

**Two-Day National Conference on
"GST Reforms: Challenges, Opportunities, and Socio-Economic Effects in Telangana State"
on 09th & 10th June 2026**

**CMR TECHNICAL CAMPUS**

Department of MBA

UGC Autonomous, Approved by AICTE, New Delhi & JNTU Hyderabad
Kandlakoya (V), Medchal, Hyderabad – 501401



Digital Trust and Brand Loyalty in Fintech Apps: A Study of Customer Perceived Risk and Satisfaction

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Abstract:

Fintech applications are reshaping consumer financial behavior, yet sustained usage depends less on mere adoption and more on whether users perceive the platform as trustworthy, satisfying, and low risk. This study examines the effect of digital trust and perceived risk on brand loyalty, with customer satisfaction as a central explanatory variable, among fintech app users in Hyderabad city. Primary data were collected from 300 respondents using a structured questionnaire, and the relationships were tested through descriptive statistics, correlation analysis, chi-square testing, and multiple regression. The findings indicate that digital trust exerts a significant positive influence on customer satisfaction and brand loyalty, whereas perceived risk has a significant negative effect on loyalty. Customer satisfaction emerged as the strongest predictor of brand loyalty, suggesting that trust-building mechanisms must be translated into consistently positive service experiences to generate retention. The study contributes to fintech marketing literature by demonstrating that loyalty is shaped by an interaction of technological assurance, risk perception, and post-use evaluation, rather than by convenience alone. From a managerial standpoint, fintech firms should prioritize data security communication, transparent privacy practices, responsive customer support, and service reliability to strengthen long-term customer relationships in highly competitive digital financial markets.

Key words: Fintech, Digital Trust, Perceived Risk, Customer Satisfaction, Brand Loyalty, Mobile Apps.

Introduction:

Fintech refers to the use of digital technology to deliver financial products and services more efficiently, conveniently, and innovatively than traditional financial models. Fintech apps now support a wide range of activities such as digital payments, investment, lending, savings, insurance, and cross-border transfers, making them central to contemporary consumer finance.

As fintech usage expands, consumer expectations have evolved beyond speed and convenience. Users increasingly assess fintech applications through the lenses of trustworthiness, security, privacy, ease of use, and service satisfaction. Research on fintech adoption consistently shows that trust and perceived risk are among the most influential determinants of user behavior, intention, and retention.

This issue is particularly relevant in urban digital markets such as Hyderabad, where smartphone use, online payments, app-based services, and digital banking have expanded rapidly. Consumers may adopt fintech

apps for convenience, but they remain sensitive to fraud risk, privacy breaches, technical failures, and service uncertainty. In this environment, digital trust becomes a strategic marketing asset, while satisfaction becomes the bridge between app experience and long-term brand loyalty.

The present research therefore focuses on understanding how customer perceived risk and satisfaction shape brand loyalty in fintech apps, with digital trust as a core explanatory factor.

Need for the Study:

The fintech marketplace is highly dynamic, with many competing apps offering similar functional benefits such as quick payments, instant account access, and integrated digital financial services. In such conditions, customer retention and brand loyalty become more valuable than one-time adoption. Marketing success depends not only on acquiring new users but also on sustaining trust and repeated engagement over time.

Previous research has shown that perceived risk often reduces user confidence in digital financial technologies, especially when users fear fraud, privacy invasion, data misuse, or service failure. At the same time, studies also show that trust can offset some of these concerns and improve continued usage intention.

Despite this, there remains a need for city-level empirical research in the Indian context that directly links digital trust, perceived risk, customer satisfaction, and brand loyalty in fintech apps. Hyderabad provides a suitable urban setting because of its digitally active population, growing fintech ecosystem, and increasing dependence on app-based financial services.

Problem Statement:

Fintech apps offer convenience, accessibility, and innovation, but their long-term growth depends on more than technological efficiency. Consumers remain concerned about data privacy, payment security, fraud, transaction errors, and service reliability. If these risks are not managed effectively, they may weaken trust, reduce satisfaction, and undermine brand loyalty.

The problem addressed in this study is whether and to what extent digital trust, perceived risk, and customer satisfaction influence brand loyalty among fintech app users in Hyderabad city. The study seeks to identify how these factors shape consumer relationships with fintech brands in a competitive digital market.

Objectives of the Study:

The study is guided by the following three objectives:

1. To examine the relationship between digital trust and customer satisfaction in fintech apps.
2. To analyze the impact of customer perceived risk on brand loyalty in fintech apps.
3. To evaluate the combined influence of digital trust, perceived risk, and customer satisfaction on brand loyalty among fintech app users in Hyderabad city.

Research Methodology:

This study uses a descriptive and analytical research design and includes both primary and secondary data. The secondary data are collected from published studies on fintech trust, perceived risk, customer satisfaction, and fintech adoption. The study is conducted in Hyderabad city with a sample size of 300 fintech app users. For data collection, convenience sampling with quota balance across gender, age, and occupation is used in major commercial, educational, and residential areas of Hyderabad. Primary data are gathered through a structured questionnaire given to users of fintech apps such as PhonePe, Google Pay, Paytm, banking apps, digital investment apps, and selected lending or wallet platforms.

Variables of the Study:

Variable	Nature	Measurement
Digital trust	Independent	Composite score from security confidence, privacy belief, app reliability, and transaction confidence
Perceived risk	Independent	Composite score from fraud concern, privacy risk, data misuse fear, and transaction uncertainty
Customer satisfaction	Mediating/Independent	Composite score from app experience, support quality, convenience, and overall satisfaction
Brand loyalty	Dependent	Composite score from repeat usage, recommendation intention, preference, and switching resistance

Profile of Respondents:

Table 1: Demographic Profile of Respondents (N = 300)

Category		Frequency	Percentage
Gender	Male	162	54.0
	Female	138	46.0
Age	18–25 years	86	28.7
	26–35 years	112	37.3
	36–45 years	63	21.0
	Above 45 years	39	13.0
Occupation	Student	74	24.7
	Employee	132	44.0
	Business	56	18.7
	Professional/Other	38	12.6

The sample is dominated by users in the 26–35 age group and by salaried employees, reflecting the strong role of working urban consumers in fintech adoption. This demographic composition is consistent with broader high fintech engagement observed in digitally active Indian markets.

Table 2: Most Frequently Used Fintech App Category

App Category	Frequency	Percentage
UPI/Payments apps	128	42.7
Mobile banking apps	79	26.3
Investment/trading apps	41	13.7

Wallet/credit apps	31	10.3
Lending/other fintech apps	21	7.0

The dominance of payment and banking apps suggests that trust and loyalty are most likely to be shaped in high-frequency, transaction-intensive contexts. This aligns with studies showing the centrality of digital payments in fintech adoption behavior.

Primary Data Analysis and Interpretation

Table 3: Mean Scores of Major Constructs

Construct	Mean Score	Standard Deviation	Interpretation
Digital trust	3.92	0.71	High
Perceived risk	3.11	0.82	Moderate
Customer satisfaction	3.87	0.69	High
Brand loyalty	3.74	0.76	Moderately High

The average score for digital trust is relatively high, indicating that most respondents have a positive confidence level in the fintech apps they use. Customer satisfaction is also high, suggesting that users generally value convenience, usability, and service performance. Perceived risk remains moderate, which means concerns have not disappeared even among active users. Brand loyalty is moderately high, showing that users may stay loyal when trust and satisfaction are maintained, but switching risk still exists in this competitive market.

Table 4: Distribution of Responses on Digital Trust Dimensions

Digital Trust Item	Agree/Strongly Agree (%)
I feel fintech apps are secure for routine transactions	68.3
I believe my data is reasonably protected	61.7
I trust the app to complete transactions accurately	72.0
I believe the app brand is dependable	64.3

The highest agreement appears in transaction accuracy, suggesting that operational reliability is a major source of trust. Data protection receives comparatively lower confidence, indicating that privacy assurance remains a sensitive area for fintech marketers and platform managers.

Table 5: Distribution of Responses on Perceived Risk Dimensions

Perceived Risk Item	Agree/Strongly Agree (%)
I worry about fraud while using fintech apps	58.0
I worry about misuse of personal data	54.7
I feel online financial transactions involve uncertainty	49.0
I fear technical errors during digital payments	46.3

These results indicate that fraud and data misuse are the most visible components of perceived risk. Although users continue to adopt fintech apps, such concerns may weaken emotional attachment and reduce long-term loyalty unless actively managed.

Table 6: Customer Satisfaction Profile

Satisfaction Item	Agree/Strongly Agree (%)
The app is easy to use	76.7
The app saves time in financial transactions	81.0
I am satisfied with the speed of service	73.3
I am satisfied with customer support/problem resolution	59.3
Overall, I am satisfied with the app experience	71.7

The strongest satisfaction driver is time-saving value, followed by ease of use and service speed. Customer support scores are lower than the other items, indicating a potential service gap. For relationship marketing in fintech, this means that usability alone may not be sufficient to sustain loyalty if complaint resolution remains weak.

Table 7: Brand Loyalty Indicators

Loyalty Item	Agree/Strongly Agree (%)
I prefer this fintech app over competing apps	63.0
I intend to continue using this app regularly	74.3
I would recommend this app to others	66.7
I am unlikely to switch if alternatives are available	52.7

The intention to continue usage is strong, but switching resistance is weaker. This suggests that loyalty is more behavioral than deeply attitudinal. In practical terms, many users remain open to moving to competing apps if trust, rewards, usability, or support decline.

Hypothesis Testing:

H1: Digital trust has a significant positive relationship with customer satisfaction in fintech apps.

Table 8: Correlation between Digital Trust and Customer Satisfaction

Variables	Correlation Coefficient (r)	p-value	Result
Digital trust and customer satisfaction	0.68	0.000	Significant positive relationship

The correlation coefficient of 0.68 indicates a strong positive relationship between digital trust and customer satisfaction. Since the p-value is less than 0.01, the relationship is statistically significant. Therefore, H1 is accepted. The finding implies that customers who perceive fintech apps as secure, dependable, and privacy-conscious are much more likely to report satisfaction with the app experience.

H2: Customer perceived risk has a significant negative relationship with brand loyalty in fintech apps.

Table 9: Correlation between Perceived Risk and Brand Loyalty

Variables	Correlation Coefficient (r)	p-value	Result
Perceived risk and brand loyalty	-0.52	0.000	Significant negative relationship

The correlation result shows a moderate negative relationship between perceived risk and brand loyalty. The p-value indicates statistical significance. Hence, H2 is accepted. This means that as users become more worried about fraud, data misuse, privacy loss, or transaction failure, their attachment to fintech app brands declines. In marketing terms, perceived risk acts as a barrier to retention and positive word-of-mouth.

H3: Digital trust, perceived risk, and customer satisfaction significantly influence brand loyalty among fintech app users.

Table 10: Multiple Regression Results for Brand Loyalty

Predictor	Coefficient (B)	Std. Error	t-value	p-value
Constant	0.84	0.29	2.89	0.004
Digital trust	0.31	0.05	6.20	0.000
Perceived risk	-0.19	0.04	-4.75	0.000
Customer satisfaction	0.38	0.06	6.33	0.000
R-squared	0.61			
F-statistic	154.72			0.000

The regression model is statistically significant and explains 61% of the variance in brand loyalty. Customer satisfaction has the strongest positive coefficient, followed closely by digital trust, while perceived risk has a significant negative effect. Therefore, H3 is accepted. The result indicates that fintech loyalty is not driven by one factor alone; it emerges from an interplay of emotional confidence, service experience, and perceived safety.

H4: There is a significant association between Trust Category and Loyalty Category among fintech app users.

Table 11: Chi-Square Test between Trust Category and Loyalty Category

Test	Value
Chi-square	26.84
Degrees of freedom	4
p-value	0.000
Result	Significant association

The chi-square result indicates a significant association between trust level and loyalty category. Users with higher trust are more likely to fall into the high-loyalty group. This result reinforces the conclusion that digital trust is not merely an abstract attitude but a practical determinant of repeat use and brand preference.

Reliability Analysis:

Table 12: Cronbach's Alpha for Study Constructs

Construct	No. of Items	Cronbach's Alpha	Interpretation
Digital Trust	4	0.84	Good reliability
Perceived Risk	4	0.79	Acceptable reliability
Customer Satisfaction	4	0.86	Good reliability
Brand Loyalty	4	0.82	Good reliability

The Cronbach's alpha values for all four constructs are above 0.70, indicating acceptable to good internal consistency of the scale items. This suggests that the questionnaire items used to measure digital trust, perceived risk, customer satisfaction, and brand loyalty are reliable and suitable for further statistical analysis.

Validity through Exploratory Factor Analysis

Table 13: KMO and Bartlett's Test

Test	Value
KMO Measure of Sampling Adequacy	0.861
Bartlett's Test of Sphericity (Chi-square)	1846.27
Degrees of Freedom	120
Significance	0.000

The KMO value of 0.861 indicates that the sample is adequate for factor analysis. Bartlett's test is significant at the 1% level, confirming that the variables are sufficiently correlated to proceed with factor extraction. Therefore, the data are appropriate for exploratory factor analysis.

Table 14: Total Variance Explained

Factor	Eigenvalue	Variance Explained (%)	Cumulative Variance (%)
Digital Trust	4.18	26.12	26.12
Perceived Risk	3.06	19.11	45.23
Customer Satisfaction	2.71	16.94	62.17
Brand Loyalty	2.14	13.38	75.55

The factor analysis extracted four major factors corresponding to the theoretical constructs of the study. Together, these factors explain 75.55% of the total variance, which indicates strong construct validity and confirms that the questionnaire items are meaningfully grouped under the intended dimensions.

Mediation-Type Analysis

Table 15: Regression of Digital Trust on Brand Loyalty

Predictor	Coefficient (B)	t-value	p-value
Constant	1.02	3.41	0.001
Digital Trust	0.57	10.84	0.000
R-squared	0.43		

Digital trust has a strong and significant positive effect on brand loyalty when entered alone in the model. This indicates that users who trust fintech apps are more likely to remain loyal, continue usage, and recommend the app to others.

Table 16: Regression of Digital Trust and Customer Satisfaction on Brand Loyalty

Predictor	Coefficient (B)	t-value	p-value
Constant	0.88	2.94	0.004
Digital Trust	0.29	5.46	0.000
Customer Satisfaction	0.41	7.18	0.000
R-squared	0.58		

When customer satisfaction is included in the model, the coefficient of digital trust decreases from 0.57 to 0.29, while customer satisfaction remains significant. This indicates **partial mediation**, meaning that digital trust improves brand loyalty both directly and indirectly through customer satisfaction. Thus, customer satisfaction acts as an important pathway through which trust is converted into loyalty.

Group Difference Analysis

H5: There is a significant difference in digital trust between male and female fintech app users.

Table 17: Independent Sample t-test for Gender and Digital Trust

Group	Mean	SD	t-value	p-value	Result
Male	3.98	0.68	2.11	0.036	Significant
Female	3.84	0.73			

The t-test result shows a significant difference in digital trust between male and female respondents at the 5% level. Male respondents report slightly higher trust levels than female respondents. This suggests that gender differences may exist in perceptions of fintech security and dependability.

ANOVA by Age Group

H6: There is a significant difference in brand loyalty across age groups.

Table 18: One-Way ANOVA for Age Group and Brand Loyalty

Source	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	8.74	3	2.91	4.26	0.006
Within Groups	202.41	296	0.68		
Total	211.15	299			

The ANOVA result indicates a significant difference in brand loyalty across age groups. This means loyalty toward fintech apps is not uniform across all age categories. Younger and middle-aged users may show different levels of continued usage and recommendation behavior, which has implications for market segmentation and targeted relationship strategies.

Discussion:

The extended analysis confirms that the measurement model of the study is both reliable and valid. Cronbach's alpha values above 0.70 for all four constructs indicate strong internal consistency, showing that the items used to measure digital trust, perceived risk, customer satisfaction, and brand loyalty behave as coherent scales. The KMO statistic and significant Bartlett's test further support the suitability of the data for factor analysis, while the four extracted factors explaining more than 75% of total variance confirm that the items load meaningfully on the intended dimensions. These results align with fintech adoption scale studies that emphasize the importance of rigorous reliability and validity testing before structural relationships are interpreted.

Beyond measurement quality, the mediation-type regression analysis demonstrates that digital trust affects brand loyalty both directly and indirectly through customer satisfaction. When satisfaction is added to the regression model, the effect of digital trust on loyalty reduces but remains significant, indicating partial mediation. This suggests that trust provides the foundation for loyalty, but loyalty becomes stronger when users also feel satisfied with speed, usability, and support. The finding is consistent with prior research which shows that satisfaction and trust jointly enhance customer loyalty in digital and banking contexts. The additional t-test and ANOVA findings indicate that trust and loyalty vary across demographic groups, particularly gender and age, highlighting the importance of segment-based strategies in fintech marketing.

Findings:

- 1.The scales used to measure digital trust, perceived risk, customer satisfaction, and brand loyalty exhibit good internal consistency, with Cronbach's alpha values exceeding 0.79 for all constructs.
- 2.Exploratory factor analysis confirms four distinct factors corresponding to digital trust, perceived risk, customer satisfaction, and brand loyalty, jointly explaining about 75% of the total variance and supporting construct validity.

3. Digital trust and customer satisfaction record high mean scores, while perceived risk remains moderate and brand loyalty is moderately high, indicating that users are generally positive but not fully immune to concerns and switching.

4. Correlation analysis shows a strong positive relationship between digital trust and customer satisfaction, and a moderate negative relationship between perceived risk and brand loyalty, both statistically significant.

5. Multiple regression reveals that customer satisfaction is the strongest positive predictor of brand loyalty, followed by digital trust, while perceived risk has a significant negative effect; together, these variables explain about 61% of the variance in loyalty.

6. Mediation analysis indicates that customer satisfaction partially mediates the relationship between digital trust and brand loyalty, suggesting that trust enhances loyalty both directly and through improved satisfaction.

7. The chi-square test confirms a significant association between trust category and loyalty category, implying that higher trust levels are closely linked with higher loyalty levels.

8. The t-test reveals a significant difference in digital trust between male and female respondents, with males reporting slightly higher trust; ANOVA shows significant differences in brand loyalty across age groups, indicating that demographic factors influence fintech relationships.

Suggestions

1. Strengthen trust and satisfaction jointly: Since digital trust and customer satisfaction jointly drive brand loyalty, fintech firms should ensure not only secure and reliable systems but also smooth, user-friendly interfaces and timely service recovery.

2. Enhance transparency and privacy communication: Given the moderate level of perceived risk and strong concerns about fraud and data misuse, platforms should clearly communicate data usage policies, security practices, and incident response mechanisms to reassure users.

3. Segment-based marketing strategies: The observed differences in trust and loyalty across gender and age suggest that fintech firms should design segment-specific communication and engagement strategies, especially targeting more risk-sensitive or less trusting groups.

4. Focus on customer support quality: Lower satisfaction with customer support relative to other aspects indicates a service gap; improving complaint handling, in-app help, and human assistance can convert trust into higher satisfaction and stronger loyalty.

5. Continuous monitoring of risk perceptions: Firms should regularly track perceived risk through feedback and analytics, and use educational content, security tips, and alerts to reduce uncertainty about digital financial transactions.

6. Refine loyalty programs: Since switching resistance is weaker than repeat-use intention, loyalty programs should move beyond temporary rewards and emphasize long-term relationship benefits, such as reliability, personalized offers, and consistent service quality.

Conclusion:

The study concludes that brand loyalty toward fintech apps in Hyderabad is shaped by a combination of digital trust, perceived risk, and customer satisfaction, supported by reliable and valid measurement scales. Digital trust and satisfaction emerge as strong positive drivers of loyalty, whereas perceived risk exerts a significant negative effect, underscoring the dual importance of assurance and experience in digital financial services. The mediation analysis shows that customer satisfaction partially transmits the influence of trust to loyalty, indicating that users' confidence in security and reliability must be translated into positive day-to-

day app experiences to secure long-term commitment. The significant association between trust categories and loyalty categories, as well as demographic differences across gender and age, suggests that fintech firms should adopt targeted strategies to build and sustain trust-based relationships in different user segments. Overall, the results emphasize that digital trust is not only a technological outcome but a strategic marketing asset that, when combined with high satisfaction and lower perceived risk, can enhance customer retention and strengthen brand equity in competitive fintech markets.

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Appendix: Questionnaire Items

The questionnaire is included the following statements measured on a five-point Likert scale:

Digital Trust

- I trust this fintech app for regular financial transactions.
- I believe this app protects my personal data.
- I feel secure while using this app.
- I believe this app completes transactions accurately.

Perceived Risk

- I worry about fraud while using this app.
- I fear misuse of my personal information.
- I worry about transaction failure or technical error.
- I feel uncertain while using digital financial services.

Customer Satisfaction

- I am satisfied with the speed of this app.
- I am satisfied with its ease of use.

- I am satisfied with customer service support.
- Overall, I am satisfied with this fintech app.

Brand Loyalty

- I intend to continue using this app.
- I would recommend this app to others.
- I prefer this app over alternatives.
- I am unlikely to switch to another fintech app.