



A Study on Measuring Augmented Reality's Impact on Financial Behaviour among the Working Group in Chennai

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Abstract: The rapid advancement of financial technology (Fintech) has transformed the way individuals interact with financial services and information. Among emerging digital technologies, Augmented Reality (AR) has gained increasing attention due to its ability to provide immersive and interactive experiences by overlaying digital information onto real-world environments. In the financial sector, AR applications include virtual banking interfaces, interactive investment dashboards, and financial planning simulations that assist users in understanding financial data more effectively. This study investigates the impact of Augmented Reality on the financial behaviour of working professionals in Chennai. The research focuses on financial planning, spending habits, saving behaviour, and investment decisions influenced by AR-enabled financial platforms. A descriptive research design was adopted and primary data were collected through a structured questionnaire from 180 working professionals across various sectors including IT, banking, healthcare, and education. Statistical tools such as percentage analysis, correlation analysis, regression analysis, and chi-square tests were used to interpret the data. The findings reveal that awareness of AR technology in financial applications is relatively high among respondents, while active usage is moderate. The results also indicate that AR usage has a positive relationship with financial literacy and decision-making. The study concludes that AR technology has the potential to enhance financial behaviour by improving understanding of financial information and promoting better financial decision-making.

Index Terms: Augmented Reality, Financial Behaviour, Fintech, Financial Literacy, Technology Adoption.

1. Introduction

Technological innovation has significantly reshaped the financial services industry across the world. The development of financial technology, commonly referred to as Fintech, has introduced various digital tools that allow individuals to access financial services conveniently. Mobile banking applications, digital wallets, artificial intelligence-based financial advisory systems, and blockchain-enabled payment systems have transformed the way individuals manage their finances.

One of the emerging technologies that is gaining increasing attention in digital service environments is Augmented Reality (AR). Augmented Reality integrates digital information with the physical environment, allowing users to interact with virtual objects within real-world surroundings. Unlike virtual reality, which creates a completely simulated environment, AR overlays digital elements onto the real world to enhance user perception and interaction.

In financial services, AR applications are gradually being introduced to improve customer engagement and financial literacy. AR-enabled financial platforms can visualize financial data such as spending patterns, investment performance, and savings goals in interactive formats. For example, AR investment dashboards can display portfolio performance using 3-dimensional graphics, while AR budgeting tools can illustrate monthly expenses and savings through visual simulations.

Financial behaviour refers to the manner in which individuals manage their financial resources, including saving, spending, budgeting, and investing. Behavioural finance theories suggest that financial decisions are often influenced by psychological factors, cognitive biases, and emotions. Technologies that improve the clarity and accessibility of financial information can potentially reduce these biases and encourage more informed decision-making.

Chennai is one of India's major metropolitan cities and an important hub for information technology and financial services. The city's working population is highly exposed to digital technologies and fintech applications. Therefore, Chennai provides an appropriate environment to study the impact of AR technology on financial behaviour among working professionals.

This research aims to examine how AR technology influences financial decision-making and financial behaviour among working professionals in Chennai.

2. Review of Literature

Recent studies have explored the influence of Augmented Reality on consumer behaviour and digital technology adoption across different industries. However, its application in financial services remains relatively underexplored.

Lavoye, Mero and Tarkiainen (2021) conducted a systematic review on consumer behaviour in augmented reality environments and found that AR enhances both functional and experiential value for users. The study suggests that AR improves decision-making by enhancing visualization and accessibility of information.

Nguyen and Nguyen (2023) examined technology adoption in augmented reality applications using structural equation modelling. Their findings indicate that system quality, perceived usefulness, and interactivity significantly influence user acceptance of AR technologies.

Kovács and Keresztes (2024) analysed the use of AR technologies in digital commerce and concluded that immersive visualization significantly improves consumer engagement and product understanding. Their study also suggests that AR technologies enhance consumer confidence during decision-making.

A study published in the Journal of Business Research (2024) investigated psychological responses to augmented reality experiences and found that emotional engagement and trust significantly influence behavioural outcomes such as purchase intention and decision confidence.

Sondinti et al. (2025) examined the application of AR in retail banking environments and reported that immersive technologies enhance customer engagement and improve the understanding of financial information through interactive visualization.

Alsmadi (2025) explored the integration of AR and virtual technologies in financial innovation and concluded that AR significantly improves digital service experiences and customization in financial platforms.

Industry reports also highlight the increasing adoption of AR technologies. According to market research projections, the AR market in the banking and financial services sector is expected to grow rapidly over the next decade due to increased smartphone usage and technological advancements.

Despite these developments, limited empirical research has examined the impact of AR technology on financial behaviour in developing countries such as India. This study therefore attempts to address this research gap by analysing the influence of AR technology on financial behaviour among working professionals in Chennai.

3. Objectives of the Study

The study was conducted with the following objectives:

- To examine the awareness of Augmented Reality in financial applications among working professionals in Chennai.
- To analyse the adoption of AR technology in financial platforms.
- To evaluate the impact of AR on financial planning, budgeting, and investment behaviour.
- To examine the relationship between AR usage and financial literacy.
- To identify demographic factors influencing AR adoption.

4. Conceptual Framework

The conceptual framework of this study is based on technology adoption theories and behavioural finance principles.

Independent Variable

Augmented Reality Features

- Visualisation
- Interactivity
- Immersive experience
- Ease of understanding

Mediating Variable

Technology Acceptance

- Perceived usefulness
- Perceived ease of use

Dependent Variable

- Financial Behaviour
- Financial planning
- Budgeting
- Saving behaviour
- Investment decisions

Demographic factors such as age, profession, and income may moderate the adoption of AR technologies.

5. Research Methodology

The study adopted a descriptive and exploratory research design.

Population: Working professionals in Chennai aged 18–55 years.

Sample Size: The study included 180 respondents.

Sampling Technique: Stratified random sampling was used to ensure representation from different professional sectors.

Table 1: Sector-wise Distribution

Sector	Respondents	Percentage
IT	58	32.2
Banking & Finance	36	20
Healthcare	28	15.6
Education	32	17.8
Others	26	14.4
Total	180	100

Data Collection

- Primary data were collected using a structured questionnaire containing 30 questions using a five-point Likert scale.
- Secondary data were collected from journals, fintech industry reports, and academic publications.

Statistical Tools Used

- Percentage Analysis
- Correlation Analysis
- Regression Analysis
- Chi-Square Test

6. Data Analysis and Interpretation

Table 2: Awareness of AR in Financial Applications

Response	Respondents	Percentage
Aware	136	75.6
Not Aware	44	24.4
Total	180	100

Interpretation: A majority of respondents are aware of AR-based financial tools.

Table 3: Usage of AR Financial Tools

Category	Respondents	Percentage
Users	104	57.8
Non-Users	76	42.2
Total	180	100

Interpretation: More than half of respondents use AR financial tools.

7. Correlation Analysis

Correlation between AR usage and financial literacy: **r = 0.64**

Interpretation: There is a moderately strong positive relationship between AR usage and financial literacy.

8. Regression Analysis

Regression model:

$$Y = a + bX$$

Where

Y = Financial Behaviour

X = AR Usage

Table 4: Regression Coefficients Showing the Impact of AR Usage on Financial Behaviour

Variable	Coefficient
Intercept	1.38
AR Usage	0.62

Regression Equation

$$\text{Financial Behaviour} = 1.38 + 0.62 (\text{AR Usage})$$

Interpretation: Increased AR usage improves financial behaviour scores.

9. Chi-Square Test

The following hypotheses were formulated for the purpose of the study:

- H₀: No relationship between age and AR usage
- H₁: Significant relationship between age and AR usage

Table 5: Age Group and AR Financial Tool Usage – Observed Frequency Distribution (Chi-Square Analysis)

Age Group	AR Users	Non-Users	Total
18–25	24	10	34
26–35	52	20	72
36–45	18	28	46
46–55	10	18	28
Total	104	76	180

Chi-Square Value = **20.52**

Degree of Freedom = **3**

Table Value at 5% significance = **7.815**

Since **20.52 > 7.815**, the null hypothesis is rejected.

Interpretation: Age significantly influences the adoption of AR financial tools.

10. Findings

- Majority of respondents are aware of AR technology in financial applications.
- AR adoption is higher among younger professionals.
- AR applications improve financial planning and budgeting awareness.
- There is a positive relationship between AR usage and financial literacy.
- IT and finance professionals show higher adoption levels.

11. Discussion

The results support technology adoption theories such as TAM and UTAUT which highlight the role of perceived usefulness and ease of use in technology adoption. The findings also align with behavioural finance theories suggesting that improved access to financial information positively influences financial decision-making.

AR technology enhances financial literacy by presenting financial data through interactive visualization tools. This improves user understanding and confidence in financial decisions.

12. Conclusion

The study concludes that Augmented Reality has significant potential to influence financial behaviour among working professionals. AR technologies improve the visualization and understanding of financial information, which encourages better financial planning and decision-making.

As fintech innovation continues to evolve, financial institutions should consider integrating AR technology into digital financial platforms to improve customer engagement and financial literacy.

13. Recommendations

- Financial institutions should integrate AR into digital banking platforms.
- Fintech companies should design user-friendly AR financial applications.
- Policymakers should promote digital financial literacy programs.
- Collaboration between fintech startups and banks can accelerate AR adoption.

14. Limitations

- The study is limited to Chennai.
- Responses are based on self-reported data.
- The study measures short-term behavioural impact.

15. Scope for Future Research

Future research can conduct comparative studies across different cities, examine long-term behavioural changes due to AR usage, and explore AR applications in insurance, wealth management, and financial advisory services.

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