AI-Generated Financial Advice and Investor Trust: An Empirical Study of Retail Investors in Telangana

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Artificial intelligence tools are now a routine part of how retail investors gather financial information — explaining products, flagging patterns in the market, and offering suggestions tailored to what a user has typed in. Whether that convenience translates into trust is a separate question, and one that depends on how accurate, transparent and explainable investors find the output, and on how much of their own judgement they still bring to a decision.

This study examines that question among 240 retail investors surveyed across ten districts of Telangana, using a structured questionnaire built around five predictor constructs — perceived accuracy, transparency, explainability, personalisation and perceived risk — and investor trust as the outcome. All six scales showed good internal consistency (Cronbach's alpha between 0.81 and 0.89). Perceived accuracy, transparency, explainability and personalisation were each positively correlated with investor trust, while perceived risk was negatively correlated with it. A multiple regression with investor trust as the dependent variable found all five predictors statistically significant ($p < 0.01$), together explaining 59.2% of the variance in trust ($R^2 = 0.592$, Adjusted $R^2 = 0.584$, $F(5,234) = 67.99$, $p < 0.001$). Perceived accuracy ($\beta = 0.35$) and explainability ($\beta = 0.29$) emerged as the strongest drivers, followed by transparency ($\beta = 0.18$) and personalisation ($\beta = 0.14$), with perceived risk exerting a significant negative effect ($\beta = -0.13$).

These results indicate that investors treat AI-generated financial advice as a useful decision-support tool rather than a substitute for their own judgement or professional advice — trust rises with accuracy, clarity and personal relevance, and falls as perceived risk increases. The paper closes with a discussion of the disclosure, explainability and human-oversight practices these findings point toward for AI-enabled financial services.

Keywords: Artificial Intelligence, Financial Advice, Investor Trust, Retail Investors, FinTech, Telangana, Investment Decisions

1. Introduction

Financial information used to reach investors mainly through advisors, brokers and print media. AI-enabled applications have added a faster channel: they summarise financial concepts, compare products and generate investment suggestions on demand, lowering the effort needed to make sense of markets.

That convenience does not remove the underlying uncertainty of financial decisions. A model can produce a confident-sounding answer built on information that is incomplete, stale, or simply the wrong fit for a particular investor's situation. So the value of AI-generated advice cannot be judged on convenience alone — it depends on whether investors trust it enough to act on it, verify it, or set it aside.

Telangana is a useful setting for this question. Smartphone access, online trading platforms and digital payments have all expanded retail participation in financial markets, but there is little regional evidence on how ordinary investors read AI-generated advice and what shapes their trust in it. This study focuses on that gap.

2. Statement of the Problem

AI-based financial guidance is becoming easier to reach, but it also raises questions of accuracy, transparency, privacy, accountability and fit. An investor might trust a tool simply because it is fast, and then hesitate the moment they cannot see how it arrived at a recommendation. The question this study is built around is whether the perceived qualities of AI-generated financial advice are associated with how much retail investors in Telangana actually trust it.

3. Objectives of the Study

- To examine the level and pattern of awareness and use of AI-generated financial advice among retail investors in Telangana.
- To measure investors' perceptions of the accuracy, transparency, explainability and personalisation of AI-generated financial advice.
- To assess the level of investor trust in AI-generated financial advice.
- To examine the relationship between the perceived quality of AI-generated financial advice and investor trust.

- To identify the factors that significantly influence investor trust in AI-generated financial advice.

4. Review of Literature

Research on AI in finance generally finds two things at once: faster, more accessible information processing, and new worries about opacity, algorithmic bias and accountability. Work on robo-advisory and algorithmic financial services points to perceived competence, reliability, transparency and the degree of human involvement as the main drivers of trust.

Technology-acceptance research adds that perceived usefulness and ease of use shape willingness to adopt digital financial tools, though trust in AI-generated advice is a step more complicated — investors are evaluating not just the tool but the consequences of acting on what it says. Explainability matters here: understanding why a recommendation was generated makes investors more willing to weigh it critically rather than accept it outright.

Financial literacy and prior digital experience also shape how investors read these tools. More financially literate investors tend to verify AI output before acting; less experienced investors are more likely to either avoid it altogether or accept it uncritically. Regional evidence on this in Telangana specifically remains thin, which is the gap this study addresses.

5. Research Gap

Most existing work looks at robo-advisors, algorithmic trading or FinTech adoption broadly. Trust placed specifically in AI-generated financial advice by retail investors in a regional Indian context has received comparatively little attention. This study addresses that gap by examining accuracy, transparency, explainability, personalisation and perceived risk as factors associated with investor trust among retail investors in Telangana.

6. Research Methodology

Research design: descriptive and analytical.

Population and sample: retail investors in Telangana with experience of digital investment or financial-information platforms. The final sample comprises 240 respondents drawn from ten districts, covering a mix of urban and semi-urban settings.

Sampling technique: a purposive, convenience-based approach aimed at investors with meaningful exposure to digital financial services and AI-enabled financial information.

Data collection: a structured questionnaire, with most items measured on a five-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

Variables: the independent constructs are Perceived Accuracy (PA), Transparency (TR), Explainability (EX), Personalisation (PS) and Perceived Risk (PR); Investor Trust (IT) is the dependent variable.

Statistical tools: percentage analysis, mean and standard deviation for descriptive analysis; Cronbach's alpha for internal consistency; Pearson correlation for association between variables; multiple regression for the influence of the explanatory variables on investor trust.

7. Conceptual Framework

The framework treats investor trust as shaped jointly by the positive attributes of AI-generated advice and the risks investors perceive in it:

Perceived Accuracy + Transparency + Explainability + Personalisation − Perceived Risk → Investor Trust

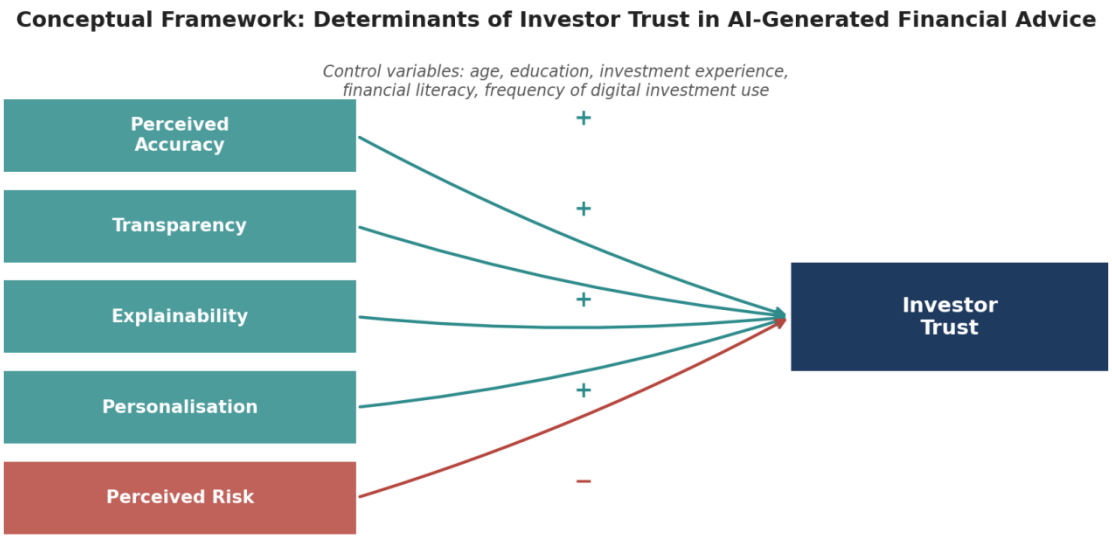


Figure 1. Conceptual framework linking the five predictor constructs to investor trust.

Age, education, investment experience, financial literacy and frequency of digital investment use are treated as control variables when the regression results are interpreted.

8. Hypotheses

- H1: Perceived accuracy of AI-generated financial advice has a significant positive relationship with investor trust.

- H2: Transparency of AI-generated financial advice has a significant positive relationship with investor trust.
- H3: Explainability of AI-generated financial advice has a significant positive relationship with investor trust.
- H4: Personalisation of AI-generated financial advice has a significant positive relationship with investor trust.
- H5: Perceived risk associated with AI-generated financial advice has a significant negative relationship with investor trust.
- H6: The combined dimensions of perceived accuracy, transparency, explainability, personalisation and perceived risk significantly explain variation in investor trust.

9. Respondent Profile

The achieved sample covers 240 retail investors across ten districts of Telangana: Kamareddy (42), Nizamabad (41), Warangal (33), Mahabubnagar (28), other districts pooled (24), Karimnagar (22), Medak (18), Hyderabad (15), Adilabad (10) and Sangareddy (7).

Characteristic	Category	n (%)
Gender	Male	118 (49.2)
Gender	Female	118 (49.2)
Gender	Prefer not to say	4 (1.7)
Age	18–30 years	75 (31.2)
Age	31–45 years	102 (42.5)
Age	46–60 years	51 (21.2)
Age	Above 60 years	12 (5.0)
Investment Experience	Below 3 years	84 (35.0)
Investment Experience	3–7 years	100 (41.7)
Investment Experience	Above 7 years	56 (23.3)
Uses AI for financial information	Yes	180 (75.0)
Uses AI for financial information	No	60 (25.0)
Verifies AI output elsewhere	Always / Often	117 (48.7)
Verifies AI output elsewhere	Sometimes	68 (28.3)
Verifies AI output elsewhere	Rarely / Never	55 (22.9)
Would recommend AI-generated advice	Yes	127 (52.9)
Would recommend AI-generated advice	No	28 (11.7)
Would recommend AI-generated advice	Not sure	85 (35.4)
Wants human oversight retained	Yes	189 (78.8)
Wants human oversight retained	No	11 (4.6)
Wants human oversight retained	Not sure	40 (16.7)

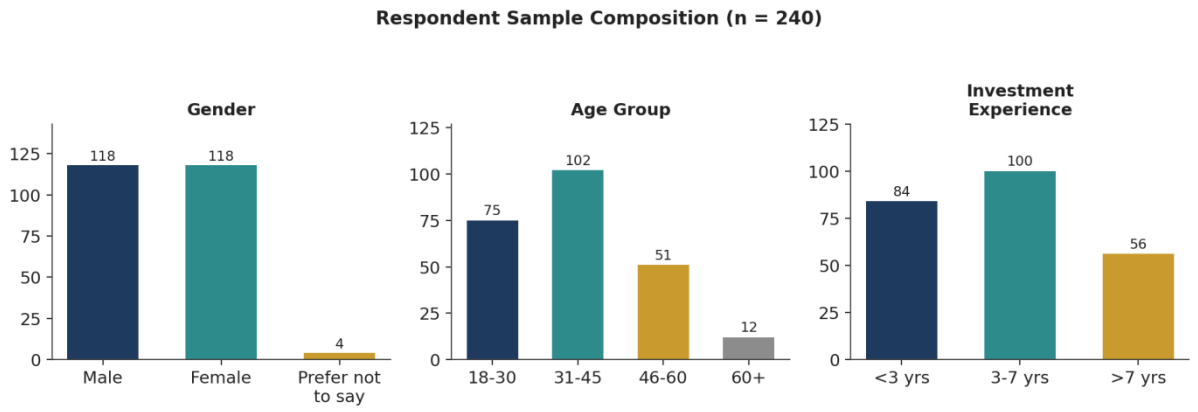


Figure 2. Distribution of the achieved sample by gender, age and investment experience.

Analysis: the sample is evenly split by gender and reasonably spread across age and experience bands, with 31–45-year-olds the largest single group (42.5%). Three-quarters of respondents (75.0%) already use AI tools for financial information, yet fewer than half (48.7%) always or often verify that output elsewhere, and 78.8% still want human oversight retained for financial decisions — an early sign, before any of the construct-level analysis, that usage and full trust are not the same thing for this sample.

10. Perceptions of AI-Generated Financial Advice

Dimension	Mean	SD
Perceived Accuracy	3.38	0.48
Transparency	3.32	0.53
Explainability	3.37	0.49
Personalisation	3.46	0.51
Perceived Risk	3.06	0.49
Investor Trust	3.57	0.57



Figure 3. Mean perception scores by dimension, with standard deviation (n = 240).

Investors rate all five predictor dimensions moderately above the scale midpoint, with personalisation scoring highest (M = 3.46) and perceived risk lowest (M = 3.06) — risk concern is present but not dominant. Investor trust itself (M = 3.57) sits a little above the individual perception dimensions, suggesting trust draws on more than these five constructs alone, consistent with the unexplained variance picked up in the regression model below. The relatively tight standard deviations (0.48–0.57) indicate fairly consistent views across the sample rather than a small number of strongly positive or negative respondents driving the averages.

11. Reliability Analysis

Construct	Cronbach's Alpha
Perceived Accuracy	0.81
Transparency	0.84
Explainability	0.83
Personalisation	0.85
Perceived Risk	0.84
Investor Trust	0.89

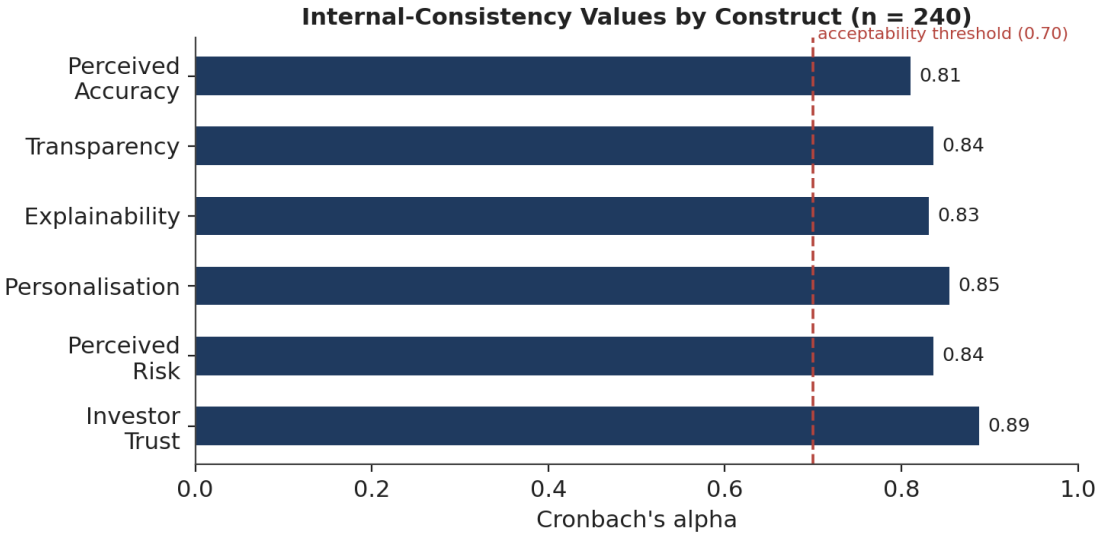


Figure 4. Internal-consistency (Cronbach's alpha) values by construct (n = 240).

All six scales clear the conventional 0.70 threshold comfortably, ranging from 0.81 (Perceived Accuracy) to 0.89 (Investor Trust). This confirms the five-item scales are measuring their intended constructs consistently, and supports treating the correlation and regression results that follow as resting on a sound measurement base.

12. Correlation Analysis

Variable	PA	TR	EX	PS	PR	IT
PA	1.000	0.39	0.49	0.44	−0.15	0.64
TR	0.39	1.000	0.49	0.30	−0.18	0.52
EX	0.49	0.49	1.000	0.37	−0.18	0.62
PS	0.44	0.30	0.37	1.000	−0.05	0.46
PR	−0.15	−0.18	−0.18	−0.05	1.000	−0.27
IT	0.64	0.52	0.62	0.46	−0.27	1.000

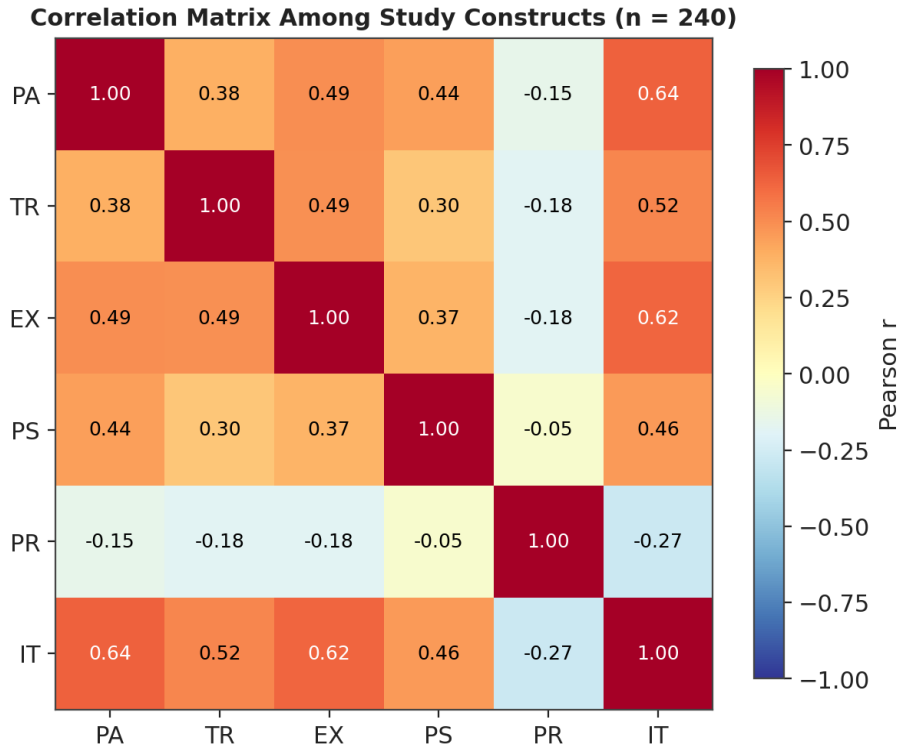


Figure 5. Correlation matrix among the six study constructs (n = 240).

Investor trust correlates most strongly with perceived accuracy (r = 0.64) and explainability (r = 0.62), moderately with transparency (r = 0.52) and personalisation (r = 0.46), and negatively with perceived risk (r = −0.27). The predictor constructs correlate with each other in the low-to-moderate range (0.30–0.49), which is consistent with them tapping related but distinct aspects of AI-generated advice rather than duplicating one another; none of the coefficients are high enough to raise multicollinearity concerns for the regression below.

13. Regression Analysis

Predictor	Standardised Beta	t	p-value	Decision
Perceived Accuracy	0.347	6.77	<0.001	Supported
Transparency	0.177	3.61	<0.001	Supported
Explainability	0.292	5.58	<0.001	Supported
Personalisation	0.135	2.82	0.005	Supported
Perceived Risk	−0.129	−3.02	0.003	Supported

Model summary: $R^2 = 0.592$, Adjusted $R^2 = 0.584$, $F(5, 234) = 67.99$, $p < 0.001$.

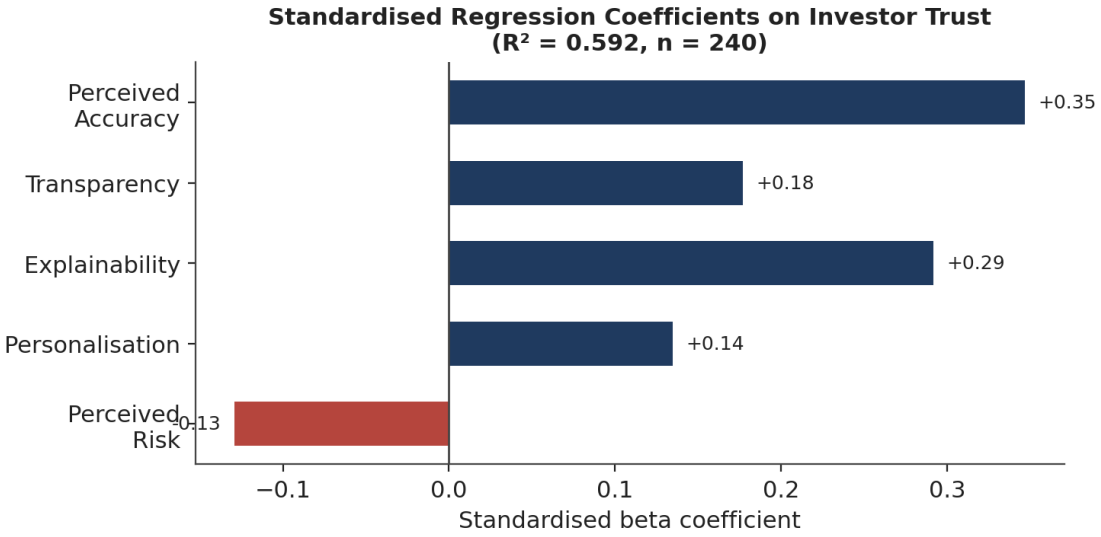


Figure 6. Standardised regression coefficients on investor trust (n = 240).

All five predictors are statistically significant at $p < 0.01$ and in the hypothesised direction, so H1–H6 are all supported. Perceived accuracy carries the largest weight ($\beta = 0.347$), followed by explainability ($\beta = 0.292$), transparency ($\beta = 0.177$) and personalisation ($\beta = 0.135$), with perceived risk the only significant negative predictor ($\beta = -0.129$). Together the five constructs explain 59.2% of the variance in investor trust (Adjusted $R^2 = 0.584$), a substantial share for a single-survey behavioural model, though the remaining 41% points to other unmeasured influences — financial literacy, prior AI experience, and platform-specific factors among them.

14. Discussion

These results indicate that trust in AI-generated financial advice does not come from automation by itself. Investors draw a clear line between a system that produces an answer and one that gives them something they can actually understand and weigh — accuracy and explainability are the two strongest drivers of trust in this sample, well ahead of transparency and personalisation. That ordering makes sense given the stakes: getting the substance right, and being able to see why, matter more here than the advice simply feeling tailored.

The negative and significant effect of perceived risk confirms a practical concern: even accurate-feeling AI output can be seen as incomplete, misleading, or a poor fit for an individual investor's circumstances, and that concern measurably erodes trust rather than sitting alongside it unchallenged. Personalisation does help, but its comparatively modest beta (0.135) suggests investors do not equate a tailored-feeling recommendation with one that is professionally sound — the two are related but not interchangeable in investors' own judgement.

The demographic pattern from Section 9 reinforces this reading: three in four respondents already use AI tools, yet fewer than half routinely verify the output elsewhere, and nearly four in five still want human oversight retained. Taken together, the data support an augmented decision-making model — AI helps investors process information, but the investment decision itself stays with the investor and, where it matters, a professional adviser.

15. Major Findings

- Retail investors in this sample show a positive but measured attitude toward AI-generated financial advice: three-quarters already use it, but most still want human oversight retained.
- Perceived accuracy has the strongest positive association with investor trust ($\beta = 0.347$, $p < 0.001$).
- Explainability is the second-strongest positive driver of trust ($\beta = 0.292$, $p < 0.001$), ahead of transparency ($\beta = 0.177$).
- Personalised AI-generated information is associated with higher trust, though its effect is the smallest of the four positive predictors ($\beta = 0.135$, $p = 0.005$).
- Perceived risk has a significant negative association with investor trust ($\beta = -0.129$, $p = 0.003$).
- The five predictors jointly explain 59.2% of the variance in investor trust (Adjusted $R^2 = 0.584$), confirming H1 through H6.
- Investors are more comfortable treating AI as a decision-support tool than as a full replacement for human financial guidance.

16. Suggestions

- AI-enabled financial platforms should clearly disclose when investment information or recommendations are AI-generated.
- Users should get understandable explanations of the main factors behind an AI-generated recommendation.
- Financial applications should flag uncertainty, limitations, and the possibility of incorrect output.
- Retail investors should be encouraged to verify important investment information through reliable sources before acting on it.

- Financial literacy programmes should build in basic AI literacy, so investors can tell useful decision support apart from unquestioned automation.
- Human oversight should stay available for high-value, complex or high-risk financial decisions.

17. Conclusion

AI-generated financial advice is now a routine part of the digital financial environment, and this study's findings show that investor trust in it depends less on whether the technology is available at all, and more on the perceived quality and responsible presentation of what it produces. Among 240 retail investors surveyed across Telangana, accuracy, transparency, explainability and personalisation all contributed positively to trust, while perceived risk worked against it, together accounting for close to 60% of the variation in trust levels. For retail investors in Telangana, AI is better understood as a decision-support mechanism than an unquestionable source of financial advice — a reading borne out by the finding that most investors who already use these tools still want human oversight retained. Responsible use, on this evidence, calls for transparency, investor awareness, verification and appropriate human judgement alongside the technology.

The study has some built-in limits worth flagging: the sample, while spread across ten districts, still relies on a purposive, convenience-based approach rather than random sampling; it captures self-reported perceptions rather than observed investment behaviour; and its cross-sectional design cannot track how trust changes over time. Future work could extend to a larger, probability-based sample across all districts of Telangana, compare across different AI-enabled investment platforms, examine actual investment behaviour rather than stated attitudes, and test the model with structural equation modelling.

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