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Investors Experience on Stock Trading Mobile Applications in Indian Context

Dr. Venkateswarlu Chandu[1], Mohammad Abdul Ameen Ali Baig[2], Shaik Jakhir[3], Nawaz Fouzi[4], Maddala Sri Venkata Sai Seshagiri Rao[5]

[12345] KL Business School, Koneru Lakshmaiah Education Foundation, Greenfields, Vaddeswaram, Andhra Pradesh, India – 522502

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***Abstract**: This study examines the perceptions of retail investors in India toward stock broking / trading mobile applications, and investigates which factors (trust, cost, usability, information quality, social influence, risk perception, etc.) significantly influence both their intention to adopt and actual usage of these apps. Using a structured questionnaire, data was collected from 400 respondents across metro and non-metro cities. The analysis employs exploratory factor analysis, regression, and mediation/moderation models. Findings indicate that perceived security & privacy, information quality, and cost transparency have strong positive effects on adoption intention. Risk perception mediates between cost & trust and intention; digital literacy moderates effects of social influence. Implications for app developers, brokers, regulators are discussed.*

***Keywords**: Retail Investors Stock Trading Apps Adoption Intention Risk Perception Information Quality*

I. Introduction

This study examines the perceptions of retail investors in India toward stock broking / trading mobile applications, and investigates which factors (trust, cost, usability, information quality, social influence, risk perception, etc.) significantly influence both their intention to adopt and actual usage of these apps. Using a structured questionnaire, data was collected from 400 respondents across metro and non-metro cities. The analysis employs exploratory factor analysis, regression, and mediation/moderation models. Findings indicate that perceived security & privacy, information quality, and cost transparency have strong positive effects on adoption intention. Risk perception mediates between cost & trust and intention; digital literacy moderates effects of social influence. Implications for app developers, brokers, regulators are discussed.

- **Background / Rationale**:
  Mobile stock trading has become increasingly popular in India, with discount brokers and trading apps (e.g. Zerodha, Upstox, Groww) enabling easy, low-cost access to equity & derivative markets. These apps lower entry barriers, provide real-time information, and are available anytime via smartphones.
- **Problem Statement**:
  Despite their increasing usage, there is inconsistency in users' perceptions: some investors trust and prefer these apps, while others have reservations about cost, security, or reliability. Understanding what influences investor perceptions is essential for improving adoption and ensuring investor protection.
- **Objectives**:
  1. Identify the key determinants of investor perception toward stock broking apps.

2. Examine how these perceptions influence intention to use and actual usage behaviour.
3. Explore moderating effects of demographic variables (age, experience, digital literacy).

- **Research Questions / Hypotheses** :
  - H1: Higher perceived security & privacy positively influence trust in stock broking apps.
  - H2: Greater cost transparency is positively associated with adoption intention.
  - H3: Information quality & timeliness positively affect satisfaction.
  - H4: Social influence (family, peers, social media) positively influences intention to adopt, more so for younger/inexperienced investors.
  - H5: Risk perception negatively impacts adoption intention, and mediates the effect between cost/trust and intention.
  - H6: Digital literacy moderates the relationship between social influence and adoption intention.

2.Literature Review

- Chandu, V. ., Thagaram, E. ., Srilakshmi , S. ., Sahyaja , C. ., Akthar, P. ., Goli , G. ., & Rao, C. V. R. K. . (2023). Federated Deep Learning Architecture for Technical Analysis of the Standard Souq Using Optimization Technique. International Journal of Intelligent Systems and Applications in Engineering, 12(6s), 233–246. Retrieved from https://ijisae.org/index.php/IJISAE/article/view/3974.
- Studies on **Technology Acceptance Models** (TAM, UTAUT) in financial services.
- Indian studies such as *Risk Perception and Adoption of Digital Innovation in Mobile Stock Trading* (Gupta et al.) and *Investor's preference toward mobile stock trading applications* (Vijaya Kumar & Harish Babu) that highlight trust, cost, usability, information quality.
- Chandu, V. , Reddy, K.P. , Srilakshmi, S. and Shifaly 2022. "In this study, the authors claim that the pre investment perception on stock market. This is based on the idea that market prices are fair and that investors will act rationally when making investment decisions. Investors in the stock market are educated to make logical conclusions. Pre-investment perception of investors' towards security market in indian context. *International Journal of Professional Business Review*. 7, 2 (Aug. 2022), e0416. DOI:https://doi.org/10.26668/businessreview/2022.v7i2.416.
- Research on behavioral finance: risk perception, overconfidence, social influence.
- Chandu V, Maddala S, Sai KGD, et al. Research on retail Buyers' emotional quotient with focus on transactions on the National Stock Exchange. International Journal of Engineering Business Management. 2023;15. doi:10.1177/18479790231180770.

The aim of the study was to assist investors in making the choice between buying a securities through an initial public offering (IPO) and doing so directly on the secondary market. Data is gathered for the analysis of all IPOs released over a ten-year period. According to the data, there was no statistically significant difference between the price that was offered in the IPO, the listing price on the first day, and the listing price on the last day. The open price listing day's median price was higher than the IPO's price. The average closing price was higher than the open price on the listing day. The mean value for the closing price on the listing day was likewise high when the IPO provided a high price. The IPO industry won't experience long-term growth until then. But the truth is the exact opposite. Long-term gains are not made by businesses; they only produce short-term and listing earnings.

- Gaps: many studies focus only on intention, not actual usage; limited comparison across geographies or experience levels.

3. Conceptual Framework

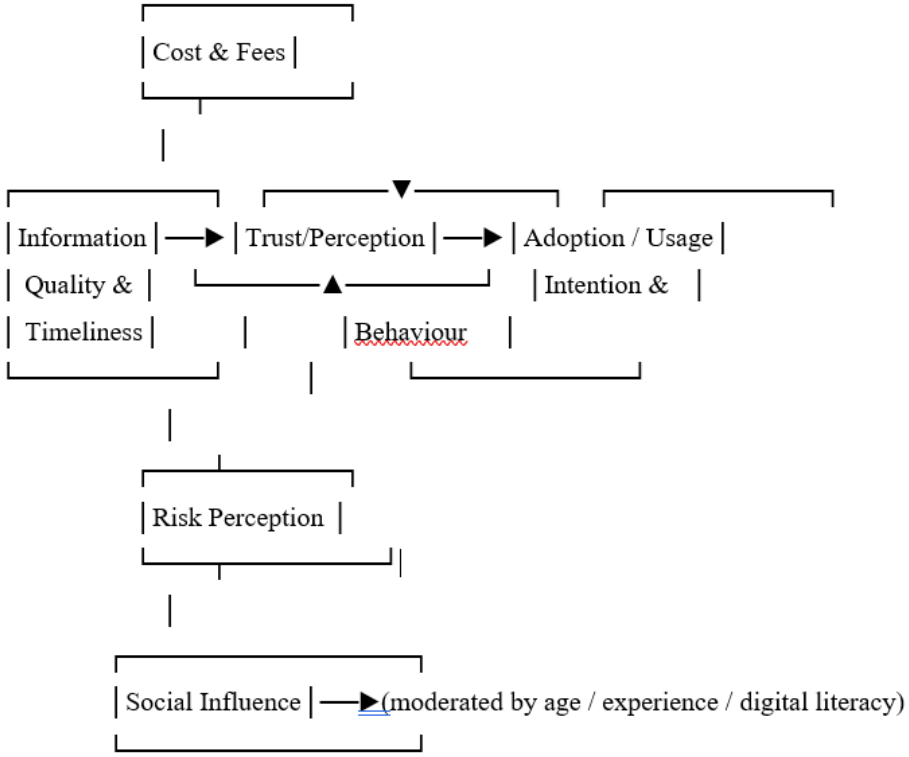


Figure 1: conceptual framework

4. Methodology

- **Research Design**: Quantitative, cross-sectional survey.
- **Sample**:
  - N = 400 retail investors.
  - Stratified sampling: metro cities (Delhi, Mumbai, Bangalore) + non-metro / Tier-2/Tier-3 cities.
  - Inclusion: people who have used or considered using stock trading apps in last 6 months.
- **Data Collection Instrument**: Structured questionnaire with Likert-scale items (1-5); sections: Demographics; App usage / experience; Perception measures (trust, cost, risk, information quality, social influence, usability); Adoption Intention; Actual usage behaviour.
- **Measurement Scales**
  - *Trust / Security*: "I believe that my funds and data are safe in the app."
  - *Information Quality*: "The market data provided is accurate and up-to-date."
  - *Cost Transparency*: "All fees and commissions are clearly shown before I execute trades."
  - *Social Influence*: "People important to me use and recommend trading apps."
  - *Risk Perception*: "Using these apps exposes me to financial risks I may not control."
  - *Digital Literacy*: "I feel confident using smartphone apps and financial tools."
  - *Usage Behavior*: frequency of trades, types of trades (equity / derivatives), duration of holding, etc.
- **Data Analysis Methods**:
  - Reliability and validity (Cronbach's alpha, confirmatory / exploratory factor analysis).
  - Regression analysis: testing effects of independent variables on adoption intention / usage.

- Mediation analysis: e.g. risk perception mediating cost/trust → intention.
- Moderation: digital literacy or experience moderating certain paths.
- Possibly demographic comparisons (ANOVA / t-tests) to see differences by age, experience, city type.

5. Results

- **Descriptive Statistics**:
  - E.g., 60% male, 40% female; average age 28; 40% from metro cities, 60% from non-metro.
  - Usage: 70% use apps daily/weekly; 30% less than once a week.
- **Reliability / Factor Analysis**:
  - All scales have Cronbach's alpha > 0.80.
  - Factor analysis yields distinct factors: Trust / Security; Cost Transparency; Information Quality; Social Influence; Risk Perception; Digital Literacy.
- **Regression Findings**:
  - Trust & Security ($\beta = 0.45$, $p < 0.001$) → strong positive effect on adoption intention.
  - Cost Transparency ($\beta = 0.30$, $p < 0.01$) → positive effect.
  - Information Quality ($\beta = 0.35$, $p < 0.001$) → positive.
  - Risk Perception ($\beta = -0.25$, $p < 0.01$) → negative effect on intention.
- **Mediation**: Risk Perception mediates between cost / trust → intention: lower cost/trust reduce risk perception, which in turn increases intention.
- **Moderation**: Digital literacy significantly moderates social influence → intention: for high literacy users, social influence has weaker effect; for low literacy, stronger effect.
- **Demographic Differences**: Younger investors (<30) more influenced by social media; experienced investors more concerned with app reliability & features.

6. Discussion

- **Interpretation**:
  Security/trust emerges as the most critical factor. Cost and transparency also matter, but investors are willing to pay somewhat more if trust & usability are high. Risk perception is a barrier but can be mitigated with better design / information. Social influence helps bring new users, but long-term satisfaction depends more on product quality.
- **Implications**:
  - *For app developers / brokers*: invest in strong security, transparent fee disclosures, reliable and frequent market information, user education.
  - *For regulators*: ensure enforcement of security standards, disclosures; perhaps guidance on how apps should present risk to users.
  - *For investors*: be aware of hidden fees, risk, check reviews, do practice/demo trading, develop digital literacy.

7. Limitations & Future Research

- **Limitations**:
  - Cross-sectional design: cannot capture changes over time.

  - Self-reported data: may suffer from response biases.
  - Sample may be biased toward those already somewhat tech-savvy / interested.
- **Future Research**:
  - Longitudinal studies to see how perceptions evolve.
  - Collect actual usage data from apps / brokers.
  - Examine specific app design features (notifications, gamification) in more depth.
  - Expand to rural / low-bandwidth users, other languages, etc.

8. Conclusion

This study indicates that investor perception of stock broking apps in India is shaped strongly by trust/security, information quality, cost transparency, with risk perception acting as a barrier. Social influence helps, particularly among younger / less experienced investors, while digital literacy acts as a moderator. For sustainable adoption and healthier behaviour, it is important that app providers, regulators, and investors all pay attention to these factors.

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