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Correlational variations between emotional biases and financial literacy in investment decision-making

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Abstract

Background: Both financial literacy and emotional biases determine investment decision by SACCO members. They do not operate in isolation but bear a concerted influence. In this paper we seek to explore synergies between financial literacy and emotional biases in investment decisions.

Objectives: To empirically explore synergies between financial literacy and emotional biases in investment decision-making by SACCO members.

Method: Perception based data was collected among 284 Imarisha SACCO members in Kericho County, Kenya between 28th to 31st July, 2025. The data was collected through self-filled questionnaire using KoboCollect. The data was checked for completeness, entered in excel, cleaned, coded and analyzed. First, the data was subjected to normality testing to ensure suitability for subsequent statistical analyses and generalization of findings. Second, correlation analysis was employed to examine the associations between: emotional biases and financial literacy; emotional biases and investment decisions; and financial literacy and investment decisions. All statistical procedures were conducted using R version 4.5.1, from which the results were obtained and systematically interpreted.

Results: The correlation analysis revealed a moderate positive association between emotional biases and financial literacy ($r = 0.397$). A stronger positive correlation was observed between emotional biases and investment decisions ($r = 0.598$), while financial literacy and investment decisions also demonstrated a strong positive relationship ($r = 0.619$).

Conclusions: The correlation analysis revealed that financial literacy and emotional biases have marginal variations individually in their influence on investment decisions

Keyword: Correlation, emotional biases, financial literacy, investment decisions

Introduction

Studies show that individuals are more emotional than rational in making financial decisions (Parker, 2023) ^[6]. Emotional biases represent irrational tendencies in thought or judgment that are influenced by affective states rather than by objective facts or logical reasoning (Armansyah, 2022) ^[3]. Such biases may compel investors to act on emotions such as fear, greed, attachment, or overconfidence, instead of relying on rational factual analysis. Within the framework of behavioral finance, these emotional distortions frequently undermine sound judgment, as they alter the perception of risk, reward, and expected outcomes (Nagesh B, 2023) ^[5].

Financial literacy, on the other hand, equips investors with the knowledge and skills necessary to understand financial concepts, leverage alternatives, and make sound choices (G., 2021). A financially literate investor is more likely to recognize risks, compare investment options, and avoid decisions solely driven by emotions. Studies indicate that higher levels of financial literacy enhance investors' capacity to diversify their portfolios, evaluate long-term risks, and minimize susceptibility to common biases, thereby enabling them to make more prudent and informed financial decisions. (Annamaria Lusardi, 2023) ^[2]. Investment decisions are therefore shaped by the interaction between emotional biases and financial literacy. While emotional biases may cloud rational thinking, adequate financial literacy serves as a corrective lens that enables investors to interpret information critically and act in alignment with long-term goals. Recent findings further emphasize that financial literacy acts as a mediating factor between emotional biases and investment outcomes, enabling investors to make decisions that maximize returns and minimize risks (Nagesh B,

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2023) [5]. Consequently, the balance between these two factors plays a crucial role in determining the quality and outcomes of investment decisions. Individually, both emotional biases and financial literacy influence investment decisions. The influence may vary between the two variables. Hence in this paper, we seek to empirically explore variations between financial literacy and emotional biases in investment decision-making by SACCO members

Method

Primary data was collected among 284 Imarisha SACCO

Results

Normality test

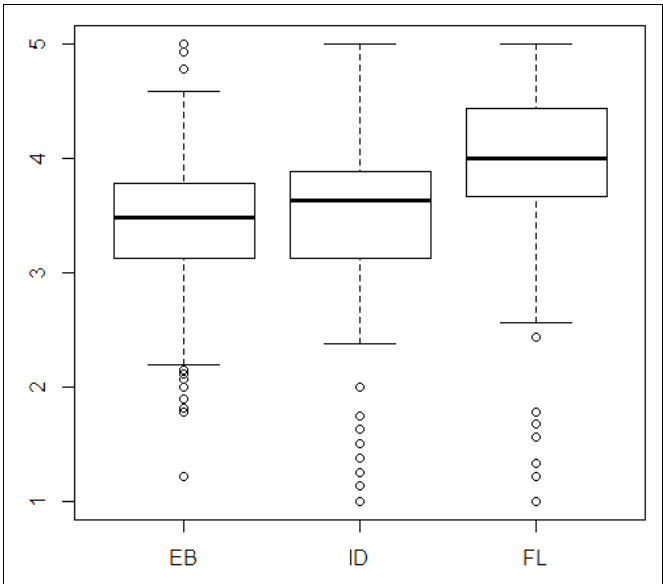


Fig 1: Normality Test (Boxplot interpretation)

The normality of the data was evaluated visually through boxplots, which revealed a normal distribution. This confirmed that the dataset met the assumption of normality, making it suitable for subsequent statistical analyses and the generalization of findings.

Correlation Analysis

Correlation analysis was employed to examine the associations between: emotional biases and financial literacy; emotional biases and investment decisions; and financial literacy and investment decisions.

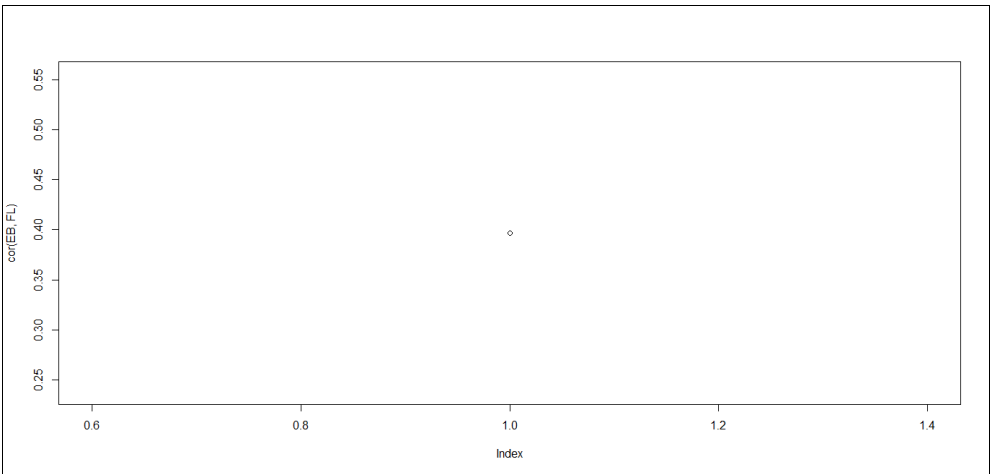


Fig 2: Correlation analysis of Emotional biases and financial literacy

Correlation coefficient between emotional biases and financial literacy $r = 0.3967865$

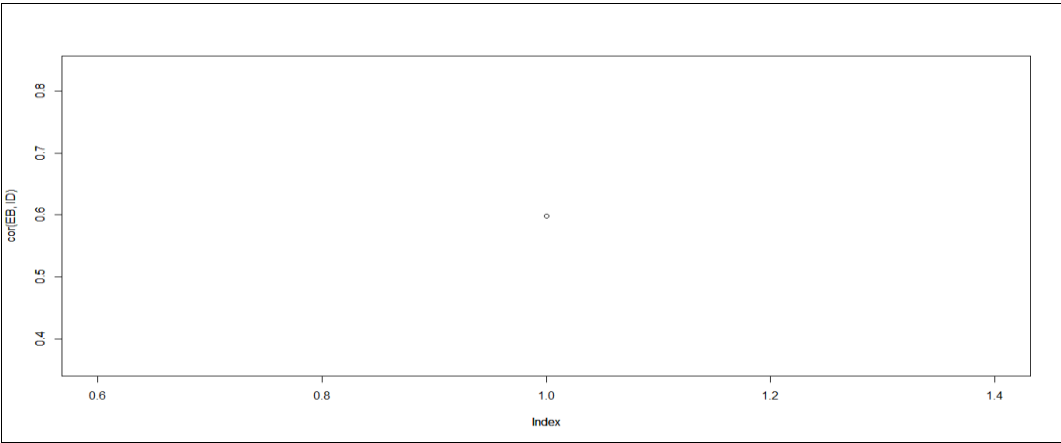


Fig 3: Correlation analysis of Emotional biases and investment decisions

Correlation coefficient between emotional biases and investment decisions $r= 0.5983708$

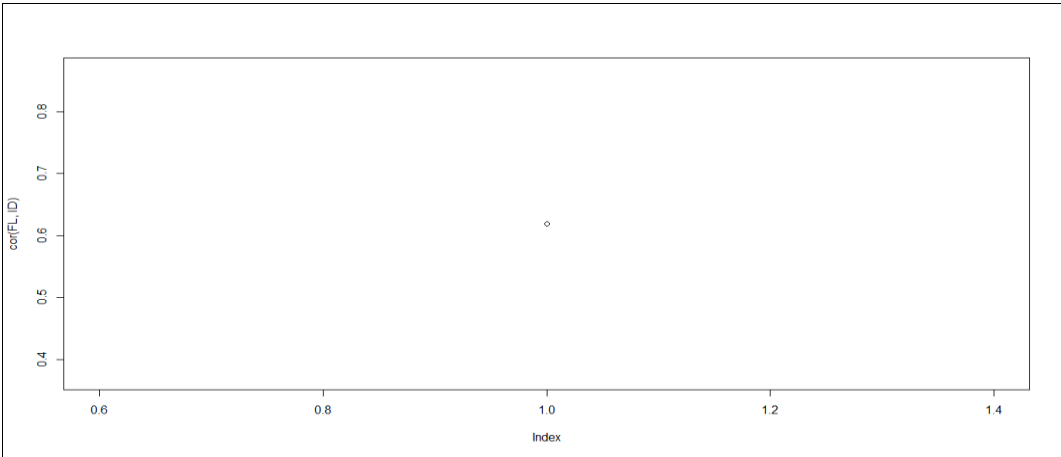


Fig 4: Correlation analysis of financial literacy and Investment decision

Correlation coefficient between financial literacy and investment decisions $r= 0.6191066$

Discussions

Correlation analysis revealed a moderate positive association between emotional biases and financial literacy ($r=0.397$), demonstrating weak association between emotional biases and financial literacy. On the other hand, there was relatively strong positive correlation between emotional biases and investment decisions ($r=0.598$) this shows that 59.8% of variations in investment decisions is explained by emotional biases, agreeing with (Shailendra Kumar, 2024). The remaining 40% is uncounted for. Lastly, financial literacy and investment decisions also demonstrated marginally strong positive relationship ($r = 0.619$) consistent with (Abhilasha Agarwal, 2025). The finding indicate that financial literacy is marginally (2.1%) more influential than emotional biases in this unidirectional analysis. It is plausible that synergies between emotional biases and financial literacy regarding investment decisions would account for additional 39.7% as seen in the correlation analysis between the two.

Recommendation

Based on results of the analysis it is recommended that SACCOs should formulate and implement policies requiring

members to undergo financial literacy program to enable rational investment decisions.

Acknowledgement

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