systematic review by Akims et al. (2023) on the interaction between financial literacy and investment behaviour in the Sub-Saharan region, argued that entrepreneurs with knowledge of the principles of diversification did not risk resource allocation to a single business. Resource allocation resulted in increased income and reduced business volatility. SMEs that invested in a diversified manner across different products, savings, and credit instruments showed improved financial performance (Akims et al., 2023). Nevertheless, it failed to focus on manufacturing sector, thus limiting sector-specific relevance. It also did not incorporate a gender analysis, which is critical in analysing the specific challenges of women entrepreneurs.

Conceptual Framework

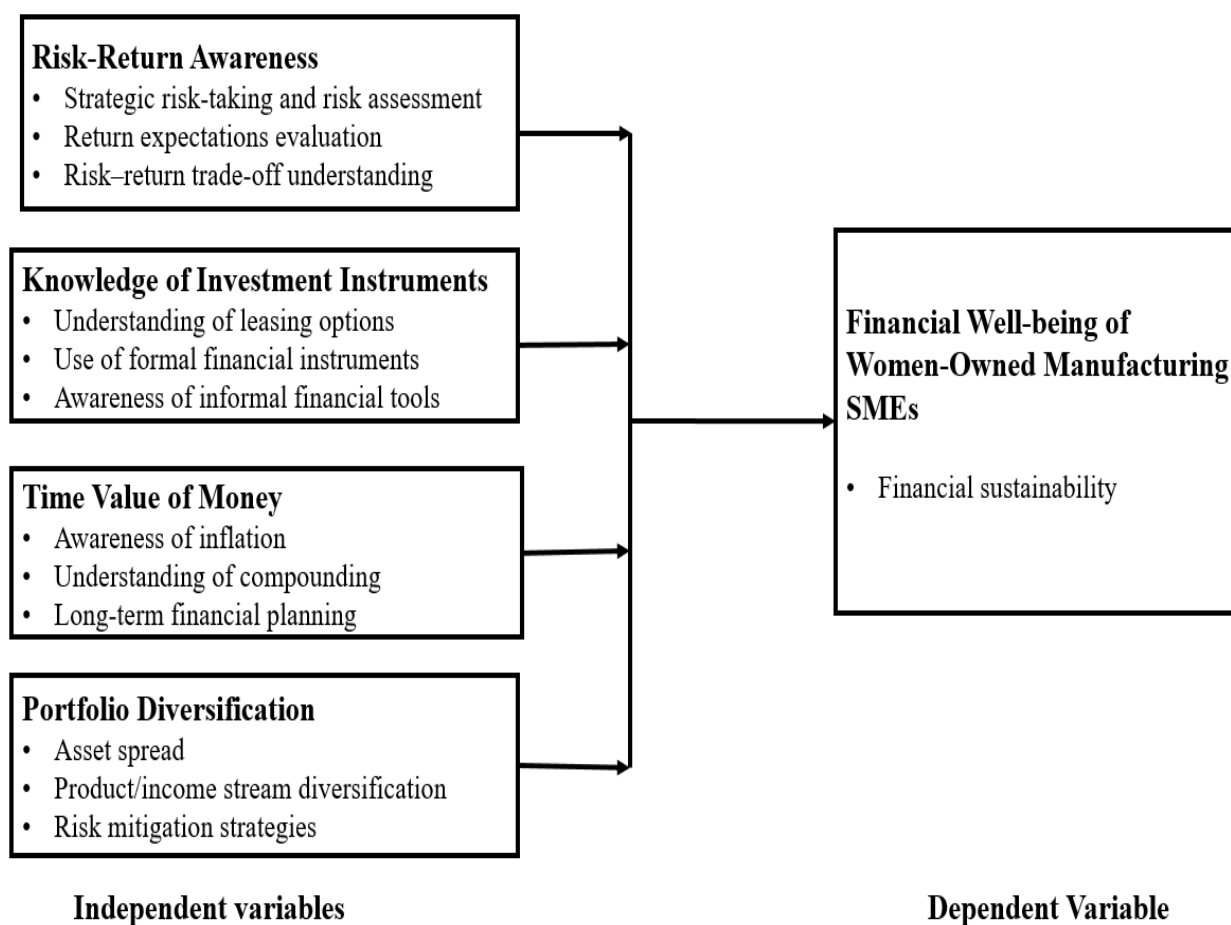


Figure 1: Conceptual Framework

Source: Researcher (2026)

METHODOLOGY

A descriptive research design and cross-sectional were applied to enable the exploration of the existing association between investment literacy and financial well-being of women-owned SMMEs in Nairobi City County. For the study, all formally registered small and medium-sized manufacturing enterprises owned by women and are located and operated in the Nairobi City County, Kenya was the target population. The accessible population was derived from the official registry of the KAM, Women in Manufacturing (WIM) programme, further classified with the records from the KNBS. These documents showed that 153 women-owned manufacturing SMEs are registered and located in Nairobi City County ("Women in Manufacturing (WIM) program," 2024). Thus, these 153 SMMEs formed the research sampling frame. Given that the target population was finite and relatively small (153 SMEs), the applied tally to consider all the features of the targeted population within the sample. Therefore, the study sample size comprised of 153 women-owned manufacturing SMEs.

The structured questionnaire was employed as the main tool for data collection. In this case, the questionnaires were mainly considered because they were efficient and effective in collecting comparable, standardized data on a comparatively large sample of participants, and they provided efficiency, uniformity, and anonymization (Fairclough & Thelwall, 2022). To assess the efficiency, clarity, and dependability of the research instrument before commencing the main data collection, a preliminary pilot study was conducted. For this study, the pilot comprised of 15 participants, which was about 10% of the study's target population,

who were selected from women-owned manufacturing SMEs located in the Nairobi City County, but was removed from the final survey.

Quantitative data obtained on the questionnaires for analysis. The data was cleaned and coded before being analysed with SPSS. Descriptive statistics from SPSS, was used to establish an overview on the respondent characteristics as well as the trends of investment literacy and financial well-being. Descriptive statistics yielded frequency distributions, standard deviations, percentages, and means. These measures provided a comprehension of the central tendency and the extent of the variability in the data.

For the inferential analysis, Pearson's correlation and multiple linear regression techniques were applied to test the study hypotheses and determine the relationships among the variables. The regression model was used to assess both the individual and combined effects of risk-reward knowledge, investment instruments, time value of money (TVM), and portfolio diversification on financial well-being. Multiple linear regression was selected because the study sought to examine the extent to which several independent variables jointly predict a single dependent variable using data collected through a cross-sectional survey. Below was the model used:

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

(Hanson, 2010)

Where:

Y= Financial Well-being

X₁= Risk-Return Awareness

X₂= Knowledge of Investment Instruments

X₃= Time Value of Money Awareness

X₄= Portfolio Diversification Knowledge

β₀= Intercept

β₁ --- β₄= coefficients of regression

FINDINGS AND DISCUSSIONS

Response Rate

Based on the results, out of the 153 questionnaires that were administered by the researcher, 122 were retrieved while 31 were not retrieved, signifying a response rate of 80%. This is in keeping with the threshold of 60% which was recommended by Mugenda (2011).

Descriptive Statistics Results

The descriptive results which featured the standard deviations and means of the various statements relating to each of the variables are covers in this section of the study.

Risk-Return Awareness

The findings on risk-return awareness emphasizes how entrepreneurs perceive and balance the emerging investment risks against expected returns.

Table 1: Descriptive Statistics of Risk-Return Awareness

	SD	D	N	A	SA	M	St. Dev
Higher-return investments are generally associated with higher levels of risk.	0.0%	13.9%	12.3%	50.0%	23.8%	3.8361	.94790
Investment decisions in the enterprise consider both potential returns and associated risks.	0.0%	0.0%	38.5%	24.6%	36.9%	3.9836	.87181
The enterprise evaluates possible financial losses before committing funds to an investment.	0.0%	0.0%	41.0%	12.3%	46.7%	4.0574	.93860
Risk assessment is conducted before selecting financing or investment options.	0.0%	0.8%	13.9%	27.0%	58.2%	4.4262	.75971

Source: Research Data (2026)

The descriptive findings of Risk-Return Awareness are displayed in the table overhead. Accordingly, 73.8% of those who participated agreed with the statement “higher-return investments are generally associated with higher levels of risk”. This endorsement was reinforced by a mean of 3.9524 and standard deviation of 0.9358, which affirmed Akims et al. (2023). Furthermore, most of the respondents (61.5%; M=4.1190; SD=0.88902) concurred with the assertion that “investment decisions in the enterprise consider both potential returns and associated risks”, which affirmed Alsuwaidi et al. (2024).

Furthermore, there was a moderately high affirmation by those who participated (59%; M=4.0476; SD=0.9358) with the statement that “the enterprise evaluates possible financial losses before committing funds to an investment”. This tallied with the findings of the study by Xu and Zia (2025). Finally, most of those who participated agreed (85.2%, M=4.4286; SD=0.80070) that “risk assessment is conducted before selecting financing or investment options”. This confirmed the results pertaining to the study by Witantri et al. (2025).

Knowledge of Investment Instruments

The table below gives the descriptive findings of knowledge of investment instruments.

Table 2: Descriptive Statistics of Knowledge of Investment Instruments

	SD	D	N	A	SA	M	Std. Dev
The enterprise understands the terms and conditions of bank loans and credit facilities	0.0%	14.8%	12.3%	27.0%	45.9%	4.0410	1.08634
The enterprise is knowledgeable about leasing and asset financing options.	14.8%	12.3%	13.9%	58.2%	0.8%	3.1803	1.14283
The enterprise understands how government securities such as treasury bills and bonds operate.	29.5%	12.3%	25.4%	32.8%	0.0%	2.6148	1.22270
The enterprise understands how insurance products can be used for risk management.	0.8%	14.8%	63.1%	13.1%	8.2%	3.1311	.79201
The enterprise is familiar with structured savings and reinvestment mechanisms.	12.3%	13.1%	41.0%	0.0%	33.6%	3.2951	1.37684

Source: Research Data (2026)

According to the findings, there was a high level of affirmation (72.9%; M=4.0476; SD=1.12515) by the respondents of the statement “the enterprise understands the terms and conditions of bank loans and credit

facilities” as established by Ochenge (2026). Additionally, most of the respondents felt that “the enterprise is knowledgeable about leasing and asset financing options” (59%; M=3.1667; SD=1.20804) as established by Lusardi and Messy (2023).

Furthermore, a minority of the participants felt that “the enterprise understands how government securities such as treasury bills and bonds operate” (32.8%; M=2.5714; SD=1.23254) as found by Soumya and Padmavathi (2025). Furthermore, only a small number of participants felt “the enterprise understands how insurance products can be used for risk management” (21.3%; M=3.1190; SD=0.88902), which contrasted with Alaka et al. (2022). Lastly, only a few respondents felt that “the enterprise is familiar with structured savings and reinvestment mechanisms” (33.6%; M=3.3333; SD=1.33739), which contradicted Saad et al. (2021).

Time Value of Money Awareness

The descriptive findings of TVM awareness that was captured in Table 4.10.

Table 3: Descriptive Statistics of Time Value of Money Awareness

	SD	D	N	A	SA	M	Std. Dev
The enterprise considers the time value of money when making financial decisions.	14.8%	11.5%	26.2%	13.9%	33.6%	3.4016	1.42967
Future cash flows are evaluated using appropriate financial techniques such as discounting.	14.8%	0.8%	0.0%	61.5%	23.0%	3.7705	1.24507
Delayed returns are assessed against present investment costs before decision-making.	0.0%	14.8%	26.2%	50.8%	8.2%	3.5246	.84514
Inflation effects are considered when evaluating long-term investments.	13.9%	64.8%	0.0%	0.0%	21.3%	2.5000	1.34993

Source: Research Data (2026)

The descriptive findings of Time Value of Money Awareness are presented in Table 4.10. According to the findings, approximately less than half of the respondents (47.5%; M=3.4524; SD=1.50126) agreed with the statement “the enterprise considers the time value of money when making financial decisions”. This was only partially aligned with Karanja and Wanjiru (2022). The bulk of respondents (84.5%; M=3.6905; SD=1.33413) agreed with the statement “future cash flows are evaluated using appropriate financial techniques such as discounting”. This was consistent with the findings of Sangu and Achuti (2025).

Furthermore, the study found that there was agreement by most of the respondents towards the statement “delayed returns are assessed against present investment costs before decision-making” (59%; M=3.5238; SD=0.89000). This corroborated the findings of Gurbaxani et al. (2026). Finally, only a minority of participants felt that “inflation effects are considered when evaluating long-term investments” (21.3%; M=2.6667; SD=1.44267). This did not affirm the findings of Mukonde and Silwimba (2025).

Portfolio Diversification Knowledge

The descriptive findings of Portfolio Diversification Knowledge are shown in in the table below.

Table 4: Descriptive Statistics of Portfolio Diversification Knowledge

	SD	D	N	A	SA	M	Std. Dev
The enterprise spreads investments across different financial options to reduce risk.	0.0%	0.8%	14.8%	13.9%	70.5%	4.5410	.77297
Funds are not concentrated in a single investment or financing source.	0.0%	8.2%	0.0%	28.7%	63.1%	4.4672	.86420
Funds are not concentrated in a single investment or financing source.	5.0%	8.2%	10.1%	18.6%	58.1%	3.7623	.64351
The enterprise balances short-term and long-term investment options.	12.3%	0.0%	51.6%	27.0%	9.0%	3.2049	1.04398

Source: Research Data (2026)

A considerable number of the participants felt that “the enterprise spreads investments across different financial options to reduce risk” (84.4%; M=4.4762; SD=0.86216), as determined by Witantri et al. (2025). Furthermore, the bulk of the participants felt that “funds are not concentrated in a single investment or financing source” (91.8%; M=4.3571; SD=0.90585), which affirmed Bongomin et al. (2024).

A considerable majority of the participants felt that “diversification strategies are applied to improve financial stability” (76.7%; M=3.7619; SD=0.61721). This corroborated the findings of Saliba et al. (2025). Finally, only a small number of participants felt that “the enterprise balances short-term and long-term investment options” (36%; M=3.3333; SD=1.02806), which contrasted with Gheghina et al. (2020).

Financial Well-being

Financial well-being is assessed through the SMEs’ ability to sustain operations, meet obligations while maintaining the long-term stability.

Table 5: Descriptive Statistics of Financial Well-being

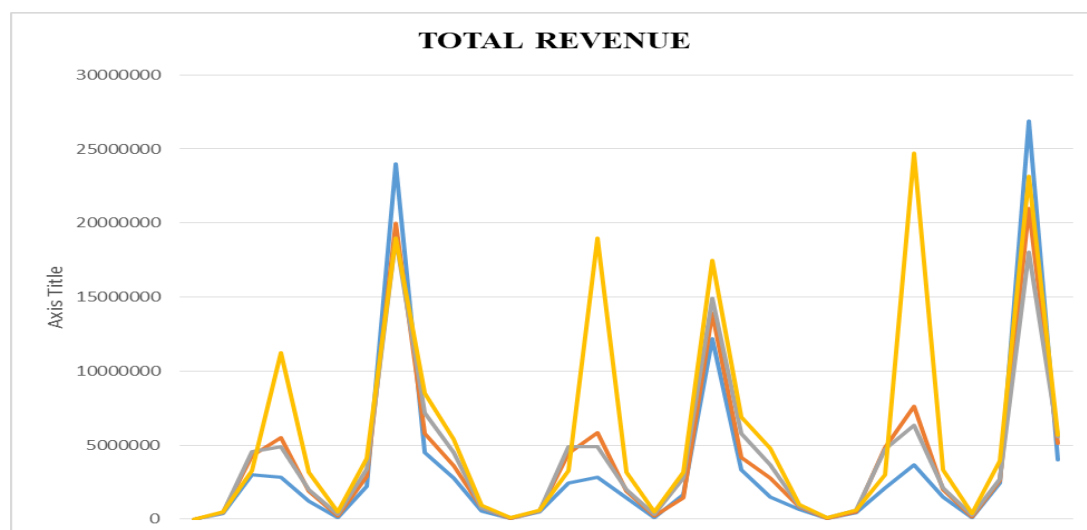
	SD	D	N	A	SA	M	Std. Dev
The enterprise consistently generates sufficient profits to sustain operations.	0.0%	50.0%	41.0%	0.0%	9.0%	2.6803	.87449
Profit margins have been stable or improving over recent years.	0.0%	9.0%	50.8%	40.2%	0.0%	3.3115	.63091
Revenues adequately cover operating expenses.	0.0%	13.1%	24.6%	62.3%	0.0%	3.4918	.71865
The enterprise able to cover their short-term financial obligations on time.	26.2%	26.2%	11.5%	9.0%	27.0%	2.8443	1.57470
The enterprise maintains adequate working capital for daily operations.	0.0%	0.0%	33.9%	30.0%	36.1%	3.3607	.48217
Cash flow levels are sufficient to support ongoing business activities.	13.9%	45.9%	13.1%	27.0%	0.0%	2.5328	1.03799
The enterprise reinvests part of its profits into business growth.	0.0%	36.9%	13.9%	40.2%	9.0%	3.2131	1.04628
The enterprise allocates funds for expansion or asset acquisition.	0.0%	25.4%	46.7%	14.8%	13.1%	3.1557	.95364
Financial resources are available for future investment opportunities.	0.0%	63.9%	27.0%	8.2%	0.8%	2.4590	.68209
The enterprise maintains financial stability during economic fluctuations.	11.5%	0.0%	62.3%	26.2%	0.0%	3.0328	.85217
The enterprise is able to manage debt obligations effectively.	13.9%	12.3%	59.0%	1.6%	13.1%	2.8770	1.10280
Enterprise has experienced consistent financial performance over time.	0.0%	0.8%	36.1%	63.1%	0.0%	3.6230	.50334

Source: Research Data (2026)

The descriptive findings of Financial Well-being are divided into the findings sourced from primary data and those sourced from secondary data. Accordingly, the findings sourced from primary data are showed in the above table. These results exhibited that a minority of participants felt that “the enterprise consistently generates sufficient profits to sustain operations” (9%; M=2.6803; SD=0.87449), which was inconsistent with Brown and Rocha (2021). Additionally, there was a neutral feeling amongst most of the participants regarding whether “profit margins have been stable or improving over recent years” (50.8%; M=3.3115; SD=0.63091), which did not tally with Serrasqueiro et al. (2023). Most of the participants felt that “revenues adequately cover operating expenses” (62.3%; M=3.4918; SD=0.71865, which matched Singh and Kumar (2017). A minority of those who participated agreed that “the enterprise able to cover their short-term financial obligations on time” (36%; M=2.8443; SD=1.57470), which failed to corroborate Gul et al. (2022).

The bulk of the participants felt that “the enterprise maintains adequate working capital for daily operations” (66.1%; M=3.3607; SD=0.48217). This was in line with Abdiaziz (2025). Most of the participants disagreed that “cash flow levels are sufficient to support ongoing business activities” (45.9%; M=2.5328; SD=1.03799), which contradicted Adenakyo and Zikusooka (2024). Only half of the participants felt that “the enterprise reinvests part of its profits into business growth” (49.2%; M=3.2131; SD=1.04628), partially echoing Slávik et al. (2023). Additionally, there was neutrality amongst most of the participants regarding whether “the enterprise allocates funds for expansion or asset acquisition” (46.7%; M=3.1557; SD=0.95364), which differed with Batrancea et al. (2022).

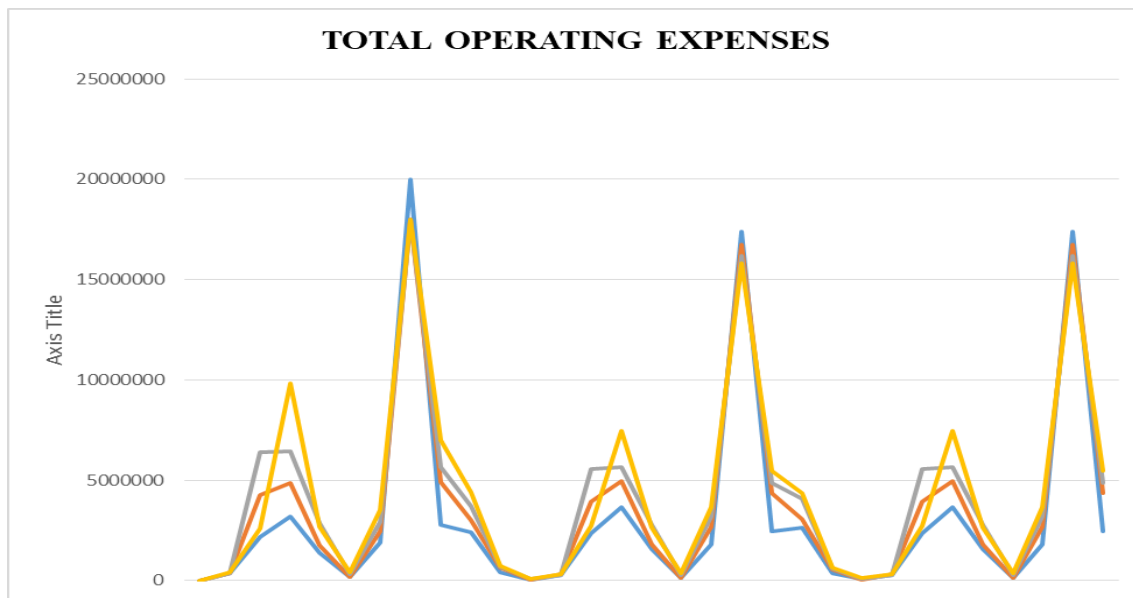
There was disagreement amongst the bulk of participants regarding whether “financial resources are available for future investment opportunities” (63.9%; M=2.4590; SD=0.68209). This did not corroborate Bakhtiari et al. (2020). Further, the bulk of the participants were neutral towards regarding whether “the enterprise maintains financial stability during economic fluctuations” (62.3%; M=3.0328; SD=0.85217), which contrasted with Nkwinika and Akinola (2023). Large number of the participants remained neutral in relation to whether “the enterprise is able to manage debt obligations effectively” (59%; M=2.9524; SD=1.05812), which did not confirm Okello et al. (2025). Finally, a significant number of participants felt “the enterprise has experienced consistent financial performance over time” (63.1%; M=3.6230; SD=0.50334). which agreed with Deku et al. (2021).



Source: Research Data (2026)

Figure 2: Total Revenue of Women-Owned SMEs (2022-2025)

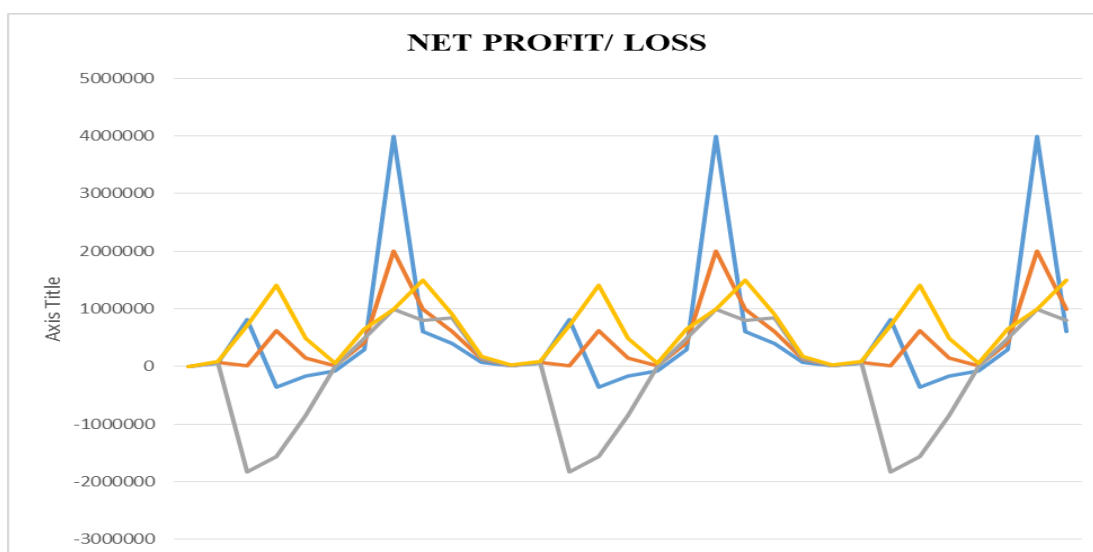
The descriptive findings sourced from secondary data are discussed in the section. These findings feature trend analysis of the Total Revenue, Total Operating Expenses, Net Profit/Loss, and Cash Flow from Operating Expenses, between 2022 and 2025 relating to the 73 firms which were able to disclose their information. The findings of the Total Revenue of the firms are displayed in the figure overhead. Accordingly, the mean total revenue for 2022 was Kshs. 3,665,622, that of 2023 was 4,176,694, that of 2024 was 4,275,241, while that of 2025 was 6,048,415. This is an indicator that there was a growth in the mean total revenue across the period under review by 66%.



Source: Research Data (2026)

Figure 3: Total Operating Expenses for Women-Owned SMEs (2022-2025)

The results relating to the Total Operating Expenses for the 73 firms for the period between 2022 and 2025 are displayed in the figure overhead. Accordingly, the mean total operating expenses for the period under review were Kshs. 3,241,122, 3,801,394, 4,323,129, and 4,394,673, for 2022, 2023, 2024, and 2025, respectively. Thus, there was a growth in total revenue by 36% across the period under review.



Source: Research Data (2026)

Figure 4: Net Profit/ Loss for Women-Owned SMEs (2022-2025)

The results relating to the Net Profit/ Loss for the 73 firms across the period under review are shown in Figure 4.9. According to the results, the mean Net Profit/ Loss for the 31 firms across the period under review were Kshs. 548,338, 477,251, -118,736, and 662,158 for 2022, 2023, 2024, and 2025, respectively. Thus, there was a 21% growth in the Net Profit during the period under review.

Finally, the results relating to the Cash Flow from Operations for the 31 firms for the period under review are displayed in the figure overhead. Accordingly, the mean cash flow from operations for the firms for the period under review were Kshs. 217,389, 387,382, -98,975, and 576,618 for 2022, 2023, 2024 and 2025, respectively. Therefore, the mean cash flow from operations for the 31 firms grew by 165% during the period under review.

Inferential Statistics Results

The inferential analysis which comprised of Multiple Linear Regression analyses and Pearson Correlation Coefficient. The following sections discuss the associated findings in detail.

Correlation Analysis

The Pearson Correlation analysis of the study is captured in the table below.

Table 6: Pearson Correlation Coefficients

		Correlations								
		Risk- Return Awareness	Knowledge of Investment Instruments	Time Value of Money Awareness	Portfolio Diversification Knowledge	Financial Well-being				
Risk-Return Awareness	Pearson	1								
	Correlation									
	Sig. (2- tailed)									
Knowledge of Investment Instruments	N	122	1							
	Pearson	.400**								
	Correlation									
Time Value of Money Awareness	Sig. (2- tailed)	0.000	.711**	1						
	N	122								
	Pearson	.726**								
Portfolio Diversification Knowledge	Correlation	-0.063	.321**	-0.088	1					
	Sig. (2- tailed)						0.000			
	N						122			
Financial Well- being	Pearson	0.543	0.267	0.150	-0.131	1				
	Correlation									
	Sig. (2- tailed)						0.019	0.006	0.009	0.152
	N	122	122	122	122	122				

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

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data (2026)

From the table, the findings show that three of the predictors, Risk-Return Awareness, Knowledge of Investment Instruments, and Time Value of Money Awareness had positive correlations of $r = 0.543$, $r = 0.267$ and $r = 0.150$ with Financial Well-being. However, Portfolio Diversification Knowledge had negative correlation of $r = -0.131$ with Financial Well-being. The p-values for Risk-Return Awareness, Knowledge of Investment Instruments, and Time Value of Money Awareness were <0.05 whereas that Portfolio Diversification Knowledge was >0.05 .

Regression Analysis

The multiple linear regression analysis of the study featured three aspects, namely: the summary model, variance analysis, and the beta coefficient analysis. The table below shows the regression model summary for the study.

Table 7: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.449 ^a	0.201	0.174	0.38850

a. Predictors: (Constant), Portfolio Diversification Knowledge, Risk-Return Awareness, Knowledge of Investment Instruments, Time Value of Money Awareness

Accordingly, the multiple regression model can be used to explain up to 20.1% of the changes in the financial well-being of SMEs as evidenced by the R Square value of 0.201. in other words, 20.1% of any changes in the financial well-being of SMEs was as a result of financial literacy.

Table 8: Analysis of Variance

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.447	4	1.112	7.366	.000 ^b
Residual	17.659	117	0.151		
1 Total	22.107	121			

a. Dependent Variable: Financial Well-being

b. Predictors: (Constant), Portfolio Diversification Knowledge, Risk-Return Awareness, Knowledge of Investment Instruments, Time Value of Money Awareness

The variance analysis (ANOVA) results are presented in the above table. Accordingly, at 95% confidence interval the F-test statistic (F_{cal}) was equivalent to 7.366, which is more than 2.52 of the F critical score (F_{crit}) which provided the evidence of a significant linkage amid financial well-being of SMEs and investment literacy. Furthermore, since the p-value is below 0.05, there is also evidence of a statistically significant linkage between the predictors and outcome variables. Thus, the disparities in the equation are vital and signifies the fit accuracy of the regression model.

Table 9: Beta Coefficients

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	3.497	0.513		6.816	0.000
Risk-Return Awareness	0.388	0.081	0.603	4.806	0.000
Knowledge of Investment Instruments	0.094	0.073	0.189	1.291	0.199
Time Value of Money Awareness	-0.322	0.079	-0.741	-4.092	0.000
Portfolio Diversification Knowledge	-0.271	0.125	-0.218	-2.174	0.032

a. Dependent Variable: Financial Well-being

Finally, the Beta Coefficients results are captured in the table overhead. According to the findings, the beta coefficients can be substituted into the multiple regression equation as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon = 3.497 + 0.388X_1 + 0.094X_2 - 0.322X_3 - 0.271X_4 + 0.513$$

According to the above equation, holding the predictors constant, Financial Well-being is a constant that is equivalent to 3.497. Risk Return Awareness has a positive as well as significant ($\beta = 0.388$; p-value = 0.000) influence on the Financial Well-being of SMEs in Kenya, which was consistent with Apaloo and Bright (2022), and Shitambasi and Makori (2025). Further, Knowledge of Investment Instruments has a positive but insignificant ($\beta = 0.094$; p-value = 0.199) influence on the Financial Well-being of SMEs in Kenya. This contradicted Gichuru et al. (2024) and Ochola and Kimutai (2025) who established that financial literacy, particularly knowledge of investment instruments, was critical towards the financial decision-making of SMEs in Kenya.

Additionally, Time Value of Money Awareness was found to be negatively but significantly ($\beta = -0.322$; p-value = 0.000) associated with the Financial Well-being of SMEs in Kenya. This was inconsistent with Macharia and Ombati (2025), and Akumu et al. (2025) who determined that financial literacy including knowledge of TVM was vital in determining the financial performance of SMEs. Finally, the study found that Portfolio Diversification Knowledge had a negative and a significant ($\beta = -0.271$; p-value = 0.032) influence on the financial well-being of SMEs in Kenya. This was aligned with Khudaykulov et al. (2022) and Gichuru (2024) who determined that owing to resource constraints, SMEs were unable to engage in portfolio diversification compared to their larger counterparts, therefore negating the impact of such practices on their financial performance.

Test of Hypotheses

HO₁: Risk and return awareness has no significant effect on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County.

The study established a significant positive relationship between risk-return awareness and the financial well-being of SMMEs owned by women in Nairobi City County ($\beta = 0.388$; p-value = 0.000). The p-value of 0.000 indicates that the observed relationship is statistically significant at 95% confidence interval, signifying that there was strong evidence against the null hypothesis. The positive β coefficient suggests that for every increase in one unit of the risk-return awareness, financial well-being increases by 0.388 units, holding other factors constant. This was consistent with Apaloo and Bright (2022) and Shitambasi and Makori (2025).

HO₂: Knowledge of investment instruments has no significant effect on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County.

The study found that Knowledge of Investment Instruments has a insignificant ($\beta = 0.094$; p-value = 0.199) which was positive because of its influence on the Financial Well-being of SMEs in Kenya. The p-value of 0.199 indicates that the observed statistically relationship to be insignificant at 95% confidence interval, signifying that there is strong evidence to confirm the null hypothesis. The positive β coefficient suggested an increase in every one unit of knowledge of investment instruments, financial well-being increases by 0.094 units, when other factors are held constant. This contradicted Gichuru et al. (2024) and Ochola and Kimutai (2025) who established that financial literacy, particularly knowledge of investment instruments, was critical towards the financial decision-making of SMEs in Kenya.

HO₃: Time value awareness has no significant impact on the financial well-being of small and medium sized manufacturing enterprises owned by women in Nairobi City County.

The study established that Time Value of Money Awareness was negatively but significantly ($\beta = -0.322$; p-value = 0.000) associated with the Financial Well-being of SMEs in Kenya. The p-value of 0.000 indicates that the observed relationship is statistically significant at 95% confidence interval, signifying strong evidence

towards rejecting null hypothesis. The negative β coefficient suggested that in every one unit resulted in an increase in the time value of money awareness, financial well-being decreases by 0.322 units, when other factors are held constant. This was inconsistent with Macharia and Ombati (2025) and Akumu et al. (2025) who determined that financial literacy including knowledge of time value of money was a critical determinant of the financial performance of SMEs.

HO₄: Portfolio diversification knowledge has no significant effect on the financial well-being of small and medium sized manufacturing enterprises owned by women operating in Nairobi City County.

The study found that Portfolio Diversification Knowledge had a negative but important ($\beta = -0.271$; p-value = 0.032) influence on the financial well-being of SMEs in Kenya. The p-value of 0.032 indicates that the observed relationship is statistically significant at 95% confidence interval, signifying that there was strong evidence towards rejecting null hypothesis. The negative β coefficient suggests that for every one unit increase in portfolio diversification knowledge, financial well-being decreases by 0.271 units, holding other factors constant. This was aligned with Khudaykulov et al. (2022) and Gichuru (2024) who determined that owing to resource constraints, SMEs were unable to engage in portfolio diversification compared to their larger counterparts, therefore negating the impact of such practices on their financial performance.

CONCLUSIONS AND RECOMMENDATIONS

Numerous conclusions can be established from the findings relating to the influence of Risk-Return Awareness, Knowledge of Investment Instruments, Time Value of Money Awareness, and Portfolio Diversification Knowledge, on Financial Well-being of SMEs. Pearson Correlation analysis determined that two of the independent variables, Risk-Return Awareness and Knowledge of Investment Instruments had positive correlations with Financial Well-being of SMEs. However, Time Value of Money Awareness and Portfolio Diversification Knowledge were negatively correlated with Financial Well-being of SMEs. The multiple linear regression analysis showed that the regression model can be used to explain 38% of the changes in Financial Well-being; and significant and statistically significant were present between Risk-Return Awareness, Knowledge of Investment Instruments, and Time Value of Money Awareness; the dependent variable, Financial Well-being, but not with Portfolio Diversification Knowledge. The detailed conclusions pertaining to the four objectives are covered in the following sections.

The total aggregate mean score of risk-return awareness was 4.1369 whereas the total aggregate standard deviation was 0.89033 showing that most of the participants felt that risk-return awareness was a critical determinant of the financial well-being of women-owned SMEs operational in Nairobi County. The results of the Pearson Correlation analysis demonstrated that risk-return awareness correlated both positively and significantly with financial well-being. Thus, the study concluded that strategic risk-taking and risk assessment; returns expectations evaluation; and risk-return trade-off understanding were all crucial determinants of the financial well-being of women-owned SMEs.

The total aggregate mean of knowledge of investment instruments was 3.2476 while the aggregate standard deviation was 1.15843 showing that the bulk of participants felt that knowledge of investment instruments was critical towards the enhancement of the financial well-being of women-owned SMEs operational in Nairobi County. The Pearson Correlation analysis indicated that knowledge of investment instruments had a positive and significant correlation with financial well-being. Thus, the study concluded that understanding of leasing options; use of formal financial instruments; and awareness of informal financial tools were all crucial determinants of the financial well-being of women-owned SMEs.

The total aggregate mean of time value of money awareness was 3.3333 while the total aggregate standard deviation was 1.29202 confirming that time value of money awareness was a key determinant of the enhancement of the financial well-being of women-owned SMEs operational in Nairobi County. However, the Pearson Correlation analysis indicated that there was a negative and insignificant correlation between time

value of money awareness and financial well-being. Thus, the study concluded that awareness of inflation; understanding of compounding; and long-term financial planning were all not critical towards the enhancement of the financial well-being of women-owned SMEs operational in Nairobi.

The total aggregate mean of portfolio diversification knowledge was 3.9821 while the total aggregate standard deviation was 0.85332 indicating that there was a general acceptance of the importance of portfolio diversification knowledge to the enhancement of the financial well-being of women-owned SMEs operational in Nairobi County. However, the Pearson Correlation analysis indicated that there was a negative and insignificant correlation between portfolio diversification knowledge and financial well-being. Thus, the study concluded that asset spread; product/ income stream diversification; and risk-mitigation strategies were all not critical towards the enhancement of the financial well-being of women-owned SMEs operational in Nairobi.

There are several recommendations that can be derived from the above conclusions. As far as the first objective is concerned, risk-return awareness is a critical determinant of the financial well-being of women-owned SMEs operational in Nairobi County. Thus, these organisations should endeavour to enhance their awareness of risk-return dynamics of investments so as to enhance their financial well-being. The results related to the second objective indicate that knowledge of investment instruments is an important determinant of the financial well-being of women-owned SMEs operational in Nairobi County. Therefore, these organisations should ensure that they boost their understanding of leasing options; the use of formal financial instruments; and awareness of informal financial tools to enhance their financial well-being.

The results associated with the third objective indicate that time value of money awareness is not a significant determinant of the financial well-being of women-owned SMEs operational in Nairobi County. Thus, these organisations need to benchmark with other more successful SMEs in other sectors to establish how to best to integrate the awareness of inflation; understanding of compounding; and long-term financial planning into their operations so as to enhance their financial well-being. The findings pertaining to the fourth objective indicate that portfolio diversification knowledge is not a critical determinant of the financial well-being of women-owned SMEs operational in Nairobi County. Therefore, these organisations need to investment in boosting their portfolio diversification knowledge by attending seminars and courses so as to determine how best to apply asset spread; product/ income stream diversification; and risk-mitigation strategies to enhance their financial well-being.

Suggestions for Further Research

There is a scarcity of research that examine how investment literacy influences the financial well-being of women-owned manufacturing SMEs operating in Nairobi City County, particularly within its more industrialized sub-counties. Thus, future research should be focused on this glaring gap in the knowledge base. This study has adopted both cross-sectional and descriptive research designs, future research should apply other research designs.

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