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A STUDY ON USER SATISFACTION OF DIGITAL APPLICATIONS IN TIRUPUR DISTRICT

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Abstract

The rapid growth of digital applications has transformed the way users interact with financial services, e-commerce, government platforms, and social media. Understanding user satisfaction has become essential for improving service quality and sustaining engagement. This study aims to analyze user satisfaction with digital applications by focusing on factors such as ease of use, speed and performance, security in transactions, user interface, and customer support. Primary data were collected from 196 respondents representing different demographic categories of gender, age, education, occupation, and income. The analysis involved descriptive statistics, correlation, and factor analysis using SPSS to examine patterns of app usage, problems faced, and improvement needs.

The findings reveal that government service apps were slightly more used compared to other categories, and most respondents accessed apps 2–3 times a week. Security features and speed/performance emerged as the most influential factors, while debit/credit cards and cash on delivery were equally preferred as payment methods. Problems such as security concerns, poor customer support, and app crashes were commonly reported, with improvements suggested in better security, simplified user interface, and enhanced customer support. Correlation results showed weak associations among factors, and factor analysis extracted two dimensions: ease of use with satisfaction, and security with interface. However, the low KMO value indicated limited reliability of the factor structure.Overall, the study concludes that user satisfaction with digital applications is shaped primarily by ease of use, security, and interface design, highlighting the need for app developers to focus on trust, simplicity, and service quality.

Keywords: User Satisfaction, Ease of Use, Security, Performance, Customer Support

Introduction

The rapid expansion of digital technology has revolutionized the way individuals live, work, and conduct transactions in India. Digital applications—ranging from mobile banking, UPI payments, and e-commerce to online education, healthcare, and government service portals—have become essential tools for both personal convenience and business operations. In tier-II and tier-III cities like Tirupur, which is globally recognized as a textile and knitwear hub, the penetration of smartphones and the internet has accelerated the adoption of such applications at an unprecedented rate.

Tirupur's socio-economic environment is unique, with its large base of small and medium enterprises, migrant workers, and a youthful workforce. This demographic mix creates both opportunities and challenges for digital adoption. On one hand, residents are increasingly dependent on digital applications for financial transactions, communication, shopping, and accessing essential services. On the other hand, issues such as language barriers, inconsistent network connectivity, limited digital literacy, and concerns over privacy and trust affect the overall satisfaction of users.

Satisfaction is a key determinant in sustaining digital adoption because it directly influences repeat usage, loyalty, and positive word-of-mouth.Although several studies have examined user satisfaction with digital applications in metropolitan areas, there is limited research focusing on industrial districts like Tirupur.

A deeper understanding of the satisfaction levels, pain points, and improvement areas from the perspective of users in such regions is necessary for app developers, service providers, and policymakers to design more inclusive and effective digital solutions.

Research gap: Limited district-level, segment-specific evidence catering to Tier-II/III users beyond metro-centric studies.

Review of literature

- A study conducted in Southeast Asia in 2024 emphasized that ease of use and interface quality play a vital role in shaping user trust and satisfaction in shopping apps, ultimately influencing loyalty and adoption (Author, 2024).
- In another 2025 study published by the ACM, researchers confirmed that information security perceptions significantly affect users' intention to continue using digital payment applications, making security features a critical factor for user retention (Author, 2025).
- Research on UPI adoption in India highlighted that two-factor authentication, low transaction costs, and system simplicity are crucial elements that improve user satisfaction and trust in digital transactions (Author, 2025).
- A 2025 study on Gen-Z e-commerce users revealed that service quality and security features positively influence customer satisfaction and repeat usage, showing that younger demographics are highly sensitive to digital service performance (Author, 2025).

- A study in 2024 demonstrated that the combined effect of usability, security, and service quality strongly enhances the overall customer experience, indicating that satisfaction is a multi-dimensional construct rather than dependent on a single factor (Author, 2024).

Objectives

The objective of the study

- To develop a reliable and valid satisfaction scale for digital applications in Tirupur.
- To measure overall satisfaction and compute a Digital App Satisfaction Index (DASI).
- To offer recommendations for app providers, banks/fintechs, and government service platforms.

Research Design & Methodology

This study adopted a descriptive cross-sectional survey design focusing on Tirupur residents aged 18 and above who had used at least one digital application in the past three months. The sample size of 196 was derived using Cochran's formula, with a target of 200–240 to enable subgroup analysis. Respondents were selected through stratified purposive sampling across age groups and app categories, followed by convenience sampling within strata. Data was collected using a structured questionnaire covering demographics, usage, satisfaction, and feedback, available in Tamil and English. A hybrid approach of paper and Google Forms ensured wider reach, with informed consent, anonymity, and one response per participant maintained.

Analysis and Interpretation

Table1

Demographic Profile

Particular	No.of Respondents	Percentage
Gender		
Female	63	32.1
Male	64	32.7
Prefer not to say	69	35.2
Total	196	100
Age		
21–30	40	20.4
31–40	30	15.3
41–50	45	23
Above 50	43	21.9
Below 20	38	19.4
Total	196	100
Education Qualification		
Graduate	34	17.3

Others	49	25
Postgraduate	37	18.9
Professional/Technical	36	18.4
Up to Higher Secondary	40	20.4
Total	196	100
Occupation		
Homemaker	40	20.4
Others	43	21.9
Salaried	36	18.4
Self-Employed/Business	39	19.9
Student	38	19.4
Total	196	100
Monthly income		
15001–30000	41	20.9
30001–50000	41	20.9
50001–75000	42	21.4
Above 75000	36	18.4
Below 15000	36	18.4
Total	196	100

The demographic profile of 196 respondents shows a balanced distribution across various categories. In terms of gender, males (32.7%) and females (32.1%) are almost equal, while 35.2% preferred not to disclose their gender. Age-wise, the majority fall within 41–50 years (23%) and above 50 years (21.9%), followed by 21–30 years (20.4%). A smaller share belongs to below 20 years (19.4%) and 31–40 years (15.3%). Educational qualification indicates diversity, with 25% under "Others," 18.9% postgraduates, 18.4% professionals, 17.3% graduates, and 20.4% up to higher secondary.

Occupationally, the respondents include homemakers (20.4%), students (19.4%), salaried employees (18.4%), self-employed/business (19.9%), and others (21.9%). Monthly income levels also reflect variety, with 20.9% each earning ₹15,001–30,000 and ₹30,001–50,000, while 21.4% earn ₹50,001–75,000. Around 18.4% belong to both below ₹15,000 and above ₹75,000 categories. Overall, the data reveals participation from different age groups, income levels, occupations, and education backgrounds. This heterogeneous mix ensures that the study findings are broad, balanced, and representative of varied sections of society.

Table 2

Application type using

App type used	Frequency	Percent
Banking/Fintech	40	20.4
E-commerce	38	19.4
Government Service	44	22.4
Social Media	38	19.4
Utility	36	18.4
Total	**196**	**100.0**

Out of 196 respondents, 22.4% use government service apps, which is the highest among all categories. Banking/fintech apps are used by 20.4%, while e-commerce and social media apps are equally used by 19.4% each. Utility apps account for 18.4%, the smallest group. This shows that respondents prefer government service apps slightly more, but overall, usage is fairly balanced across different app types.

Table 3

Frequency of use

Frequency of use	Frequency	Percent
2–3 times a week	67	34.2
Daily	45	23.0
Occasionally	49	25.0
Weekly	35	17.9
Total	196	100.0

Out of 196 respondents, the highest share (34.2%) reported using apps 2–3 times a week, followed by 25.0% who used them occasionally. About 23.0% were daily users, while 17.9% used apps once a week. This shows that most respondents are moderate users, engaging with apps regularly but not on a daily basis.

Table 4

Most Influential Factor

Most influential factor	Frequency	Percent
Customer support	34	17.3
Ease of use	38	19.4
Rewards/Offers	34	17.3
Security features	47	24.0
Speed/performance	43	21.9
Total	196	100.0

Out of 196 respondents, the most influential factor in app usage is security features, chosen by 24.0% of respondents, followed by speed/performance at 21.9%. Ease of use is considered important by 19.4%, while customer support and rewards/offers are equally valued by 17.3% each. This shows that users give more importance to safety and smooth functioning of apps, while factors like support and offers play a relatively lesser role.

Table 5

Preferred Payment Method

Preferred Payment Method	Frequency	Percent
Cash on Delivery	42	21.4
Debit/Credit Card	43	21.9
Net Banking	37	18.9
UPI	36	18.4
Wallets	38	19.4
Total	196	100.0

Out of 196 respondents, debit/credit card payments are the most preferred method, chosen by 21.9%, followed closely by cash on delivery at 21.4%. Wallets account for 19.4%, net banking for 18.9%, and UPI for 18.4%. This shows that while digital payments are widely adopted, traditional options like cash on delivery still remain almost equally popular among users.

Table 6

Problems faced

Problems faced	Frequency	Percent
Never	44	22.4
Rarely	52	26.5
Yes, frequently	47	24.0
Yes, occasionally	53	27.0
Total	196	100.0

Out of 196 respondents, 27.0% reported facing problems occasionally, while 26.5% rarely experienced issues. About 24.0% mentioned facing problems frequently, whereas 22.4% stated they never faced any problems. This indicates that while a small portion of users enjoy a problem-free experience, the majority encounter difficulties at varying levels, with occasional and rare issues being the most common.

Table 7 - Types of Problems

Types of Problems	Frequency	Percent
App crashes/slow speed	41	20.9
Others	31	15.8
Poor customer support	42	21.4
Security concerns	43	21.9
Transaction failure	39	19.9
Total	196	100.0

Out of 196 respondents, the most common problem faced is security concerns (21.9%), followed closely by poor customer support (21.4%). App crashes or slow speed account for 20.9%, while transaction failures are reported by 19.9%. The least reported category is “others” with 15.8%. This shows that technical issues like security and performance, along with inadequate customer support, are the major challenges users face while using apps.

Table 8 - Recommended Frequency

Recommended Frequency	Frequency	Percent
Never	38	19.4
Often	38	19.4
Rarely	40	20.4
Sometimes	47	24.0
Very often	33	16.8
Total	196	100.0

Out of 196 respondents, 24.0% stated that they sometimes recommend apps to others, while 20.4% said they rarely do so. About 19.4% each reported that they either never recommend or often recommend apps, and 16.8% recommend them very often. This shows that while some respondents actively recommend apps, the majority fall into the middle range, suggesting that recommendations are given selectively rather than consistently.

Table 9 - Improvement Needed

Improvement Needed	Frequency	Percent
Better security	43	21.9
Faster performance	31	15.8
Improved support	42	21.4
More rewards	37	18.9
Simplified UI	43	21.9
Total	196	100.0

Out of 196 respondents, better security and a simplified user interface are the most needed improvements, each chosen by 21.9%. Improved customer support follows closely with 21.4%, while 18.9%

prefer more rewards. Faster performance is suggested by 15.8%, the lowest among all. This shows that users mainly expect safer transactions and easier app usage, along with stronger support, while performance speed and rewards are seen as relatively less critical.

pearson correlation

Correlations			
		Ease of Use	Time Saving
Ease of Use	Pearson Correlation	1	-.140
	Sig. (2-tailed)		.050
	N	196	196
Time Saving	Pearson Correlation	-.140	1
	Sig. (2-tailed)	.050	
	N	196	196

Correlations				
Control Variables			Ease of Use	Customer Support
Time Saving	Ease of Use	Correlation	1.000	-.054
		Significance (2-tailed)	.	.457
		df	0	193
	Customer Support	Correlation	-.054	1.000
		Significance (2-tailed)	.457	.
		df	193	0

The correlation analysis shows that ease of use and time saving have a weak negative relationship, with a Pearson correlation value of –0.140 and a significance level of 0.050. This indicates that as ease of use increases, the perception of time saving slightly decreases, but the relationship is very weak and only marginally significant.

When examining ease of use and customer support while controlling for time saving, the correlation value is –0.054 with a significance of 0.457, showing no meaningful association between the two variables.

Overall, the findings suggest that ease of use, time saving, and customer support are evaluated independently by users, without any strong or significant interdependence.

Descriptive Statistics			
	Mean	Std. Deviation	Analysis N
Overall Satisfaction	2.96	1.430	196
Ease of Use	2.99	1.351	196
Speed & Performance	3.04	1.439	196
Security in Transactions	2.94	1.413	196
User Interface	3.03	1.377	196

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.491
Bartlett's Test of Sphericity	Approx. Chi-Square	7.940
	df	10
	Sig.	.635

Communalities		
	Initial	Extraction
Overall Satisfaction	1.000	.509
Ease of Use	1.000	.598
Speed & Performance	1.000	.186
Security in Transactions	1.000	.361
User Interface	1.000	.612
Extraction Method: Principal Component Analysis.		

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	%of Variance	Cumulative %	Total	%of Variance	Cumulative %	Total	%of Variance	Cumulative %
1	1.184	23.672	23.672	1.184	23.672	23.672	1.183	23.670	23.670
2	1.083	21.661	45.333	1.083	21.661	45.333	1.083	21.664	45.333
3	.978	19.559	64.892						
4	.948	18.955	83.847						
5	.808	16.153	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
Overall Satisfaction	.707	-.095
Ease of Use	.716	.293
Speed & Performance	.400	-.163
Security in Transactions	-.105	.591
User Interface	-.018	.782

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

The descriptive statistics show that the mean scores of the variables range between 2.94 and 3.04, with moderate variation, indicating that respondents gave average ratings across satisfaction, ease of use, speed, security, and user interface. The KMO value of 0.491 falls below the acceptable threshold of 0.60, suggesting that the sample may not be highly suitable for factor analysis. Similarly, Bartlett's Test of Sphericity (Chi-Square = 7.940, Sig. = 0.635) is not significant, indicating that the correlation matrix is not adequate for factor extraction. Despite these limitations, principal component analysis extracted two components explaining 45.33% of the total variance.

The communalities show that ease of use (0.598) and user interface (0.612) are well represented by the extracted components, while speed and performance (0.186) and security in transactions (0.361) are poorly represented. From the component matrix, overall satisfaction (0.707) and ease of use (0.716) load strongly on Component 1, suggesting that these two factors are closely linked. On the other hand, security in transactions (0.591) and user interface (0.782) load on Component 2, indicating they form a separate

dimension. Speed and performance has weaker loadings across both components, showing limited contribution.

Overall, the factor analysis suggests that user satisfaction can be broadly grouped into two dimensions: one linked with **ease of use and overall satisfaction**, and the other with **security and interface design**. However, the low KMO value and non-significant Bartlett's Test indicate that the factor model may not be strongly reliable and should be interpreted with caution.

Conclusion

The study found that male and female respondents were almost equal, with many preferring not to disclose gender. Most respondents were from the 41–50 and above 50 age groups, and education levels were mixed. Occupation and income were fairly balanced across categories. In app usage, government service apps were most used, and most people used apps 2–3 times a week. Security and speed were the most influential factors, and debit/credit cards and cash on delivery were the most preferred payment methods. Many respondents faced occasional or rare problems, mainly related to security, customer support, and app performance. Respondents recommended apps only sometimes, and the main improvements needed were better security, simplified interface, and stronger support. Correlation results showed weak or no significant relationships between factors. Factor analysis extracted two main dimensions ease of use with satisfaction, and security with interface but the statistical adequacy was weak, so results should be taken cautiously. The study suggests that apps should focus on strengthening security measures and simplifying the user interface to improve user trust and ease of access. Enhancing customer support and optimizing performance will further reduce issues like crashes and delays. Additionally, introducing attractive rewards and maintaining flexible payment options can encourage greater user satisfaction and recommendations.

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