

Market Penetration Challenges of Paytm in Semi-Urban Areas with Special Reference to Semmancheri, Chennai

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Abstract-- This study examines the market penetration challenges of Paytm in semi-urban areas, with a focus on the issue of low active user engagement despite high app downloads. The research adopts a descriptive design and is based on primary data collected from 52 respondents using a structured questionnaire. The study analyzes factors such as usage patterns, trust and security concerns, transaction issues, merchant acceptance, and the influence of promotional offers. Statistical tools like percentage analysis, correlation, and chi-square test are used to interpret the data. The findings reveal that while awareness and adoption of Paytm are high, active usage is affected by technical issues, moderate trust levels, and limited merchant acceptance. The study concludes by suggesting measures to improve user engagement and enhance the effectiveness of digital payment systems in semi-urban areas.

Keywords--Paytm, Digital Payments, Market Penetration, Semi-Urban Areas, User Engagement, Trust and Security

I. INTRODUCTION

The growth of digital payments in India has significantly increased with the rise of smartphones and internet usage, with Paytm emerging as a leading platform for financial transactions. However, despite high awareness and app downloads, active user engagement in semi-urban areas remains low. Factors such as trust and security concerns, transaction failures, limited merchant acceptance, and dependence on cashback offers influence user behaviour. This study focuses on identifying these challenges and analyzing the gap between adoption and actual usage of Paytm in semi-urban areas.

II. STATEMENT OF THE PROBLEM

Despite the widespread adoption and high download rates of Paytm, active user engagement in semi-urban areas remains significantly low. Many users install the application but do not use it regularly for transactions. This gap between adoption and actual usage is influenced by factors such as trust and security concerns, transaction failures, limited merchant acceptance, and inadequate customer support. Therefore, the study aims to identify and analyze the key challenges affecting the effective market penetration and sustained usage of Paytm in semi-urban areas.

III. REVIEW OF LITERATURE

1. Digital Payment Adoption in India

According to Chauhan, A., & Khanna, N. (2025) Studies on digital payments in India highlight that the growth of platforms like Paytm accelerated after demonetization and increased smartphone penetration. Researchers found that awareness and initial adoption are high, **but** regular usage depends on trust, convenience, and accessibility.

2. Challenges in Adoption of Digital Payment Systems in India

The study by Vishwakarma et al. (2024) highlights that digital payment systems in India have grown rapidly due to initiatives like demonetization and the introduction of UPI. However, despite this growth, several challenges hinder widespread adoption, especially in semi-urban and rural areas. Key issues include lack of digital literacy, security concerns, technological barriers, and limited infrastructure. The study emphasizes that trust, awareness, and consumer behavior play a crucial role in determining the usage of digital payments, and addressing these challenges is essential for improving adoption and long-term sustainability.

3. Digital Payment Adoption and Usage Patterns in India

The study by Chauhan & Khanna (2025) examines digital payment adoption across different demographic groups in India using survey data and statistical analysis. The findings reveal that younger individuals and urban users are the most active users of digital payments, while semi-urban and rural users show comparatively lower engagement. Mobile wallets and UPI are the most preferred platforms due to factors such as convenience, speed, and cashback offers. Although a majority of users perceive digital payments as secure and reliable, opinions on convenience and willingness to recommend are mixed. The study also highlights that usage frequency varies significantly based on age, location, and platform preference, indicating that demographic factors play a crucial role in influencing digital payment behaviour and engagement.

4. Continuance Usage of Mobile Payment Services and Digital Resilience

The study by Alhassan & Butler (2021) focuses on the factors influencing the continued use of mobile payment services, especially after negative experiences such as fraud. The research highlights that while mobile payments contribute significantly to financial inclusion, security threats and fraud reduce user confidence. It emphasizes the concept of digital resilience, which refers to the ability of users to continue using mobile payment systems despite risks and adverse experiences. The study suggests that trust, user awareness, and the ability to handle security concerns play a crucial role in sustaining long-term usage, thereby explaining why many users discontinue or reduce usage after initial adoption.

5. Digital Payments and Financial Inclusion in Semi-Urban and Rural Areas

The study examines the role of digital payment systems in promoting financial inclusion, particularly in rural and semi-urban regions. It finds that digital payments significantly improve access to financial services by reducing dependence on traditional banking infrastructure and enabling faster, more convenient transactions. However, the study also highlights key challenges such as low digital literacy, poor internet connectivity, and security concerns, which limit adoption and effective usage. It concludes that while digital payments have strong potential to enhance financial inclusion, targeted efforts in improving infrastructure, awareness, and user trust are essential to ensure widespread and sustained usage across different regions.

IV. OBJECTIVES OF THE STUDY

- To analyze the usage frequency and engagement level of users with Paytm in semi-urban areas
- To examine the impact of trust and security concerns on the usage of Paytm among users.
- To identify the key challenges faced by users while using Paytm.
- To evaluate the influence of merchant acceptance and promotional factors (cashback/offers) on the adoption and continued usage of Paytm.

V. SCOPE OF THE STUDY

- The study examines the usage frequency and engagement level of users of Paytm in semi-urban areas, focusing on the gap between app downloads and actual usage.

- It analyzes the impact of trust, security concerns, and user perception on the continued usage of Paytm.
- The study identifies the key challenges faced by users, including transaction failures, technical issues, and customer support problems affecting engagement.
- It evaluates the influence of merchant acceptance and promotional offers (cashback) on the adoption and regular usage of Paytm.

VI. RESEARCH METHODOLOGY

The study adopts a descriptive research design, which is suitable for analyzing user behaviour, perceptions, and engagement levels toward Paytm in semi-urban areas. This design enables the examination of key factors such as trust, security concerns, transaction efficiency, merchant acceptance, and promotional influence without manipulating any variables. It helps in understanding the gap between app adoption and actual usage, providing insights into the challenges affecting active user engagement.

Sample Size And Sampling Technique

The sample size for the study consists of 52 respondents selected from semi-urban areas. The sampling technique used is convenience sampling, as respondents were chosen based on their availability and willingness to participate.

Data Collection Method

The data for the study is collected using primary data collection methods through a structured questionnaire. The questionnaire consists of close-ended questions designed to gather information on user behavior, perceptions, and challenges related to Paytm. The responses were collected directly from respondents in semi-urban areas to ensure relevance and accuracy of the data. Secondary data was gathered from research journals, articles, and online publications.

Statistical Tools Used

The study uses statistical tools such as **percentage analysis, correlation, and chi-square test** for data analysis.

- **Percentage analysis** is used to understand the distribution of responses across demographic.
- **Correlation** is applied to examine the relationship between variables like trust and usage.
- **Chi-square test** is used to identify the association between different factors affecting the usage of Paytm.

VII. DATA ANALYSIS AND INTERPRETATION

**TABLE I:
AGE DISTRIBUTION OF RESPONDENTS**

AGE	NO OF RESPONDENTS	PERCENTAGE %
18-25	33	63.5
26-40	13	25
41-55	5	9.6
ABOVE 55	1	1.9
TOTAL	52	100

Interpretation

The above table shows the age distribution of respondents. It is observed that the majority of respondents (63.5%) belong to the age group of 18–25 years, followed by 25% in the 26–40 age group. A smaller proportion of respondents fall under 41–55 years (9.6%) and above 55 years (1.9%). This indicates that the study is largely dominated by younger individuals, suggesting that digital payment platforms like Paytm are more commonly used by the younger population in semi-urban areas.

**TABLE II:
GENDER OF THE RESPONDENTS**

MALE	NO OF RESPONDENTS	PERCENTAGE
MALE	35	67.31
FEMALE	17	32.69
TOTAL	52	100

Interpretation

The table shows that 67.31% of respondents are male, while 32.69% are female, indicating that the majority of participants in the study are male.

**TABLE III:
EDUCATION QUALIFICATION OF THE RESPONDENTS**

Education qualification	No of respondents	Percentage%
10 th or less	5	9.62
12 th	20	38.46
UG or less	23	44.23
PG	4	7.69
Total	52	100

Interpretation

The table indicates that the majority of respondents (44.23%) have undergraduate-level education, followed by 38.46% with 12th qualification. A smaller proportion (9.62%) have education up to 10th or less, while only 7.69% of respondents are postgraduates. This shows that most respondents have at least a basic to intermediate level of education

**TABLE IV:
PER MONTH INCOME LEVEL OF THE RESPONDENTS**

Income level	No of respondents	Percentage
Less than 25000	26	50
25000-35000	7	13.46
35000-45000	11	21.53
Above 45000	8	15.38
Total	52	100

Interpretation

The table indicates that out of 52 respondents, a majority (50%) earn less than ₹25,000 per month, making it the largest income group and showing that most respondents belong to the low-income category. Meanwhile, 21.53% of respondents fall within the ₹35,000–₹45,000 range, followed by 15.38% earning above ₹45,000, and only 13.46% earning between ₹25,000–₹35,000, which is the smallest group. Overall, the data suggests that the study is largely dominated by lower-income individuals, implying that the findings may primarily reflect the behavior and challenges of price-sensitive users in semi-urban areas.

**TABLE V :
PRIMARY OCCUPATION**

Primary occupation	No of respondents	Percentage%
Student	26	50
Small Business Owner / Merchant	10	19.2
Salaried Employee	12	23.1
Farmer / Agricultural Worker	4	7.7
Total	52	100

Interpretation

The above table shows the primary occupation of the respondents. It is observed that the majority of respondents (50%) are students, followed by 23.1% who are salaried employees.

Small business owners/merchants constitute 15.4% of the respondents, while farmers/agricultural workers account for 7.7% and others represent 3.8%. This indicates that the study is mainly dominated by students and working professionals, suggesting that younger and economically active groups are more likely to use digital payment platforms like Paytm in semi-urban areas.

**TABLE VI :
BIGGEST CONCERN WITH USING PAYTM**

Concerns	No of respondents	Percentage%
Transaction failures / Money getting stuck	20	38.5
Cyber-fraud or Hacking	11	21.2
Lack of Customer Support	13	25
Privacy of data	8	15.4
Total	52	100

Interpretation

The above table shows the biggest concerns faced by respondents while using Paytm. It is observed that the major concern among users is transaction failures or money getting stuck (38.5%), followed by lack of customer support (25%). Cyber-fraud or hacking is a concern for 21.2% of respondents, while 15.4% are worried about data privacy. This indicates that technical issues and service-related problems are the primary barriers affecting user trust and engagement, thereby limiting the effective usage of Paytm in semi-urban areas.

**TABLE VII:
IMPORTANCE OF CASHBACKS**

IMPORTANCE	No of respondents	Percentage%
Very important	33	63.5
Somewhat important	14	26.9
Not important	5	9.6
Total	52	100

Interpretation

The data shows that cash backs are highly valued by respondents, with 63.5% considering them very important and 26.9% viewing them as somewhat important, while only 9.6% find them not important. This indicates that a large majority of consumers are influenced by cashback offers, highlighting their strong role in shaping purchasing decisions.

**TABLE VIII:
FREQUENCY OF USING PAYTM**

Frequency of using paytm	No of respondents	Percentage
Daily	30	57.7
Weekly	10	19
Monthly	4	7.7
Rarely	5	9.6
Do not use it	3	5.8
Total	52	100

Interpretation

The table shows that a majority of respondents use Paytm frequently, with 57.7% (30 respondents) using it daily, indicating strong adoption among users. About 19% (10 respondents) use it weekly, while a smaller proportion use it monthly (7.7%) or rarely (9.6%). Only 5.8% (3 respondents) reported not using Paytm at all. Overall, the data suggests that Paytm has achieved significant penetration and regular usage among the customers.

**TABLE IX:
TRUST LEVEL OF PAYTM AMONG RESPONDENTS**

Levels(1 -5)	No of respondents	Percentage
1	4	7.7
2	3	5.8
3	11	21.2
4	21	40.4
5	13	25
Total	52	100

Interpretation

The table shows the trust level of Paytm among 52 respondents using a 5-point scale. A majority of respondents exhibit a high level of trust, with 40.4% rating their trust at level 4 and 25% at level 5. This indicates that around two-thirds of the respondents have strong confidence in Paytm. Meanwhile, 21.2% of respondents fall at a moderate trust level (level 3), suggesting some level of hesitation. Only a small proportion shows low trust, with 7.7% at level 1 and 5.8% at level 2. Overall, the findings suggest that Paytm enjoys a generally positive trust perception among users, though a minority still has concerns that may affect its wider adoption.

Correlation Analysis:

Hypothesis

- **H₀:** No relationship between engagement and usage frequency
- **H_a:** Significant relationship exists

TABLE X.
RELATIONSHIP BETWEEN ENGAGEMENT AND USAGE FREQUENCY

			Engage ment	Usage
Spearman's Correlation	Engag ement	Correlati on Coefficie nt	1	-.486**
		Sig. (2- tailed)	0	0
		N	52	52
	Usage	Correlati on Coefficie nt	-.486**	1
		Sig. (2- tailed)	0	0
		N	52	52
Correlation is significant at the 0.01 level (2-tailed).				

Interpretation

The results of the Spearman's rho correlation analysis reveal a moderate negative relationship between engagement and usage frequency ($r = -0.486$). This suggests that as engagement increases, usage frequency tends to decrease, and vice versa. The significance value ($p = 0.000$) is less than 0.01, indicating that the relationship is statistically significant at the 1% level. Therefore, the null hypothesis (H_0), which states that there is no relationship between engagement and usage frequency, is rejected, and the alternative hypothesis (H_1) is accepted. In conclusion, there exists a statistically significant inverse relationship between engagement and usage frequency among the respondents.

Relationship between trust and usage

- H_0 : There is no significant relationship between trust and usage
- H_1 : There is a significant relationship between trust and usage

TABLE XI
RELATIONSHIP BETWEEN TRUST AND USAGE

			Tr ust	Us age
Spearman's Correlation	Tr ust	Correl ation Coeffi cient	1	-. 38 6**
		Sig. (2- tailed)	.	0.0 05
		N	52	52
	Us age	Correl ation Coeffi cient	-. 38 6**	1
		Sig. (2- tailed)	0.0 05	.
		N	52	52
Correlation is significant at the 0.01 level (2-tailed).				

Interpretation

A Spearman's rank-order correlation was conducted to assess the relationship between trust and usage. The results indicated a statistically significant, moderate negative correlation between the two variables, $r_s(50) = -0.386, p = 0.005$. This suggests that as trust increases, usage tends to decrease, and vice versa. Since the p-value is less than 0.01, the relationship is significant at the 1% level. Therefore, the null hypothesis (H_0), which states that there is no relationship between trust and usage, is rejected, and the alternative hypothesis (H_1) is accepted.

CHI-SQUARE TEST:

- H_0 : Merchant availability has no impact on how often people use Paytm.
- H_1 : High merchant availability increases the frequency of Paytm usage.

merchant acceptance * usage frequency Crosstabulation

			usage frequency			Total
			daily	weekly	monthly/rarely	
merchant acceptance	most shops	Count	23	5	5	33
		Expected Count	19.0	6.3	7.6	33.0
		% within merchant acceptance	69.7%	15.2%	15.2%	100.0%
	only some shops/few shops	Count	7	5	7	19
		Expected Count	11.0	3.7	4.4	19.0
		% within merchant acceptance	36.8%	26.3%	36.8%	100.0%
Total		Count	30	10	12	52
		Expected Count	30.0	10.0	12.0	52.0
		% within merchant acceptance	57.7%	19.2%	23.1%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.496 ^a	2	.064
Likelihood Ratio	5.511	2	.064
Linear-by-Linear Association	5.115	1	.024
N of Valid Cases	52		

Interpretation

The Chi-square test shows that there is no statistically significant association between merchant acceptance and usage frequency ($\chi^2 = 5.496$, $df = 2$, $p = 0.064$). The null hypothesis is accepted (fail to reject).

VIII. FINDINGS OF THE STUDY

1. The majority of respondents (63.5%) belong to the age group of 18–25 years, indicating that younger individuals are the primary users of Paytm in semi-urban areas.
2. Male respondents dominate the study, accounting for 67.31% of the total respondents, while females constitute 32.69%.
3. Most respondents possess undergraduate-level education (44.23%), followed by respondents with 12th qualification (38.46%), showing that Paytm usage is common among moderately educated individuals.
4. Half of the respondents (50%) earn less than ₹25,000 per month, indicating that Paytm is widely used among low-income groups.
5. Students form the largest occupational group (50%), followed by salaried employees (23.1%), suggesting that younger and economically active users are more inclined towards digital payments.
6. The major concern faced by respondents while using Paytm is transaction failure or money getting stuck

(38.5%), followed by lack of customer support (25%).

7. Cashback offers are considered very important by 63.5% of respondents, indicating that promotional incentives strongly influence Paytm usage.
8. A majority of respondents (57.7%) use Paytm daily, reflecting high adoption and regular usage of digital payment services.
9. Most respondents show a high level of trust in Paytm, with 40.4% rating trust level 4 and 25% rating level 5.
10. The correlation analysis between engagement and usage frequency reveals a statistically significant moderate negative relationship ($r = -0.486$, $p < 0.01$). This indicates that higher engagement is associated with lower usage frequency.
11. The correlation analysis between trust and usage also shows a statistically significant moderate negative relationship ($r = -0.386$, $p < 0.01$), suggesting that increased trust does not necessarily lead to higher usage frequency among respondents.
12. The Chi-square test indicates that there is no significant association between merchant availability and frequency of Paytm usage ($\chi^2 = 5.496$, $p = 0.064$). Therefore, merchant acceptance does not significantly influence Paytm usage frequency among the respondents.

IX. SUGGESTIONS

1. Paytm should improve its transaction processing system to reduce transaction failures and issues related to money getting stuck, as this is the major concern among users.
2. The company should strengthen customer support services by providing faster complaint resolution, 24/7 assistance, and easy grievance redressal mechanisms.

3. Paytm must enhance cybersecurity measures and create greater awareness about safe digital payment practices to reduce fear of cyber fraud and hacking.
4. The platform should ensure better protection of user data and communicate its privacy policies clearly to increase customer confidence.
5. Cashback offers and reward programs should be continued and expanded, as they play a significant role in attracting and retaining users.
6. Paytm can introduce more personalized promotional offers for students and young users, since they form the majority of users in the study.
7. Awareness campaigns and digital literacy programs may be conducted in semi-urban areas to encourage greater adoption among older age groups and less educated individuals.
8. The company should focus on improving user engagement strategies by introducing interactive features, loyalty benefits, and simplified user interfaces.
9. More training and support can be provided to small merchants and local businesses to improve digital payment acceptance and encourage wider usage.
10. Paytm should work on building long-term trust by ensuring transparency, reliability, and consistent service quality.
11. The company may introduce simplified regional language support to make the application more user-friendly for semi-urban and rural users.
12. Future studies can be conducted with a larger sample size and wider geographical coverage to obtain more comprehensive insights into digital payment behavior.

X. CONCLUSION

The present study examined consumer perception and usage behavior towards Paytm in semi-urban areas. The findings reveal that Paytm has gained significant acceptance among users, particularly among younger individuals, students, and low-income groups. The majority of respondents use Paytm regularly, with a large proportion using it on a daily basis, indicating that digital payment platforms have become an important part of everyday financial transactions in semi-urban regions.

The study also highlights that cashback offers, convenience, and ease of use are major factors encouraging the adoption of Paytm. Most respondents consider cashback and reward programs highly important, showing that promotional strategies play a vital role in attracting and retaining customers.

Furthermore, the trust level towards Paytm is generally positive, as a majority of users expressed moderate to high trust in the platform.

However, despite the growing popularity of Paytm, several challenges continue to affect user satisfaction and engagement. Transaction failures, delays in refund processing, lack of efficient customer support, cyber fraud concerns, and data privacy issues were identified as the major problems faced by respondents. These issues reduce customer confidence and may limit the long-term growth of digital payment systems in semi-urban areas.

The correlation analysis showed a statistically significant negative relationship between engagement and usage frequency, as well as between trust and usage frequency. This suggests that increased engagement or trust alone does not necessarily guarantee higher usage, indicating the influence of other factors such as convenience, service quality, and technical reliability. In addition, the Chi-square test revealed that merchant availability does not have a significant impact on the frequency of Paytm usage among respondents.

Overall, the study concludes that Paytm has successfully established itself as a widely used digital payment platform in semi-urban areas due to its accessibility, promotional benefits, and convenience. At the same time, improving transaction reliability, strengthening customer support, enhancing security measures, and increasing awareness about safe digital payment practices are essential for sustaining customer trust and expanding adoption further. The study also emphasizes the need for continuous innovation and user-friendly services to meet the expectations of diverse consumer groups in the rapidly growing digital economy.

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