



Predictive Analysis of Customer Behavior on Mobile Apps

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Abstract

The widespread use of high-tech mobile devices has made them indispensable, driving up the number of users. This surge has intensified the demand for quality mobile apps, putting pressure on developers to swiftly improve user experiences. Our article tackles the challenges faced by both consumers and developers, proposing solutions to bridge the gap. By understanding consumer behavior and empowering developers, we aim to enhance mobile app functionality and satisfaction, fostering a better relationship between users and creators. Customers' preferences for online payments are largely influenced by the current study's research of customer satisfaction with online payment apps. Simple random and sample methods were used to choose 100 respondents. Utilizing statistical tools such as ANOVA and LINEAR REGRESSION, these studies identified the online payment apps behaviors of their clients.

Keywords: Customer Behavior, Mobile App, Usage Data, App Analytics, User Journey, In-App Actions, Purchase Behavior, Demographic Analysis.

1. Introduction

Digital India is the Indian government's flagship program aimed at transforming the country into a digitally empowered nation. "Faceless, Paperless, Cashless" transactions are key objectives of this initiative. The digital payment system has gained significance, especially post-demonetization, leading the government to encourage the use of payment gateway platforms. Discounts on digital purchases and the introduction of UPI have been pivotal in promoting digital transactions. Additionally, the government plans to unveil an improved version enabling banking transactions via mobile phones without internet, through USSD (Unstructured Supplementary Service Data) [1]. Government initiatives like BHIM and UPI are driving the adoption of digital payments in India. With the increasing usage of the internet and digital devices, customers find digital payments convenient and low-risk. Online payment apps have seen success, particularly in urban areas, but rural adoption remains low. Mobile wallet or e wallet app or e wallet is an app that consists of your debit and credit card information which helps the users to pay for goods and services digitally using their mobile devices [2]. Popular online payment apps or payment apps or e wallet list in India include:

Google Pay: Google developed Google Pay, a digital wallet technology that lets customers make contactless mobile purchases [3].

PayZapp: With just one click, customers can send money, make movie reservations, purchase goods, and pay utility bills with PayZapp, an all-in-one payment solution including buying products, booking movie tickets, sending money, and paying utility bills [4].

PhonePe: PhonePe is an Indian digital wallet platform offering various services including money transfers, mobile recharges, utility payments, and investment options [5].

Paytm: Paytm is an Indian multinational e-commerce payment system offering services like mobile recharges, utility bill payments, travel bookings, and in-store payments using QR codes [6].

Kotak 811: Kotak 811 is a zero-balance digital bank account offering various financial services and day-to-day transactions [7].

BHIM: BHIM is an Indian mobile payment app developed by NPCI based on UPI, facilitating e-payments directly through banks [8].

FreeCharge: FreeCharge, a subsidiary of Axis Bank, offers services such as utility bill payments,



mobile recharges, broadband recharges, and more [9].

Mobile Wallet/Payment App Works: In the case of First Payment using Online Payment Apps

- Registered users will input their phone number and the provider will send them an SMS along with a PIN.
- The user will enter the received PIN, authenticating the number
- Now the user has to input their credit card information or another payment method if required (not required if the account has already been added) and will proceed to validate the payments.

2. Purpose

predictive analysis of customer behavior on mobile apps is essential for businesses. It helps recognize user preferences, enhance user experience, optimize marketing strategies, and increase customer retention. By analyzing past data and predicting future behaviors, businesses can tailor their offerings, personalize interactions, and improve overall customer satisfaction and profitability.

3. Objectives of the Study

- To assess the trend of online payment apps.
- To examine the impact of online payment apps by analyzing the issues faced by customers.
- To understand the mechanism of online payment apps.
- To analyze the utilization of online payment apps by customers.

4. Method

Primary Data is collected through questionnaires and responses collected through google form. Secondary data was collected from external sources like Websites, Journals in the form of review of literature

with references. A descriptive research design can use a wide variety of research methods to investigate one or more variables The sample technique are done on the basis of simple random sample technique, With a sample size of 100 respondents

Statistical Tools: tools are used in LINEAR REGRESSION and ANOVA Analyzing the data is tabulated according to the respondent's responses using percentages, aggregated scores, which are essential for study, which helps in proper analysis of data and also graphs are used in the analysis for easy and quick interpretation.

H01; 'There is no significant difference in users' understanding and perception of the mechanism of online payment apps across different demographic groups' in Table 1-4.

Table 1 Summary Output

ONLINE PAYMENT APPS	NETWORK
34	18
51	58
13	19
2	5

Table 2 Regression Statistics

Multiple R	0.884505505
R Square	0.782349988
Adjusted R Square	0.673524982
Standard Error	12.47476487
Observations	4

Table 3 ANOVA

	df	SS	MS	F	Significance F
Regression	1	1118.760483	1118.760483	7.189064506	0.115494495
Residual	2	311.2395172	155.6197586		
Total	3	1430			

Table 4 Intercept

	Coefficient s	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	3.9231257 94	10.034841 59	0.3909504 46	0.7335500 71	- 39.253312 78	47.099564 36	- 39.253312 78	47.099564 36
NETWOR K	0.8430749 68	0.3144343 65	2.6812430 9	0.1154944 95	- 0.5098269 1	2.1959768 47	- 0.5098269 1	2.1959768 47

5. Results and Discussion

5.1 Results

- Regular updating of features makes the respondents use online payment.
- Many of the respondents have limited network issue
- Majority of the respondents feel that making online payment saves money and time
- Most of the respondents are comfortable in using mobile wallet
- Network issues does not affect online payment apps
- Network issues does not affect security and privacy features

5.2 Discussion

The summary output represents a linear regression analysis between network issues with online payment apps. The regression model is not significant ($p > 0.05$), indicating that network issues does not affect online payment apps, so accept H_0 and reject H_a .

The R value is 0.782 implies that 78.2% of the variability of no risk in mobile payment apps, overall is not significant for network issues with online payment apps in Figure 1.

Conclusion

the evolution of payment methods from cash to online payment apps and now to electronic commerce and mobile banking. It highlights the increasing use of online payment methods for daily purchases, addressing associated issues and customer adoption. Technological advancements in mobile transactions are enhancing convenience and transparency, fostering trust among customers. This shift from traditional to advanced payment methods is evident in retailing and banking, facilitated by widespread mobile device usage. Statistical data indicates a continuous growth in online payment users, suggesting long-term acceptance. However, the adoption of new technologies presents both opportunities and challenges for secure online payment systems.

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16. Which of the following user experience issues have you experienced

103 responses

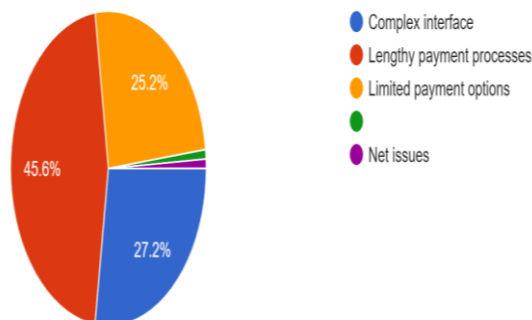


Figure 1 User Experience Issue



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