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Awareness to Satisfaction: Understanding FinTech Usage in the Digital Era

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Abstract

Fintech has become an important part of India's financial development, especially in the digital period that accelerated after the pandemic.The explosive growth of FinTech has transformed customer behaviour. This research intends to examine consumer awareness of fintech services and eco-friendly financial products, usage behaviour, customer satisfaction and perceived technical challenges, along with the influence of demographic factors on these outcomes.Despite the rapid growth of FinTech services in India, existing studies focus on isolated factors like acceptance of technology without integrating loyalty, awareness, satisfaction and perceived challenges in a holistic analysis model. Furthermore, less empirical evidence exists on how security awareness, eco-friendly financial initiative and transaction-related concern together influence contentment and preference of the user. This research emphasises these gaps by statistically examining the correlations among these aspects to provide profound insight into FinTech adoption behaviour.

This research is hinged on primary data rather than relying on secondary sources, collected through convenience sampling from 150 respondents. The respondents include Student, Salaried Employee, Self-employed, Business Owner, Unemployed and Home Maker using a structured questionnaire. Statistical tools proposed for analysis include frequency analysis, Anova, T.Test, Correlation Test to test the formulated hypothesis.

The findings show that awareness of fintech service and ecofriendly financial initiatives is generally low among the respondents, while usage behaviour is moderate and satisfaction tends to rise with greater usage. The research also shows that gender does not significantly affect usage behaviour or satisfaction, and perceived technical challenges have only a weak relationship with satisfaction. These results suggest that fintech adoption is becoming more inclusive, but awareness building and user support remain important for strengthening digital financial participation.

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Introduction

FinTech services depict innovative applications of technology in financial operations, modifying traditional models through digital payments, lending, and advisory tools. Their embracement has surged globally, yet faces barriers like regulation and protection (Feyen et al., 2021).

Digital revolution is transforming financial services, real-world examples illustrate how digital innovation drives FinTech success through efficiency, security, and user growth. These cases build on core technologies like AI, Block-chain, and mobile platforms. (Feyen et al., 2021)

Examples include digital payments (e.g., PayPal), infrastructure providers (e.g., Plaid), digital insurers (e.g., BIMA), and P2P lending platforms (e.g., Funding Circle). (Aggarwal et al., n.d.; Feyen et al., 2021)

These services address economic frictions such as information asymmetries and transaction costs, enabling unbundling of financial production where specialized players allow consumers to assemble preferred products. Blockchain, AI/ML for fraud detection and credit scoring, open banking, and robo-advisors are prominent trends, alongside digital payments and cryptocurrencies. Fintech has driven greater access and convenience for retail users while AI, cloud, and DLT reshape wholesale markets like trading. (Aggarwal et al., n.d.; Feyen et al., 2021; Madhulal & Assistant Professor, 2024)

Despite these advantages, the rapid expansion of fintech services also presents challenges related to cyber security risk, privacy concern, technical barriers and lack of awareness among users.

Therefore the research is based on primary data gathered from 150 respondents using structured questionnaires which provides a broader understanding of consumer behaviour towards fintech services.

Literature review

FinTech adoption and Customer Satisfaction

Fintech services have significantly transformed the financial sector by improving transaction efficiency, accessibility and convenience for consumers.according to (Aggarwal et al., n.d.,) fintech innovations have created new opportunities in digital finance while also introducing operational and technological challenges. Similarly (Feyen, E., Frost et al., 2021) emphasized that

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digital transformation in financial services has accelerated due to advancement in mobile technologies, artificial intelligence and digital payment infrastructure.

Research conducted in the Indian banking sector by (C. Sree Naga Pranavi et al., 2025). found that ease of use, transaction speed, security and service reliability positively influence customer satisfaction towards digital payment systems. The study concluded that customers prefer fintech services that provide secure and user friendly transaction experiences. However , the research mainly concentrated on satisfaction outcomes without integrating demographic and behavioural variables into analysis.

Similarly, (Sankararaman et al., 2025).examined fintech adoption patterns among urban consumers in Chennai and identified convenience, transaction efficiency and cost effectiveness as major drivers of usage behaviour . The study highlighted that security concerns and inadequate and digital literacy remain barriers to wider adoption. Nevertheless the research largely focused on descriptive usage behaviour and did not comprehensively examine satisfaction and loyalty dimensions.

Perception, security and usage barriers

Security perception and trust are important determinants influencing consumer acceptance of digital financial services . (P. Venkaiah Babu et al., 2024) investigated users' perceived risks and challenges associated with fintech adoption in India and identified privacy concern , cyber threat, regulatory uncertainty and lack of awareness as major obstacles affecting user confidence. The study emphasized the importance of strengthening security frameworks and consumer education to improve trust in digital financial systems

(Chawla U et al., 2023) examined the mediating role of perceived trust in the adoption of advanced financial technologies after the COVID 19 Pandemic. Their findings suggested that trust significantly affects the willingness of digital users to adopt fintech services. Similarly, Hassan studied fintech service adoption in the Bangladesh insurance industry and observed that security, trust and personal innovativeness positively influence customer behaviour. However, these studies primarily focused on technology acceptance and did not extensively evaluate post adoption satisfaction or long term user engagement.

Demographic Pattern and Behavioural Pattern

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Demographic variables such as age, income, occupation and educational background have been widely associated with differences in fintech adoption behaviour. A study conducted by (None, S. B. & None, D. C. V. H., 2025) analyzed user behaviour toward fintech consulting services in India and found that income level, age and risk perception significantly influence adoption patterns and satisfaction levels. However the study focused mainly on demographic influence and did not examine customer loyalty or continued usage intention.

(Abbas, S.K. et al., 2025) applied machine learning techniques to study technology acceptance behaviour among digital wallet users. Their findings identified different behavioural clusters and usage patterns among customers. Although the study provided valuable insights into digital wallet adoption, it primarily concentrated on behavioural prediction rather than customer satisfaction and awareness dimensions.

Extended Models and Customer Retention

Customer retention and continued engagement have become increasingly important in digital financial eco systems. (Patnaik, A et al., 2023) explored user acceptance of digital payment systems in India using an extended technology acceptance framework and observed that trust, perceived usefulness and security significantly influence customer adoption behaviour.

Furthermore, (Sharmila Devi, R et al., 2025) examined digital finance adoption among marginalized women street vendors and reported their convenience, facilitating conditions and social influence positively affect customer satisfaction and continued usage intention. The study highlighted the importance of inclusive digital financial initiatives for sustainable economic participation.

Industry reports submitted by economic times also indicate that loyalty programs and reward based strategies are increasingly being used by digital payment providers to strengthen customer retention and long term platform engagement. However limited empirical research has integrated demographic factors, security awareness, technical challenges, customer satisfaction and loyalty behaviour within a single analytical framework.

Research Gap

Despite the rapid growth of FinTech services in India, existing studies focus on isolated factors like acceptance of technology without integrating loyalty, awareness, satisfaction and perceived challenges in a holistic analysis model. Furthermore, less empirical evidence exists

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on how security awareness, eco-friendly financial initiative and transaction-related concern together influence contentment and preference of the user. This research emphasises these gaps by statistically examining the correlations among these aspects to provide profound insight into FinTech adoption behaviour.

Objective of this study

- To research about awareness of fintech services and eco friendly products in Consumers.
- To examine the patterns of adoption and utilization of digital applications.
- To study the degree of customer satisfaction associated with the use of fintech services.
- To investigate the technical challenges faced in using digital financial services.
- To examine the relationship between demographic factors and fintech usage.

Research Methodology

This research is conducted using primary data collected through convenience sampling from 150 respondents. The respondents include Student, Salaried Employee, Self-employed, Business Owner, Unemployed and Home Maker using a structured questionnaire. Statistical tools proposed for analysis include Anova, T.Test, Correlation, and Chi-Square Test of Independence to test the formulated hypothesis.

Hypothesis

H0: Awareness of fintech services and ecofriendly products, digital application usage patterns, perceived challenges using digital financial services and demographic factors does not significantly influence fintech usage behaviour and user satisfaction.

H1: Awareness of fintech services and ecofriendly products, digital application usage patterns, perceived challenges using digital financial services and demographic factors significantly influence fintech usage behaviour and user satisfaction.

Data Analysis and Interpretation

7.1To research about awareness of fintech services and eco friendly products in Consumers.

Awareness category	**Sum of frequency**
high	0
low	150

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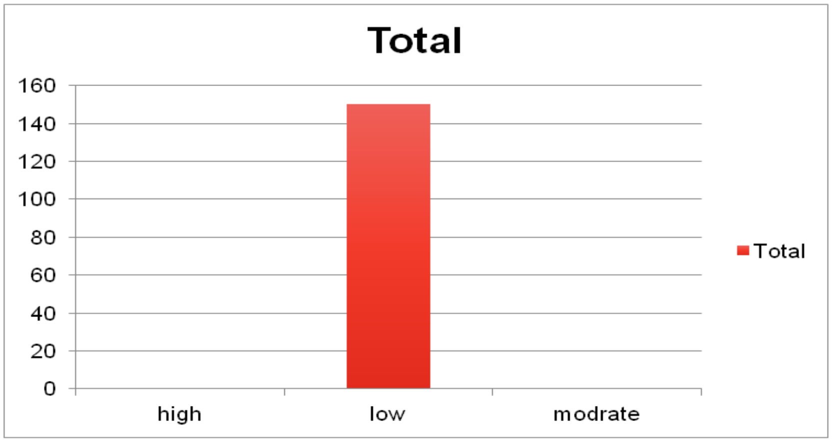
moderate	0



Source: primary data collected through google form

To research about awareness about fintech and ecofriendly products in consumers a frequency analysis, standard deviation and anova test is conducted and a frequency analysis reveals that 100% of respondents fall under the low awareness category, indicating a generally low level of awareness regarding fintech services specially eco friendly initiatives among consumers.

The standard deviation is 0.353 which indicates low variability among respondents which suggests that awareness levels are relatively homogeneous across the sample Anova single factor

Groups	Count	Sum	Average	Variance
Column 1	5	4.58333333	0.9166667	0.201388889
Column 2	108	81.1666667	0.7515432	0.110200088
Column 3	5	3.75	0.75	0.256944444
Column 4	8	5.16666667	0.6458333	0.154265873
Column 5	4	3.25	0.8125	0.223958333
Column 6	1	0.58333	0.58333	0

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Variation Category	**Sum of Squares**	**Degree of freedom**	**Mean Square**	**F Ratio**	**Probability Value**	***F Crit***
Between Groups	0.268878	5	0.0537757	0.437158679	0.821882799	2.286770718
Within Groups	15.37648	125	0.1230118			
Total	15.64536	130				

Source:primary data collected through google form

The analysis tested the awareness level among varied age groups.The results indicate no statistically significant difference in awareness scores among different age categories (p=0.8218>0.05). Hence age does not significantly influence awareness of fintech service in this research which suggests that awareness is almost uniform across different age groups and age is not a strong predictor of awareness level.

One way Anova				
SUMMARY				
Groups	***Count***	***Sum***	***Average***	***Variance***
Column 1	5	5.5	1.1	0.07125
Column 2	108	103.6	0.959259	0.121548979
Column 3	4	3.95	0.9875	0.200625
Column 4	8	10.15	1.26875	0.222098214
Column 5	4	4.5	1.125	0.090833333
Column 6	1	0.6	0.6	0

7.2 To examine the patterns of adoption and utilization of digital applications.

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Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1.007966	5	0.201593	1.590195257	0.16768	2.287366623
Within Groups	15.7198	124	0.126773			
Total	16.72777	129				

Source: primary data collected through google form

Fintech usage score is compared among respondents belonging to different age categories to identify whether age influences digital financial behaviour which revealed that there is no significant difference statistically (p=0.16768>0.05). Hence age does not significantly influence usage behaviour in this research which suggests that fintech adoption may be uniform across different age groups

Correlation	*Awareness*	*Usage Behaviour*
Awareness	1	
Usage Behaviour	-0.10539128	1

Source: primary data collected through google form

A correlation test is conducted to examine the relationship between awareness score and usage behaviour score. The result reveals a very weak negative correlation (r=-0.10539128), indicating that awareness has no meaningful linear relationship with usage behaviour among respondents which suggests that awareness alone does not drive usage and other factors like convenience, offer, accessibility may influence usage of fintech service more.

7.3 To analyze the customer satisfaction level towards fintech services.

Usage behaviour/satisfaction	*Column 1*	*Column 2*	*Column 3*	*Column 4*	*Column 5*	*Column 6*	*Column 7*
1	1						
2	1	1					

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3	0.548376	0.548376	1				
4	0.337033	0.337033	0.608139	1			
5	0.310242	0.310242	0.532435	0.666812	1		
6	0.274471	0.274471	0.513423	0.458712	0.555063	1	
7	0.449331	0.449331	0.811248	0.842969	0.841614	0.770331	1

Source: primary data collected through google form

Relationship between usage behaviour and customer satisfaction is studied using pearson correlation test the findings of which indicates that respondents who use fintech services more frequently tend to report higher satisfaction level (r=0.7703), indicating that the more engagement with fintech services leads to higher satisfaction and usage behaviour significantly contributes to satisfaction.

Independent Sample t test results		
	Variable 1	***Variable 2***
Mean	4.0078125	3.75
Variance	1.07453377	0.583686441
Observations	32	119
Hypothesized Mean Difference	0	
Df	40	
t Stat	1.314205425	
P(T<=t) one-tail	0.098131932	
t Critical one-tail	1.683851014	
P(T<=t) two-tail	0.196263864	
t Critical two-tail	2.02107537	

Source: primary data collected through google form

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The analysis is conducted to study the satisfaction levels between male and female respondents using independent t-test. Although male respondents (M=4.01) reported slightly higher satisfaction than female respondents (FM=3.75),the difference was not statistically significant (t=1.314,p=0.196>0.05). Therefore gender does not significantly influence customer satisfaction towards fintech services.

7.4 To assess the technical challenges faced in using digital financial services.

correlation	***satisfaction***	***challenge***
satisfaction	1	
challenge	0.074811	1

Source: primary data collected through google form

In order to assess the technical challenges faced in using digital financial services a correlation analysis is done between customer satisfaction and perceived technical challenge. An analysis found that there is very weak positive correlation (r=0.075) suggesting that technical challenges have no meaningful impact on satisfaction levels among respondents and even if respondents face challenges satisfaction remains almost unchanged, normally we expect more the challenge lesser the satisfaction but in this research we have got a very weak positive relationship which is practically negligible and therefore suggest that users might tolerate technical challenges if other factors like convenience, speed and offer drive more satisfaction.

Independent Sample t test results		
	Variable 1	***Variable 2***
Mean	1.6875	1.817226891
Variance	0.451612903	0.33654394
Observations	32	119
Hypothesized Mean Difference	0	
df	44	
t Stat	-0.996690784	
P(T<=t) one-tail	0.162182269	

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t Critical one-tail	1.680229977	
P(T<=t) two-tail	0.324364539	
t Critical two-tail	2.015367547	

Source: primary data collected through google form

In order to examine whether perceived technical challenges faced in using digital financial services differ based on gender is conducted using t test which revealed there was no significant difference statistically (t=-0.996,P=0.32436>0.05) which suggests that challenges encountered in using fintech services are gender neutral and are experienced similarly by both gender users.

7.5 To examine the relationship between demographic factors and fintech usage.

Independent Sample t test results		
	Variable 1	***Variable 2***
Mean	1.1171875	1.005882353
Variance	0.202517641	0.118270189
Observations	32	119
Hypothesized Mean Difference	0	
Degree of freedom	41	
t Stat	1.300721353	
P(T<=t) one-tail	0.100308686	
t Critical one-tail	1.682878003	
P(T<=t) two-tail	0.200617371	
t Critical two-tail	2.019540948	

Source: primary data collected through google form

To examine whether gender differences exist in usage behaviour of fintech services analysed using independent sample t-test which reveals that the variation observed between the groups was minimal and did not indicate any meaningful difference in consumer behaviour (Male=1.117) & (Female=1.005), t stats = 1.3007, P= 0.2006>0.05 Thus the null hypothesis is accepted which suggests that gender does not significantly influence fintech usage behaviour among respondents

Conclusion

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The research examined the awareness, usage behaviour, satisfaction level and challenges associated with fintech services, along with the influence of demographic factors. The results revealed that although respondents are aware of fintech services, the overall awareness level remains low. Usage behaviour is moderate and primarily driven by convenience and accessibility. The statistical analysis reveals that Demographic factors like gender do not significantly influence customer satisfaction and usage behaviour. Further the relationship across perceived technical challenge and satisfaction is weak and statistically insignificant, suggesting that users have adapted to operational difficulties in digital financial platforms.

These findings highlight that fintech adoption is becoming more inclusive and less dependent on demographic distinctions. However the research is limited by its restricted sample size and geographical concentration, which may affect the general applicability of findings.

Further research can also incorporate additional demographic and behavioural variables, longitudinal analysis or advanced statistical models to gain deeper insights into fintech adoption patterns.strengthening awareness initiatives and improving user experience remain critical for sustainable digital financial inclusion.

The study concludes that strengthening digital awareness, enhancing user experience and improving cyber security measures are essential for promoting a sustainable and inclusive digital financial eco-system.

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