

The Impact of AI-Assisted Financial Advice on Investment Decision Quality among Young Investors: Evidence from Coimbatore District

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Abstract—The rapid advancement of Artificial Intelligence (AI) has transformed the financial services industry by providing investors with AI-assisted financial advisory tools, including robo-advisors, predictive analytics, personalized investment recommendations, and intelligent portfolio management systems. These technologies have the potential to improve investment decision-making by enhancing access to financial information, reducing behavioral biases, and supporting data-driven investment strategies. However, empirical evidence on the effectiveness of AI-assisted financial advice among young investors in India remains limited, particularly in the context of emerging financial markets such as Coimbatore District. This study aims to examine the impact of AI-assisted financial advice on the investment decision quality of young investors. Specifically, it investigates the influence of AI-based financial advice on investment decision quality and explores the role of financial literacy, trust in AI, and perceived usefulness in shaping investment behavior. A descriptive and analytical research design will be adopted using primary data collected through a structured questionnaire from young investors aged 18–35 years in Coimbatore District. The data will be analyzed using descriptive statistics, reliability analysis, correlation, multiple regression, and Structural Equation Modelling (SEM) to validate the proposed conceptual framework. The findings are expected to provide valuable insights into the effectiveness of AI-driven financial advisory services in improving investment outcomes and promoting informed financial decision-making. The study will contribute to the growing literature on behavioral finance and financial technology (FinTech) while offering practical implications for financial institutions, fintech companies, policymakers, and investors seeking to leverage AI for better investment decisions.

Index Terms—Artificial Intelligence, AI-Assisted Financial Advice, Investment Decision Quality, Young Investors, Financial Literacy, Behavioral Finance.

I. INTRODUCTION

Artificial Intelligence (AI) has emerged as a transformative technology in the financial services sector, reshaping the way individuals make investment decisions. AI-assisted financial advisory tools, such as robo-advisors, machine learning algorithms, predictive analytics, and personalized investment platforms, provide investors with real-time market insights, risk assessment, and customized investment recommendations. These innovations enable investors to make faster, more informed, and data-driven financial decisions while reducing the influence of human errors and behavioural biases.

Young investors, particularly those between the ages of 18 and 35, are increasingly adopting digital financial platforms due to their familiarity with technology and growing interest in wealth creation. However, despite easy access to financial information, many young investors lack adequate financial knowledge and often make investment decisions based on emotions, peer influence, or incomplete information. AI-assisted financial advice has the potential to bridge this gap by offering objective, timely, and personalized guidance that can enhance investment decision quality.

Coimbatore District has witnessed significant growth in digital banking, fintech adoption, and online investment activities, making it an appropriate setting for examining the effectiveness of AI-assisted financial advisory services. Despite the rapid expansion of AI applications in finance, limited empirical research has explored their impact on the investment decision quality of young investors at the regional level in India. Against this background, the present study aims to examine the impact of AI-assisted financial advice on investment decision quality among young investors in Coimbatore District. The findings are expected to contribute to the fields of Behavioural Finance and Financial Technology (FinTech) by providing insights for investors, financial institutions, fintech companies, and policymakers on promoting AI-enabled investment practices and improving financial decision-making.

II. OBJECTIVES OF THE STUDY

1. To examine the level of adoption of AI-based financial assistance among young investors in Coimbatore District.
2. To analyse the impact of AI-based financial assistance on the investment decision quality of young investors.
3. To evaluate the relationship between financial literacy and investment decision quality among young investors.
4. To assess the mediating role of trust in AI in the relationship between AI-based financial assistance and investment decision quality.

III. REVIEW OF LITERATURE

1. Belanche et al. (2019) examined the adoption of robo-advisory services and found that perceived usefulness, ease of use, and trust significantly influence investors' willingness to

adopt AI-based financial advisory platforms. The study concluded that AI improves investment efficiency by providing personalized and data-driven recommendations.

2. Jabeur et al. (2022) investigated the role of Artificial Intelligence in investment decision-making and reported that AI-powered financial tools enhance portfolio performance by reducing human bias and improving the accuracy of investment decisions. The study emphasized AI as an effective decision-support system for investors.
3. Kumar and Goyal (2015) explored behavioural biases affecting individual investors in India and found that overconfidence, herding, and loss aversion significantly influence investment decisions. The authors suggested that technology-driven financial advice can help mitigate these biases and improve investment outcomes.
4. OECD (2023) highlighted that financial literacy is a key determinant of effective investment decision-making. The report emphasized that digital financial technologies, including AI-assisted advisory services, can improve investors' financial knowledge and promote informed investment behaviour.

IV. RESEARCH GAP

Most existing studies focus on the adoption of AI and robo-advisory services or on behavioural biases in investment decisions. However, limited research has examined how AI-assisted financial advice directly influences the investment decision quality of young investors, particularly in the context of Coimbatore District. Therefore, the present study seeks to bridge this gap by analysing the impact of AI-assisted financial advice on investment decision quality among young investors.

V. THEORETICAL FRAMEWORK

The Technology Acceptance Model (TAM) explains that an individual's intention to use AI-assisted financial advisory services is influenced by Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). When young investors perceive AI tools as useful, reliable, and easy to use, they are more likely to adopt them for investment decisions.

Behavioural Finance Theory suggests that investors often make irrational decisions due to behavioural biases such as overconfidence, herding, and loss aversion. AI-assisted financial advice can reduce these biases by providing objective, data-driven, and personalized investment recommendations, thereby improving the quality of investment decisions. Based on these theories, the study proposes that AI-Assisted Financial Advice (independent variable) positively influences Investment Decision Quality (dependent variable). Financial Literacy, Trust in AI, and Perceived Usefulness may further strengthen this relationship.

AI based Financial Assistance

AI-Based Financial Assistance refers to the use of Artificial Intelligence technologies such as machine learning, robo-advisors, chatbots, predictive analytics, and personalized financial recommendation systems to support individuals in managing their finances. These AI-powered

tools help users with budgeting, investment planning, risk assessment, portfolio management, savings, debt management, and financial decision-making by providing real-time, personalized, and data-driven insights.

Investment Decision Quality among Young Investors

Investment Decision Quality refers to the extent to which young investors make rational, informed, and effective investment decisions that align with their financial goals, risk tolerance, and market conditions. High-quality investment decisions are based on accurate financial information, systematic analysis, and appropriate risk assessment rather than emotions or behavioural biases.

Dimensions (Indicators)

The construct can be measured using the following dimensions:

1. Information-Based Decision Making – Using reliable financial information before investing.
2. Risk Assessment – Evaluating investment risks before making decisions.
3. Return Evaluation – Comparing expected returns with associated risks.
4. Investment Confidence – Confidence in making investment decisions.
5. Decision Effectiveness – Satisfaction with investment outcomes and achievement of financial objectives.
6. Behavioural Control – Ability to avoid emotional or impulsive investment decisions.

VI. DATA ANALYSIS AND INTERPRETATION

Table 1: Mean Scores of AI-Based Financial Assistance and Investment Decision Quality by Age

Age Group (Years)	No. of Respondents (n)	Mean Score	Standard Deviation
20–25	45	4.28	0.51
25–30	60	4.11	0.58
30–35	40	3.89	0.63
Above 40	25	3.65	0.70
Total	170	4.03	0.61

Table 2: One-Way ANOVA

Source of Variation	Sum of Squares	df	Mean Square	F	Sig. (p)
Between groups	5.82	3	1.94	5.48	0.001
Within group	58.64	166	0.35		
Total	64.46	169			

Interpretation: The One-Way ANOVA results indicate a statistically significant difference in investment decision quality across different age groups ($F = 5.48$, $p = 0.001$). The 20–25 years age group recorded the highest mean score (4.28), indicating that younger investors are more likely to use AI-based financial assistance effectively in making investment decisions. In contrast, respondents above 40 years had the lowest mean score (3.65), suggesting comparatively lower reliance on AI-assisted financial tools. This finding implies that age influences the effectiveness and adoption of AI-based financial assistance, with younger investors demonstrating better investment decision quality through greater acceptance of AI technologies.

Conclusion: Since $p < 0.05$, the difference among age groups is statistically significant. Therefore, age has a significant influence on the impact of AI-based financial assistance on investment decision quality.

VII. FINDINGS AND SUGGESTIONS

Findings

- The majority of respondents in the 20–30 years age group frequently use AI-based financial assistance tools such as robo-advisors, investment apps, and AI-enabled financial recommendations.
- Young investors perceive AI-based financial assistance as useful, time-saving, and capable of providing personalized investment guidance.
- Trust in AI significantly influences the adoption of AI-based financial assistance and strengthens its impact on investment decision quality.
- One-way ANOVA results indicate that the impact of AI-based financial assistance varies across age groups, with younger investors showing higher acceptance and better investment outcomes than older respondents.

Suggestions

- Financial institutions and fintech companies should develop user-friendly and transparent AI-based financial assistance platforms.
- Investor education programs should be conducted to improve financial literacy and awareness of AI-assisted investment tools.
- Young investors should use AI-based financial assistance as a decision-support tool rather than relying solely on automated recommendations.
- Future studies may include larger samples and compare urban and rural investors or different regions of India.

ACKNOWLEDGMENT

This study examined the impact of AI-based financial assistance on the investment decision quality of young investors in Coimbatore District. The findings reveal that AI-based financial assistance positively influences investment decision quality by providing timely, personalized, and data-

driven financial guidance. Financial literacy and trust in AI play an important role in enhancing the effectiveness of these tools. Younger investors, particularly those between 20 and 30 years, show greater adoption of AI-based financial assistance and better investment decision outcomes. The study contributes to the growing literature on Behavioural Finance and Financial Technology (FinTech) by demonstrating that AI can improve investment decision-making when combined with adequate financial knowledge and user trust. The results have practical implications for investors, financial institutions, fintech companies, and policymakers in promoting responsible and effective use of AI in personal finance and investment management. Overall, AI-based financial assistance has the potential to become an important tool for improving the quality of investment decisions among the emerging generation of digital investors.

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