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Original Article

Role of Investment Literacy on Household Income Generation Among SACCO Members in Narok County, Kenya

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ABSTRACT

Increased formal financial access is widely recognised as a crucial factor in boosting household income generation, a key driver of economic growth. Paradoxically, despite Kenya's notable increase in formal financial access from 75.5% in 2019 to 83.7% in 2022, household income growth has yet to follow suit. Shockingly, over 50% of Kenyan citizens, in stark contrast to the 25-40% seen in other developing nations, still endure extreme poverty, falling below the international poverty line of $1.90 per day, according to a sobering 2022 World Bank report. This grim reality indicates that financial access may not be the issue. To shed light on this adverse trend, this research focused on the role of investment literacy on household income generation among Savings and Credit Cooperative Organization (SACCO) members in Narok County, Kenya. The study was rooted in behavioural finance theory and adopted a descriptive research design. Further, the study targeted 3,050 registered SACCO members, from which a sample size of 217 was obtained using the Yamane 1957 formula. Stratified and purposive sampling techniques were also used to select the study sample. The study used structured questionnaires, which were self-administered to collect the data. Descriptive and inferential statistics were used to analyse the study data. A simple linear regression model was adopted for the study. The findings revealed that investment literacy had a significant positive role ($\beta = 0.225$, $p < 0.05$) in household income generation, underscoring its importance in boosting household income among SACCO members. As a result, the study recommends implementing comprehensive investment literacy programs by SACCOs and relevant stakeholders to maximise their impact on income generation.

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INTRODUCTION

The contribution of household income to a nation's economic growth is paramount (Sikder et al., 2022). Increasing household income leads to more significant discretionary income, improved living standards, and reduced poverty rates (Wiesel et al., 2023). In response to the global financial and economic crisis triggered by the COVID-19 pandemic, governments worldwide have been actively seeking ways to enhance household income generation and mitigate the economic challenges faced (Gebski, 2021). One avenue that has been identified as having the potential to promote household income generation is improving access to formal financial services (Liu et al., 2017)

Despite the efforts made by governments to expand formal financial access, the impact on household income generation has been limited (Ankrah et al., 2022). This situation is evident in Kenya, where access to formal financial services and products increased from 75.5 per cent in 2019 to 83.7 per cent in 2022. However, household income generation has yet to witness the anticipated improvement (FSD, 2022). Over 50% of Kenyan citizens, in stark contrast to a proportion of only 25-40% in other developing nations, still grapple with the harsh realities of extreme poverty, placing them below the international poverty line of $1.90 a day (World Bank, 2022). This alarming scenario has prompted a comprehensive examination of the contributing factors. It aims to provide valuable insights for the Kenyan government as it strives to devise more effective strategies to realise the desired outcomes of expanded formal financial access (Calliari et al., 2022).

While various factors such as the soaring cost of living, economic recession stemming from the challenges posed by COVID-19, and inadequate infrastructure might have contributed to the observed inadequacies in household income generation in Kenya, one fundamental factor that demanded considerable attention is the investment literacy of households (Koomson et al., 2020). This becomes particularly pertinent in light of the rapid proliferation of financial technology and the increasing complexity of financial markets (Jain et al., 2023). As financial products and services become more accessible, households may grapple with the challenges of making sound investment decisions (Koomson et al., 2020).

Investment literacy has been defined as tips enabling someone to screen out the best investment opportunities from several choices to maximise investment returns (Ouachani et al., 2021). Global research, particularly in developed countries, has indicated a positive correlation between investment literacy and household income generation (Kara et al., 2021). However, developing countries like Kenya need adequate research on this relationship (Ojo et al., 2018). Therefore, to fill this study gap, this study examined the role of investment literacy in household income generation, specifically in Kenya, taking into account the unique context and challenges faced by the country.

Statement of the Problem

Increased formal financial access is widely recognised as a crucial factor in boosting household income generation, a key driver of economic growth (Sikder et al., 2022). However, despite a significant rise in formal financial access from 75.5% in 2019 to 83.7% in 2022 in Kenya, household income generation has not improved as anticipated, as over 50% of Kenyans compared to a proportion of only 25-40% in other developing countries, still grapple with extreme poverty, falling below the international poverty line of

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$1.90 a day, (World Bank, 2022; FSD, 2022). This suggests that other factors may be contributing to the problem. Due to the rapid growth in financial technology coupled with the sophistication of the financial markets, one such vital factor could have been households' investment decisions when utilising accessed financial products and services (Jain et al., 2023). Researchers in Kenya and other developing countries where this problem is predominant endeavour to investigate how well-equipped households are to make investment decisions. This could influence how well or poorly they used the accessed funds, subsequently influencing their income generation capacity (Kara et al., 2021). Prior studies have produced contrasting results besides not establishing a clear direction on the role of investment literacy in household income generation, with most concentrating on the role of financial literacy in financial management (Ombago, 2015; Schutzeichel, 2019; Bunyamin &Wahab, 2022; Mwatondo & Wekesa's, 2020). To fill this research gap, this study specifically focused on the role of investment literacy on household income generation among SACCO members in Narok County and adopted the most recent data.

Objective of the Study

To determine the role of investment literacy on household income generation among SACCO members in Narok County, Kenya.

Research Hypothesis

H_o: Investment literacy has no significant role in household income generation among SACCO members in Narok County, Kenya.

Significance of Study

This study's findings and conclusions are significant to researchers, academicians, policymakers, investors, SACCO officials, and clients, albeit with their specific needs. The study contributes explicitly to investment literacy's role in household income generation, informing policymakers, empowering investors, and aiding SACCOs in improving services and supporting clients. Ultimately, it fosters economic well-being and increased income generation.

THEORETICAL FRAMEWORK

Behavioural Finance Theory

In the 1970s, Amos and Daniel introduced the theory of behavioural finance, which posits that emotions, biases, and cognitive shortcuts (heuristics) influence household financial decision-making, leading to deviations from rationality. Recent research has substantially fortified the theory's standing. For instance, Duxbury (2015) delved into the role of overconfidence in the equity premium puzzle, revealing that overconfident households, who overestimated their stock-picking prowess, allocated more investments to equities, resulting in elevated equity prices and reduced expected returns. Moreover, Rejeb et al. (2023) developed a model accentuating the centrality of speculation and emotions in financial bubbles, underscoring how speculators' behaviour influences asset prices. Additionally, Ahmad (2021) conducted an extensive survey on behavioural biases in financial markets, asserting that these biases, shaped by emotions, societal norms, and beliefs, could significantly impact market outcomes and pricing.

Despite the growing body of evidence buttressing the theory, noteworthy limitations persist. A primary concern lies in the empirical testing of behavioural predictions, a formidable task owing to the challenge of directly observing and quantifying the psychological and emotional factors influencing financial decision-making (Cokely et al., 2018). Furthermore, some critics argue that the theory should be more expansive and offer specific guidance on facilitating improved financial decision-making (Bruijn & Antonides, 2022).

Numerous studies have scrutinised the behavioural finance theory, with Alshater et al. (2022) advising prudence in its application, acknowledging its valuable insights while suggesting it may not comprehensively elucidate financial markets independently. Similarly,

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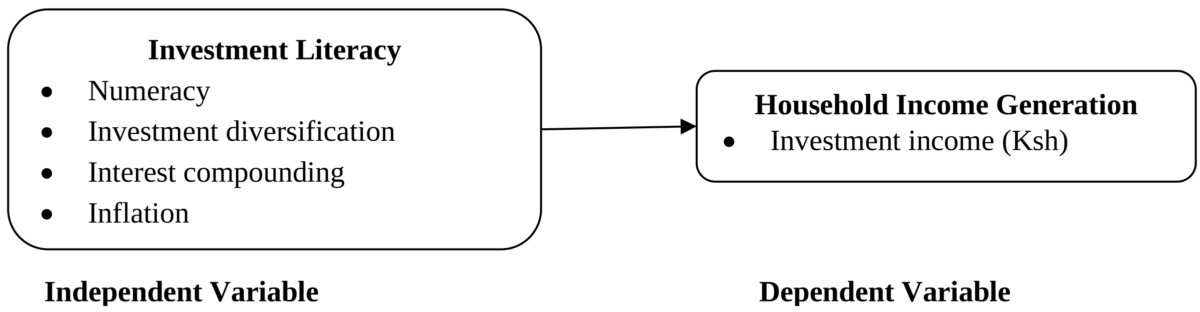
Jagannathan et al. (2017) argued that conventional market microstructure theories could expound upon financial market inefficiencies without recourse to behavioural finance. Jain et al. (2021) maintained that empirical evidence fortified the efficient market hypothesis, implying that behavioural finance might be considered optional for explaining financial market outcomes. Furthermore, Bruch and Feinberg (2017) discerned limited applicability of behavioural economics in environmental policy due to an insufficient grasp of the precise psychological factors influencing environmental decisions.

Despite these criticisms, the pertinence of behavioural finance to the study remains manifest. It imparts invaluable insights into the psychological underpinnings of financial decision-making. Understanding biases, emotions, and heuristics steering financial behaviour can empower households to render more informed decisions and devise effective investment strategies. Furthermore, the theory underscores the significance of financial skills, enabling households to discern the factors moulding their investment choices.

THE CONCEPTUAL FRAMEWORK

The study was guided by a conceptual framework (Figure 1), with investment literacy as the independent variable and household income generation as the dependent variable.

Figure 1: The conceptual framework



EMPIRICAL REVIEW

Kebede and Kuar (2015) explored the intricate relationship between investment literacy and household income in Pakistan. They examined how investment literacy influences financial behaviours, especially investment decisions and income generation. Their study followed a quantitative approach with a sample of 2,524 Pakistani households selected through stratified random sampling and surveyed online. Data analysis used structural equation modelling (SEM) and the partial least squares (PLS) method. A multidimensional tool assessed financial literacy, including investment literacy, which gauged knowledge of various investment products and strategies. Regression analysis was employed to test hypotheses, revealing that investment literacy positively affected household income by enhancing investment choices. Specifically, households with higher investment literacy were more inclined to invest in higher-yield options, leading to increased income. However, the research highlighted gaps in the literature, mainly that there need to be more studies on investment literacy's impact on income generation in developing countries like Kenya, which necessitated this study.

Lusardi and Mitchel (2017) conducted a study examining the link between financial literacy, particularly in the context of investment literacy, and its influence on household wealth. Their research, which encompassed cross-sectional data from households in the Netherlands, Italy, and the United States, focused on individuals aged 50 and older participating in the TIAA Institute-GFLEC Personal Finance Index survey, with 1,200 respondents from each country gathered through quota sampling. This comprehensive study

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combined quantitative and qualitative data and applied regression analysis and propensity score matching methods, utilising a survey questionnaire with the coefficient of determination (R^2) as the test statistic. Their findings highlighted a positive correlation between investment literacy and wealth accumulation and further unveiled a pronounced gender gap in investment literacy, with women demonstrating lower financial proficiency. These outcomes underscore the necessity for financial education programs to enhance financial and investment literacy. A similar study was relevant in Kenya, given its unique circumstances and differences in economic and social factors between the countries that influence households' financial behaviour.

In the African context, Mukulu and Qutieshat (2021) conducted a comprehensive study focusing on investment literacy and its intricate relationship with household income generation within Zambia. This multifaceted study aimed to assess the prevailing levels of financial and investment literacy among households, examine their interplay with household income generation, and scrutinise the factors shaping these literacies. Employing a cross-sectional research design, the study provided a snapshot of Zambia's financial and investment literacy landscape, utilising a stratified random sampling technique to select 340 households as contributors of valuable insights through structured questionnaires. The data underwent meticulous analysis, revealing low literacy levels, unexpected dissociation between investment literacy and income generation, and the influential roles of education and income levels. This raised the need for a similar study in Kenya, given its unique features and different levels of investment literacy between the two countries.

In Kenya, Mwatondo and Wekesa (2020) explored how investment literacy affects SACCOs' financial growth in Kwale County. Using a descriptive survey design, their study analysed financial knowledge, attitude, behaviour, and training's influence on SACCO growth. They surveyed 397 respondents, chosen through stratified random sampling, from a target of 15281 members across 80 licensed SACCOs in Kwale County. Pearson's correlation test highlighted significant positive links between financial aspects and SACCO growth, reinforced by regression results. The findings have implications for Kwale County's government, the national administration, academia, and policymakers, suggesting ways to enhance financial education, regulations, and poverty alleviation strategies. This study's significance extends to other sectors, laying the groundwork for further research into investment literacy's impact on financial growth. The current study expounded profoundly on financial literacy about household income generation, explicitly focusing on investment literacy, which is fundamental in household decision-making, which makes it stand out.

RESEARCH METHODOLOGY

The research employed a descriptive design to explore the relationship between variables (Rahi, 2017). The study targeted 3050 active members within 14 (SACCOs) in Narok County, Kenya (Narok County Registrar of Cooperatives, 2023). Stratified sampling divided these SACCO members into two strata based on their savings and loan status, and purposive sampling was used to select participants from each stratum, considering factors like age, gender, education level, and SACCO membership duration (Etoromat, 2022). The study's sample size was determined using the Yamane (1957) formula, resulting in a sample of 217 SACCO members.

Primary data was collected through a self-administered structured questionnaire utilising a 5-point Likert scale (Nthoki, 2016). A pre-test was conducted with 22 SACCO members from Narok line SACCO, not included in the main primary data collection. The choice of the 22 respondents was informed by Cooper et al. (2018), who suggested that a pilot study sample should be at least 10% of the primary sample size. Expert opinion from supervisors ensured the validity of the research instruments, and reliability was established through Cronbach's Alpha

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testing, with a resulting score of 0.9375, surpassing the threshold of 0.7 (Craciun et al., 2023).

Data analysis encompassed both descriptive and inferential statistics using SPSS software version 27. A simple linear regression model was employed to assess the impact of investment literacy on household income generation (Tello-Gamarra et al., 2022).

The regression model equation took the form:

$Y = \beta 0 + \beta i X i$,

With Y representing Household Income Generation, β0 as the Constant, βi denoting the slope parameter, and X1 represents Investment literacy.

Model adequacy was tested using ANOVA tables, and individual parameter tests were carried out using t-tests (Condon et al., 2023). Assumptions of the linear regression model, including normality, linearity, and autocorrelation, were assessed through the Kolmogorov Smirnov test, scatter plots, and Durbin-Watson test, respectively (Condon et al., 2023).

DATA ANALYSIS, RESULTS AND DISCUSSION

This study aimed to elucidate the role of investment literacy on household income generation within SACCO members in Narok County. Respondents assessed their level of agreement or disagreement with investment literacy statements using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Descriptive statistics were computed, and the findings are detailed in *Table 1*.

Table 1: Descriptive statistics

Statement	SD	D	U	A	SA	Total
I am comfortable using numbers to make financial decisions	59 (29%)	61 (30%)	51 (26%)	20 (10%)	11 (5%)	202 100%
I am familiar with various investment vehicles	45 (22%)	70 (35%)	41 (20%)	20 (10%)	26 (13%)	202 100%
I understand how interest compounds over time	59 (29%)	51 (25%)	45 (23%)	24 (12%)	23 (11%)	202 100%
I understand how inflation can affect the real value of my investments.	50 (25%)	53 (26%)	57 (28%)	22 (11%)	20 (10%)	202 100%
Key: SD=Strongly Disagree; D=Disagree; UN=Undecided; A=Agree; SA=Strongly agree						

Source (Field Data, 2023).

The data in *Table 1* reveals that 59 (29%) of SACCO members strongly disagreed, 61 (30%) disagreed, 51 (26%) were undecided, 20 (10%) agreed, and 11 (5%) strongly agreed with the statement regarding their comfort in using numbers for financial decisions. These findings signify that many respondents needed more confidence in utilising numerical data for investment choices, underscoring a substantial gap in investment literacy among Narok County's SACCO members. Proficiency in using numbers is pivotal for making well-informed financial decisions that can, in turn, bolster income generation. These results are in accordance with Zuilkowski et al. (2023) study, which found a positive correlation between adequate numerical comprehension and the ability to make prudent investment decisions. However, they contradict the findings of Naili et al. (2023), who reported a negative correlation between numerical proficiency and sound investment choices.

Regarding familiarity with various investment vehicles, including stocks and bonds, the findings show that 45 (22%) SACCO members strongly disagreed, 70 (35%) disagreed, 41 (20%) were undecided, 20 (10%) agreed, and 26 (13%) strongly agreed with the statement. These results indicate that most SACCO members would benefit from a deeper understanding of different investment options, potentially unlocking their benefits and risks. This aligns with the insights of Lusardi and Mitchel (2017), who emphasise that a

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comprehensive knowledge of investment alternatives empowers individuals to make informed decisions, thereby enhancing their potential for income generation. However, these findings differ from those of a study by Gaudecker (2015), who did not find any influence of having familiarity with various investment vehicles on household income generation.

The study also explored the respondents' grasp of how interest accumulates over time and its impact on investment value. The results revealed that 59 (29%) strongly disagreed, 51 (25%) disagreed, 45 (22%) were undecided, 24 (12%) agreed, and 23 (11%) strongly agreed with the statement. These findings indicate that many SACCO members in Narok County have limited knowledge about the mechanics of interest accumulation and its influence on investment value. These outcomes are consistent with Twumasi et al. (2022), highlighting that individuals who comprehend the impact of interest on the value of their investments are better positioned to optimise their income generation. This underscores the importance of understanding the dynamics of interest accumulation and its implications for investment value. However, these results contrast with Gaudecker's (2015), who did not find any influence of having knowledge on how inflation accumulates over time and investment value.

Regarding the influence of inflation on the actual value of investments, the data show that 50 (25%) SACCO members strongly disagreed, 53 (26%) disagreed, 57 (28%) were undecided, 22 (11%) agreed, and 20 (10%) strongly agreed with the statement. These findings indicate that a significant proportion of SACCO members could benefit from a clearer understanding of how inflation affects the actual value of investments. The sizable percentage of undecided respondents further underscores the need for increased awareness and certainty regarding this concept. This aligns with the insights of Philippas and Avdoulas (2020), emphasising that individuals who grasp the impact of inflation on the actual value of investments are better equipped to make decisions that counteract the eroding effects of inflation, ultimately leading to higher income generation. However, these findings differ from those of Xu and Zia (2012), who did not see any relationship between inflation and the actual value of investments.

The data was subjected to further scrutiny through Pearson's Correlation analysis to determine whether a correlation existed between investment literacy and the household income generation of SACCO members in Narok County. The ensuing results are showcased in *Table 2*.

Table 2: Pearson's correlation analysis between investment literacy and household income generation

		Household income
Investment Literacy	Pearson Correlation	.829**
	Sig. (2-tailed)	.022
	N	202

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

Source, (Field Data, 2023)

The results in *Table 2* show a strong positive and statistically significant correlation (r=0.829, p =0.022) between investment literacy and household income generation of SACCO members in Narok County. This means investment literacy is necessary for enhanced household income generation among SACCO members in Narok County. This agrees with Habyarimana and Kakkar's (2022) findings, who found a positive and significant relationship between investment literacy and household income generation. On the contrary, the findings differ from those of Xu and Zia (2012).

The study further sought to determine the role of investment literacy on household income generation among SACCO members in Narok County. To achieve this, the study tested the null hypothesis, which stated:

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H_{o2}*: *Investment literacy has no significant role in household income generation among SACCO members in Narok County, Kenya.

The analysis was done using simple linear regression; the results are shown in *Table 3*.

Table 3: Regression coefficients for investment literacy

R^2	β	F	T	p
.687	.225	438.996	2.056	0.022

Source (Field Data, 2023).

Table 3 reveals a satisfactory goodness of fit for the regression model, illustrating the relationship between investment literacy and household income generation among SACCO members in Narok County. The R^2 value of 0.687 signifies that approximately 68.7% of household income variation in SACCO members can be attributed to investment literacy. Notably, investment literacy holds significant sway over household income generation, evident in the F-value of 438.996 ($p<$ 0.05). The null hypothesis, positing that investment literacy has no substantial role in household income generation among SACCO members in Narok County, Kenya, was soundly rejected, as indicated by the t-value of 2.056, surpassing the critical threshold, coupled with a P value below 0.05.

These results precisely emphasise that investment literacy is pivotal in influencing household income generation for SACCO members in Narok County. This corroborates the findings of Habyarimana and Kakkar (2022), emphasising the crucial role of investment literacy in augmenting household income. Philippas and Avdoulas (2020) bolster this assertion, underscoring that households with higher investment literacy are inclined to engage in higher-yielding investment avenues, leading to amplified income. Nevertheless, these results contrast Xu and Zia (2012), who identified no significant relationship between investment literacy and household income generation.

CONCLUSION AND RECOMMENDATION

The study firmly establishes that investment literacy plays a crucial and significant role in augmenting household income generation among SACCO members in Narok County, Kenya. An evident link exists between increased investment literacy and enhanced household income, highlighting the imperative of investment literacy in this context.

In light of these findings, several recommendations are proposed: Firstly, the government should prioritise enhancing household investment literacy, even as it continues to promote formal financial access. This can be achieved by collaborating with SACCOs, who are pivotal in organising investment literacy programs and workshops for their members. Furthermore, the Kenyan government should engage educational institutions, financial entities, and government agencies in developing comprehensive investment literacy programs.

By implementing these measures, Kenyan households can acquire essential investment literacy, resulting in increased household income generation and long-term economic growth. This proactive approach has the potential to alleviate the economic challenges faced by Kenya and other developing nations in the aftermath of the COVID-19 pandemic.

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