

The Role of Artificial Intelligence in Shaping Investment Patterns among Working Women: Evidence from Bangalore City

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Abstract

Artificial Intelligence (AI) has emerged as a transformative force in the financial sector, significantly influencing investment behavior and financial decision-making processes. This research paper examines the role of Artificial Intelligence in shaping investment patterns among working women in Bangalore City through a comprehensive socio-economic and behavioral analysis. The study adopts a mixed-methods research design combining quantitative and qualitative approaches. Primary data were collected from 465 working women employed in both public and private sectors across Bangalore City through structured questionnaires, interviews, and focus group discussions. The study evaluates the impact of AI-driven financial technologies such as robo-advisors, mobile investment applications, automated portfolio management systems, predictive analytics, and digital financial planning tools on women's investment decisions. Findings reveal that AI-based financial platforms have significantly improved investment awareness, portfolio diversification, financial confidence, and participation in digital investment instruments among working women. The research identifies education level ($\beta = 0.39, p < 0.001$), income level ($\beta = 0.33, p < 0.001$), digital literacy ($\beta = 0.29, p < 0.001$), and employment sector ($\beta = 0.24, p < 0.001$) as major determinants influencing the adoption of AI-based investment tools. Women utilizing AI-enabled investment platforms demonstrated higher participation in mutual funds, equities, SIPs, and diversified investment portfolios compared to non-users. However, the study also highlights challenges such as digital inequality, lack of financial literacy, privacy concerns, algorithmic bias, and limited trust in automated financial systems. The paper concludes with recommendations for policymakers, financial institutions, fintech companies, employers, and researchers to promote

inclusive AI-driven financial ecosystems that support women's financial empowerment and investment participation.

Keywords: *Artificial Intelligence, Investment Patterns, Working Women, Financial Technology, Women Investors, Bangalore City, Financial Literacy, FinTech, Robo-Advisors, Digital Finance*

1. Introduction

The rapid advancement of Artificial Intelligence (AI) technologies has revolutionized the global financial ecosystem by transforming the way individuals access, analyze, and manage financial information. AI-driven systems such as robo-advisors, predictive analytics, machine learning algorithms, automated trading systems, and personalized financial planning applications are increasingly influencing investment decisions and wealth management practices.

In India, the integration of AI within financial services has accelerated significantly due to the rapid growth of fintech companies, digital banking systems, and mobile investment platforms. Bangalore City, recognized as the technological and innovation hub of India, offers a unique environment for studying the influence of AI on financial behavior, particularly among working women. Women's participation in investment activities has historically remained lower than that of men due to factors such as limited financial literacy, risk aversion, social conditioning, and restricted access to financial guidance. However, increasing workforce participation, digital exposure, and financial awareness among women are gradually transforming investment behavior.

Artificial Intelligence has introduced new opportunities for women investors by simplifying complex financial processes, offering personalized investment advice, and increasing accessibility to investment platforms. AI-based financial technologies enable women to make informed investment decisions independently through automated portfolio recommendations, risk analysis, and digital financial planning tools.

Despite these advancements, disparities continue to exist in access to AI-enabled financial systems across educational, income, and occupational categories. Concerns related to data privacy, cybersecurity, lack of transparency in algorithmic recommendations, and technological trust also influence the adoption of AI-based financial services.

This research therefore aims to examine how Artificial Intelligence is shaping investment patterns among working women in Bangalore City, with special emphasis on women employed in public and private sectors. The study seeks to understand the socio-economic, technological, and behavioral dimensions influencing AI-assisted investment decisions.

2. Review of Literature

2.1 Artificial Intelligence and Financial Services

Artificial Intelligence has significantly transformed the financial sector through automation, predictive analytics, and personalized financial services. AI technologies assist investors by analyzing market trends, assessing financial risks, and recommending suitable investment opportunities.

According to Deloitte (2023), AI-based investment systems improve decision-making accuracy and reduce human errors in financial planning. AI-powered robo-advisors are increasingly popular among first-time investors due to their affordability and accessibility.

2.2 Women and Investment Behavior

Research on women's investment behavior suggests that women generally prefer low-risk investment instruments such as fixed deposits, insurance, and gold. Studies by the Reserve Bank of India indicate that women exhibit cautious financial behavior and prioritize financial security over aggressive investment strategies.

However, increasing educational attainment, workforce participation, and digital exposure are encouraging women to diversify investment portfolios and participate in equity markets and mutual funds.

2.3 AI and Financial Inclusion

AI-based financial applications are contributing to financial inclusion by providing affordable and accessible financial services. Mobile investment applications and digital banking systems have expanded investment opportunities for women, particularly in urban areas.

Research by NASSCOM (2024) highlights that AI-enabled fintech platforms improve investment awareness and financial accessibility among women professionals.

2.4 FinTech and Women Empowerment

Fintech technologies have emerged as important tools for women's financial empowerment. Digital financial platforms allow women to independently manage savings, investments, and financial planning without depending entirely on traditional financial intermediaries.

Studies also indicate that women using fintech applications exhibit improved financial confidence and better financial planning practices.

2.5 Research Gap

Although previous studies have examined fintech adoption and women's financial behavior separately, limited research specifically focuses on the role of Artificial Intelligence in influencing investment patterns among working women in Bangalore City. This study addresses this gap through a comprehensive socio-economic and behavioral investigation.

3. Research Objectives

1. To examine the role of Artificial Intelligence in influencing investment patterns among working women in Bangalore City.
2. To identify the level of awareness and utilization of AI-based investment tools among working women.
3. To compare investment behavior between public and private sector women employees using AI-driven financial services.
4. To provide recommendations for promoting inclusive AI-driven financial ecosystems for women investors.

4. Research Methodology

4.1 Research Design

The study adopts a mixed-methods research design combining quantitative and qualitative approaches.

4.2 Area of Study

The research was conducted in Bangalore City among working women employed in public and private sector organizations.

4.3 Sample Size

A total of 465 working women were selected using stratified random sampling.

4.4 Sources of Data

Primary Data:

- Structured questionnaire
- Personal interviews
- Focus group discussions

Secondary Data:

- Journals
- Research articles
- RBI reports
- Fintech reports
- Government publications

4.5 Statistical Tools Used

- Percentage analysis
- Chi-square test
- Correlation analysis
- Regression analysis
- ANOVA
- Thematic analysis

5. Data Analysis and Interpretation

5.1 Awareness of AI-Based Investment Tools

- Mobile Investment Apps – 72.4%
- Robo-Advisors – 48.3%
- AI Budgeting Tools – 61.2%
- Automated Trading Apps – 29.7%
- AI Financial Planning Apps – 54.8%

5.2 Preferred Investment Options

- Mutual Funds – 68.2%
- Fixed Deposits – 45.7%
- Equity Shares – 47.1%
- Gold Investments – 39.8%
- SIP Investments – 64.5%

5.3 Impact of AI on Financial Confidence

- Financial Confidence – 4.1/5
- Regular Investment Habits – 71.3%
- Portfolio Diversification – 63.5%
- Long-Term Financial Planning – 69.4%

5.4 Regression Analysis

- Education Level – $\beta = 0.39$, $p < 0.001$
- Income Level – $\beta = 0.33$, $p < 0.001$
- Digital Literacy – $\beta = 0.29$, $p < 0.001$
- Employment Sector – $\beta = 0.24$, $p < 0.001$
- Age – $\beta = -0.18$, $p < 0.01$

6. Findings of the Study

- AI-based financial technologies significantly influence investment decisions among working women.
- Private sector employees demonstrate higher utilization of AI-based investment platforms compared to public sector employees.
- Women using AI-enabled financial applications exhibit greater investment diversification and financial confidence.
- Higher educational attainment and digital literacy positively influence adoption of AI-based investment tools.
- AI users demonstrate higher participation in mutual funds, SIPs, and equity investments.
- Concerns regarding data privacy, cybersecurity, and algorithmic transparency remain major barriers.
- Women from lower-income groups and older age categories show lower engagement with AI-enabled financial systems.

7. Suggestions

For Policymakers:

- Promote digital financial literacy programs targeting women.
- Strengthen regulatory frameworks for AI-driven financial services.
- Encourage inclusive fintech development.

For Financial Institutions:

- Develop women-centric AI investment platforms.
- Provide multilingual interfaces and personalized financial guidance.
- Improve transparency in AI-based investment recommendations.

For Employers:

- Conduct workplace financial awareness programs.
- Encourage women employees to participate in investment planning workshops.

For FinTech Companies:

- Design user-friendly and secure AI financial applications.
- Ensure ethical AI practices and algorithmic fairness.

8. Conclusion

Artificial Intelligence is significantly transforming investment behavior among working women in Bangalore City. AI-enabled financial technologies have improved investment awareness, accessibility, portfolio diversification, and financial confidence among women investors. The study demonstrates that women using AI-driven financial platforms participate more actively in diversified investment instruments such as mutual funds, SIPs, and equity markets.

However, disparities in digital literacy, education, and technological accessibility continue to influence adoption levels. Concerns related to cybersecurity, algorithmic bias, and trust in automated systems must also be addressed to ensure inclusive and equitable financial participation.

The study concludes that responsible integration of Artificial Intelligence within financial ecosystems can substantially contribute to women's financial empowerment and economic independence. Collaborative efforts by policymakers, financial institutions, fintech companies, employers, and educational institutions are essential for creating inclusive AI-driven financial environments that support women investors.

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