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AI-Powered SIP Investments

Dr.LekhaShree.S[1][0000-0003-0859-7828]

[1]PSGR Krishnammal College for Women, Coimbatore, Tamil Nadu, India

Abstract

Abstract. The convergence of Artificial Intelligence (AI) and fintech is revolutionizing investment strategies, offering enhanced personalization, efficiency and accessibility to individual investors. Among these, systematic investment plans (SIPs) have gained significant traction due to their disciplined and long term wealth building approach. This study explores the transformative role of AI in optimizing SIP investments by analyzing its impact on investor behavior, decision making and trust. Drawing from literature in AI driven finance, behavioral economics and digital platforms, the research examines how predictive analytics, Robo-advisory systems and intelligent fund selection tools influence investor engagement. A Primary survey is conducted among Indian retail investors to assess the perception and adoption of AI- Enabled SIP platforms. The study aims to identify key variables affecting investor satisfaction and behavioral consistency, offering insights into building smarter and more sustainable financial ecosystems. The findings have implications for fintech innovators, policymakers and financial educators aiming to enhance financial inclusion through intelligent automation.

Keywords: AI, Fintech, Systematic Investment Plan, Retail Investors, Behavioral Finance, Robo-Advisors, Investment Automation, Financial technology, Smart Investment, Investor Trust.

1 Introduction.

The global financial landscape is undergoing a fundamental transformation, driven by the rapid infusion of technology into financial services**,** widely known as FinTech**.** This evolution has not only widened access to formal financial instruments but also transformed the way individuals plan, save, and invest. Among the vanguard technologies, Artificial Intelligence(AI) has emerged as are volutionary force, enabling real-timeanalytics,intelligentautomation,andhyper-personalizedservices(Arneretal., 2017; Gomber et al., 2018). In India, where retail investment is increasingly becoming digitized, AI is poised to significantly influence how investment decisions are made— particularly within Systematic Investment Plans (SIPs)**.**SIPs have long been viewed as a disciplined investment route that encourages consistent savings in mutual funds over time. According to the Association of Mutual Funds in India (AMFI, 2023)**,** SIP contributions reached ₹15,000 crore per month, indicating arising preference among both novice and experienced investors. However, SIPs in their traditional form are often devoid of dynamic decision-making tools, contextual intelligence, and real-time adaptability. This is where AI steps in—not to replace human judgment but to augment it, creating smarter, more responsive, and personalized SIP strategies (Treleaven et al., 2019;Wanget al., 2020).Recent research has explored the potential of AI in investment management, particularly through applications like robo-advisory, sentiment analysis, and algorithmic fund allocation**.** For example**,** Deng et al. (2019) demonstrated that machine learning models significantly outperform traditional models in predicting market returns and volatility. Similarly, D'Acuntoetal.(2019)argued that robo-advisors reduce behavioral biases and improve portfolio e-balancing decisions**.** Ryll etal. (2020) focused on the psychological aspects, noting that AI-infused systems instill greater financial discipline among young investors due to goal-setting features and behavioral nudges.IntheIndiancontext,JoshiandBansal(2021)analyzedtheeffectivenessofrobo- advisory platforms like

Groww and Kuvera and found that users exhibited improved investmentcontinuitywhenguidedbyAI-ledsuggestions.KumarandChoudhary(2022) reported that personalized dashboards, predictive returns, and voice-based AI assistants significantly enhanced user satisfaction in SIP management. Despite these findings, few studies have explored the specific relationship between AI adoption and the behavioral and financial outcomes in SIP investments. Further, global scholars like Schueffel(2016) and Lautenschläger (2020) emphasize that while FinTech promises efficiency and scalability, its successful implementation depends on consumer trust, data transparency, and AI interpretability—elements crucial for sustained SIP participation. Studies based on Technology Acceptance Model (TAM)and Unified Theory of Acceptance and Use of Technology (UTAUT) suggest that perceived ease of use, usefulness, and trust are the key drivers for adoption of AI in financial contexts (Venkatesh et al., 2003; Chuang et al., 2022). However, there's a glaring research gap in the intersection of AI, SIP investments, and sustainable financial behavior—particularly from an Indian retail investor perspective**.** Most current studies either take a macroeconomic view of AI in FinTech or focus narrowly on robo-advisory without dissecting SIP-specific investor behavior. Given the volume of SIP flows and the youth-heavy investor base in India, there is a timely need to understand how AI can not only optimize returns but also drive long-term financial discipline. Hence, this study attempts to bridge this gap by examining the role of Artificial Intelligence in enhancing the experience, effectiveness, and sustainability of SIP investments. Through the lens of behavioral finance, FinTech evolution, and empirical analysis, this research aspires to uncover how AI-led investment toolscantransformthefutureofretailinvestment—makingitmoreinclusive, intelligent, and future-ready**.**

Problem Statement.

In the evolving FinTech landscape, Systematic Investment Plans (SIPs) have become a preferred route for retail investors, particularly in emerging economies like India, due to their disciplined, low-risk, and accessible nature. Despite this popularity, many investors continue to rely on static, one-size-fits-all SIP models, which do not accommodate real-time financial shifts, personalized goals, or dynamic market volatility. Meanwhile, Artificial Intelligence (AI) has shownimmensepotentialtorevolutionizeinvestmentstrategiesbyenablingpredictiveanalytics, automation, and user-centric financial advice. Although AI is increasingly being adopted across FinTech platforms globally, there exists a limited body of research that specifically explores its application in enhancing SIP investments—in terms of improving decision-making, personalization, returns optimization, and long-term financial discipline. Additionally, most existing studies focus on general investment behavior or macro-level trends, ignoring the behavioral, technological, and trust-based factors that affect AI adoption in SIPs by Indian retail investors.ThereisalsoinsufficientevidenceonwhetherAI-enabledSIPtoolsleadtosustainable investment practices, such as consistency, goal tracking, or portfolio diversification over time. Therefore, there is a critical research gap in understanding:

- How AI tools are perceived and adopted by SIP investors,
- What impact they have on the efficiency, personalization, and sustainability of SIPs?
- Whether AI-driven solutions can bridge behavioral gaps and in still long-term financial discipline among investors.

This study aims to fill this void by investigating the intersection of AI technology and SIP investing behavior in India, thereby contributing to both academic knowledge and practical application in the field of behavioral FinTech.

Research Questions.

i. What is the extent of awareness and usage of AI powered platforms among SIP Investors?

ii. How do perceived usefulness and trust in AI influence SIP investment choices?

iii. Do AI-driven insights contribute to more sustainable and consistent SIP investment Behavior?

Research Objectives.

i. To examine the level of awareness and adoption of AI enabled platforms among SIP Investors
ii. To assess the perceived usefulness and trust of AI tools in influencing SIP Investment decisions.
iii. To evaluate the impact of AI driven recommendations on the sustainability of SIP investments.

Hypotheses.

- **H_{01}:** There is no significant relationship between awareness of AI platforms and their adoption by SIP investors.
- **H_{02}:** Perceived usefulness and trust in AI tools do not significantly affect SIP investment decisions.
- **H_{03}:** AI-driven insights do not significantly enhance the sustainability of SIP investments.

2. Methodology for the Study.

a. Research Design

The study adopts a descriptive and analytical research design, aiming to understand the role of Artificial Intelligence (AI)in influencing smarter and sustainable Systematic Investment Plan(SIP)decisions. It blends both quantitative and qualitative elements, enabling a holistic view of investor perceptions and AI's impact.

b. Sampling Design

- **Population.**

Individual investors who invest in SIPs through digital platforms, particularly those exposed to AI-enabled investment tools.

- **Sampling Technique.**

Purposive sampling will be used to select SIP investors familiar with or using AI-assisted platforms (like Zerodha, Groww, Kuvera, IND money, etc.).

- **Sample Size.**

Aminimumof100respondentswill be targeted, ensuring adequate statistical validity.

c. Data Collection Methods

- **Primary Data.**

Structured questionnaire administered through Google Forms and investor communities.

- **Secondary Data.**

Journals (IEEE, Scopus, Science Direct),industry reports(NASSCOM, SEBI, PWC),and financial analytics portals for contextual insights and literature support.

d. Tools for Analysis

For the analysis and generation of the results, tables and charts has been used with the combination of Python Programming Language

- **Pandas:** For Data cleaning, manipulation, descriptive Statistics and tabulating results.
- **NumPy:** For Numerical Calculation and handling arrays.
- **Matplotlib and Seaborn** (Chart Creation Tools)-For generating the visual charts such as bar charts, pie charts and radar charts.
- **Overall analysis:** By using these software it allows to perform descriptive statistics, percent distribution calculation, correlations and cross tabulations and then visualize the results in clear, professional

charts to support the insights.

e. e. Scope of the Study

The research focuses on AI-assisted SIP investment decisions in India, particularly from digitally literate investors using mobile-based investment platforms. It also evaluates the sustainability aspect — consistency, risk tolerance, and goal alignment—influenced by AI insights.

f. f. Limitations of the Study

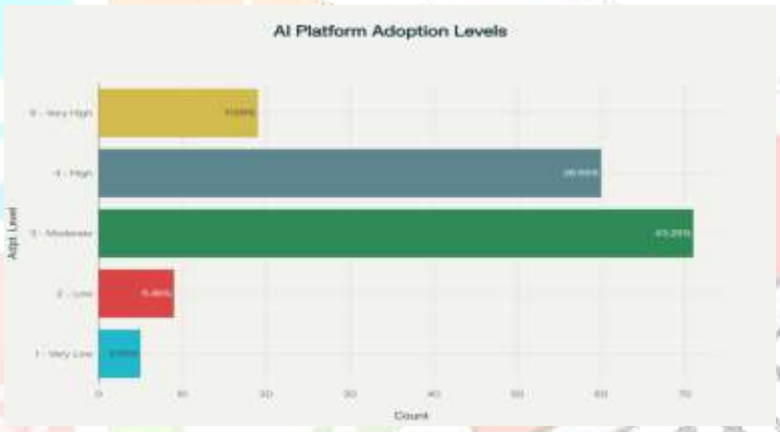
- The study is limited to respondents who are already aware or have used AI in FinTech, possibly excluding new or traditional investors.
- The self-reported data may include response bias**.**
- The generalize ability of results is restricted to tech-savvy SIP investors in urban areas.

2. Analysis and Interpretation

Objective 1: To examine the level of awareness and adoption of AI enabled platforms among SIP Investors

Chart-1

AI Platform Adoption Levels



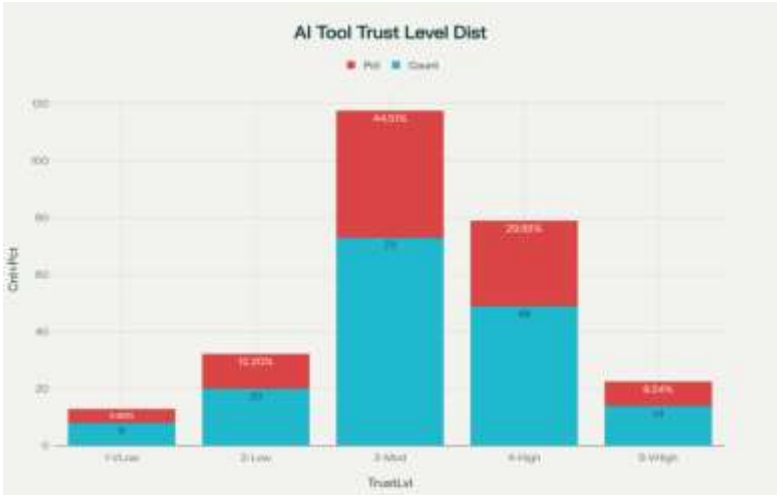
Source: Computed

Interpretation. Moderate Adoption (43.3%) represents the largest segment, indicating careful evaluation. High adoption (36.6%) shows significant early adopter presence. Very high adoption (11.6%) represents enthusiastic adopters. Low to very low adoption (8.6%) suggests minimal resistance. The adoption pattern reveals a cautious but interested investor community. However, 37.2% still show low awareness, suggesting targeted education opportunity exist.

Objective 2. To assess the perceived usefulness and trust of AI tools in influencing SIP Investment decisions.

Chart-2

Trust of AI Tools

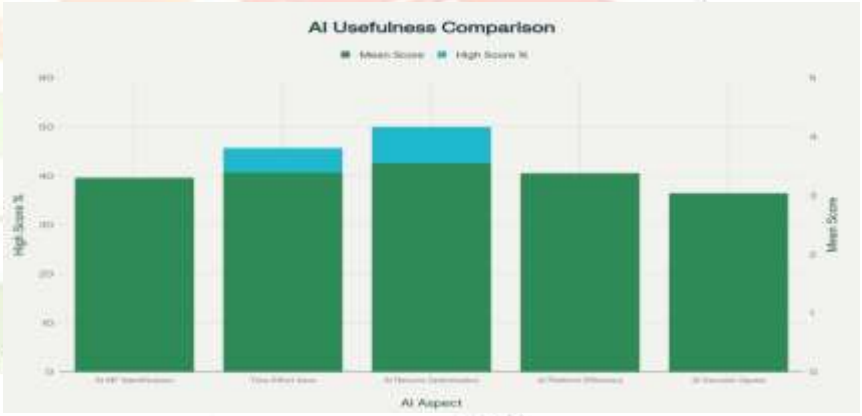


Source: Computed

Interpretation. The above chart-2 interprets the trust levels in AI Tools among SIP Investors. Moderate Trust dominates (44.5%), reflecting careful evaluation. High trust levels (29.9%) indicate substantial confidence among adaptors. Low trust levels (17.1%) represent addressable skepticism. Overall mean trust score of 3.25 suggests above average confidence.

Chart-3

Perceived usefulness of AI Tools in SIP Investments

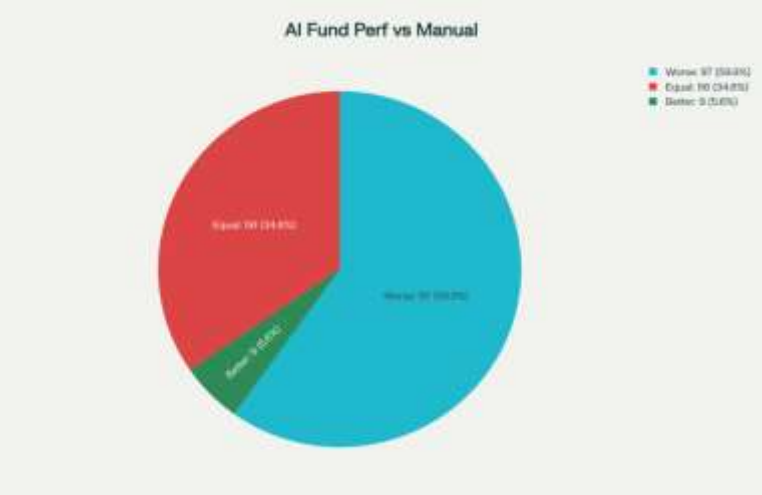


Source: Computed

Interpretation. The above chart depicts the perceived usefulness of AI Tools in SIP Investments. AI Returns Optimization leads usefulness perception (3.55 mean, 50% high scores). Time and Effort savings shows high appeal (3.39 mean, 45.7% high scores). Platform Efficiency demonstrates solid recognition (3.38 mean, 39% high scores). Decision speed shows room for improvement (3.04 mean, 22.6% high scores).

Chart-4

Performance Perception Challenge



Source: Computed

Interpretation. The above charts-4 display the AI Fund Performance Perception Vs Manual Research. 56.9% believe AI Performs worse than manual research, while only 5.6% consider AI superior. This represents a critical adoption barrier requiring evidence-based demonstration of AI Capabilities.

Objective 3. To evaluate the impact of AI driven recommendations on the sustainability of SIP investments

Chart-5

Sustainability Impact Assessment

Source: Computed

Interpretation. The Chart-5 describes the sustainability impact assessment. AI Notifications demonstrate the strongest impact (3.44 Mean, 42.7% high impact). Consistency support provides moderate assistance (3.22 mean, 34.8% high impact). Goal setting shows limited effectiveness (2.41 mean, 6.7% high impact). Investment confidence requires improvement (2.55 Mean, 7.3% high impact). This analysis reveals consistent sustainability benefits across experience levels, with newer investors (Experience Level 1) showing slightly higher scores for consistency help and goal setting, suggesting AI tools may particularly benefit those with limited experience. Despite individual metric strength, overall AI Platform support remains cautious (2.59 mean, 9.8 % high support) indicating a gap between feature specific utility and comprehensive platform adoption.

3. Suggestions

- ✓ Increase awareness campaigns to widen AI adoption further.
- ✓ Enhance transparency about AI Fund performance to build trust.
- ✓ Add features to support long-term goal setting and boost investor confidence
- ✓ Leverage effective AI notification to encourage consistent SIP contribution.

4. Conclusion.

The study concludes that while awareness of AI driven SIP investment platforms among young predominantly female and well educated investors is moderate, their actual adoption is encouraging. Investors exhibit cautious trust in AI Tools, recognizing their ability to enhance decision accuracy and optimize returns, though skepticism remains regarding AI's superiority over manual research. AI enabled features successfully promote investment consistency and timely remainders yet have limited impact on long term goal setting and investor confidence. To harness the full potential of AI in SIP investments, platforms must focus on expanding awareness, building transparent trust through clear performance reporting and enhancing features that support sustained engagement and long term financial planning. These steps will help foster smarter, more disciplined and sustainable investment behaviors among emerging SIP Investors.

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