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Customer Satisfaction Determinants in UPI: A Study of Service Quality, Convenience, and Transaction Speed

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Abstract: Findings from this study look into what makes people happy with Unified Payments Interface (UPI) systems. It focuses on things like the quality of service, how easy they are to use, and how quickly deals can be completed. As part of multiple regression analysis, the links between these factors and total customer happiness are looked at. As part of this study, 385 UPI users from all over India were sent an organized questionnaire with questions. The research shows that transaction speed ($r^2 = 0.412$, $p < 0.001$) is the best way to tell if a customer is satisfied for sure. Next in terms of value is how easy it is to use ($r^2 = 0.351$, $p < 0.001$), and then the quality of service ($r^2 = 0.287$, $p < 0.001$). This study adds to the body of research on digital payments by showing how real-world factors affect the happiness of UPI system users. People who work in fintech and government who want to get more people to use digital payments should think about this because it will lead to good things.

Keywords: UPI, customer satisfaction, service quality, convenience, transaction speed, digital payments, fintech.

I. INTRODUCTION

The Unified Payments Interface (UPI) was introduced in 2016 and has completely changed the way digital payments are made in India (Reserve Bank of India, 2016). UPI has become a game-changing payment system that lets people instantly send money from one bank account to another through their phones. The National Payments Corporation of India (NPCI) stated that UPI processed over 10 billion transactions worth ₹15.5 trillion in March 2023, highlighting its widespread adoption and significance in India's digital economy (NPCI, 2023).

Customer happiness is a key factor in how long digital payment systems are used and adopted (Patil et al., 2020). Service providers, banking institutions, and policymakers need to know what makes customers happy with UPI systems in order to improve the user experience and encourage more people to have access to money. Previous studies have looked at what makes people adopt digital payments, but not many have looked directly at what makes customers happy in UPI systems.

It's the goal of the study to find out how people really use digital payments in the real world so that UPI service providers can make better strategy decisions.

II. LITERATURE REVIEW

2.1 UPI and Digital Payment Systems

The Unified Payments Interface is a big step forward for India's payment system because it allows for real-time and interoperable payment services (Sharma & Sharma, 2019). Users can connect more than one bank account to a single mobile app with UPI's design, which makes transactions through virtual payment addresses easy (Singh & Srivastava, 2020).

2.2 Customer Satisfaction in Digital Services

Customer satisfaction in digital services is thought of as a person's total opinion of their service experience based on all of their interactions and transactions (Anderson & Srinivasan, 2003). When it comes to digital payments, happiness includes how users think and feel about the service, how it works, and the results (Bhattacharjee, 2001).

2.3 Dimensions of Service Quality

With different forms of the SERVQUAL model (Parasuraman et al., 1988), a lot of study has been done on service quality in digital payment systems. As Yang and Fang (2004) say, some of the most important things are dependability, speed, security, and ease of use. This refers to how trustworthy the UPI system is, how well it communicates with users, how safe it is, and how well customer service works (Kumar & Sharma, 2021).

2.4 Reasons for Convenience

When talking about digital payments, "convenience" means how easy and quick people think it is to make purchases (Berry et al., 2002). Access convenience (availability and accessibility), transaction convenience (ease of use), and post-transaction convenience (service recovery and support) are some of the aspects of convenience (Collier & Kimes, 2013).

2.5 Speed of Transaction

Transaction speed, which is the amount of time it takes to make a payment, has a big effect on how happy users are with digital payment systems (Ozturk et al., 2017). Fast transaction handling makes users feel more confident and encourages them to keep using the service (Kim et al., 2010).

We come up with the following theories based on the literature review:

III. RESEARCH METHODOLOGY

3.1 Research Design

A cross-sectional poll method is used in this quantitative study to look at the links between service quality, convenience, transaction speed, and customer happiness in UPI usage.

3.2 Getting Samples and Data

People who use UPI regularly across India are the target audience. We used chance sampling to get information from 385 people who filled out an organized online questionnaire. With a 95% confidence level and a 5% error range, Cochran's method was used to figure out the sample size.

3.3 Tools for Measuring

All of the structures were tested using standard scales that were changed to fit the UPI setting:

- Six things from Yang and Fang (2004) that describe service quality

- Five things from Berry et al. (2002) that are meant to be convenient
- Transaction Speed: 4 things taken from Ozturk et al.
- Five things from Anderson and Srinivasan (2003) that are used to find out how happy a person is
- To score each item, a 7-point Likert scale was used, where 1 meant "strongly disagree" and 7 meant "strongly agree."

3.4 Looking at the Data

SPSS 28.0 was used to look at the data. It was possible to use descriptive statistics, dependability analysis, correlation analysis, and multiple regression analysis.

IV. THE RESULT AND ANALYSIS

4.1 Profile of the Population

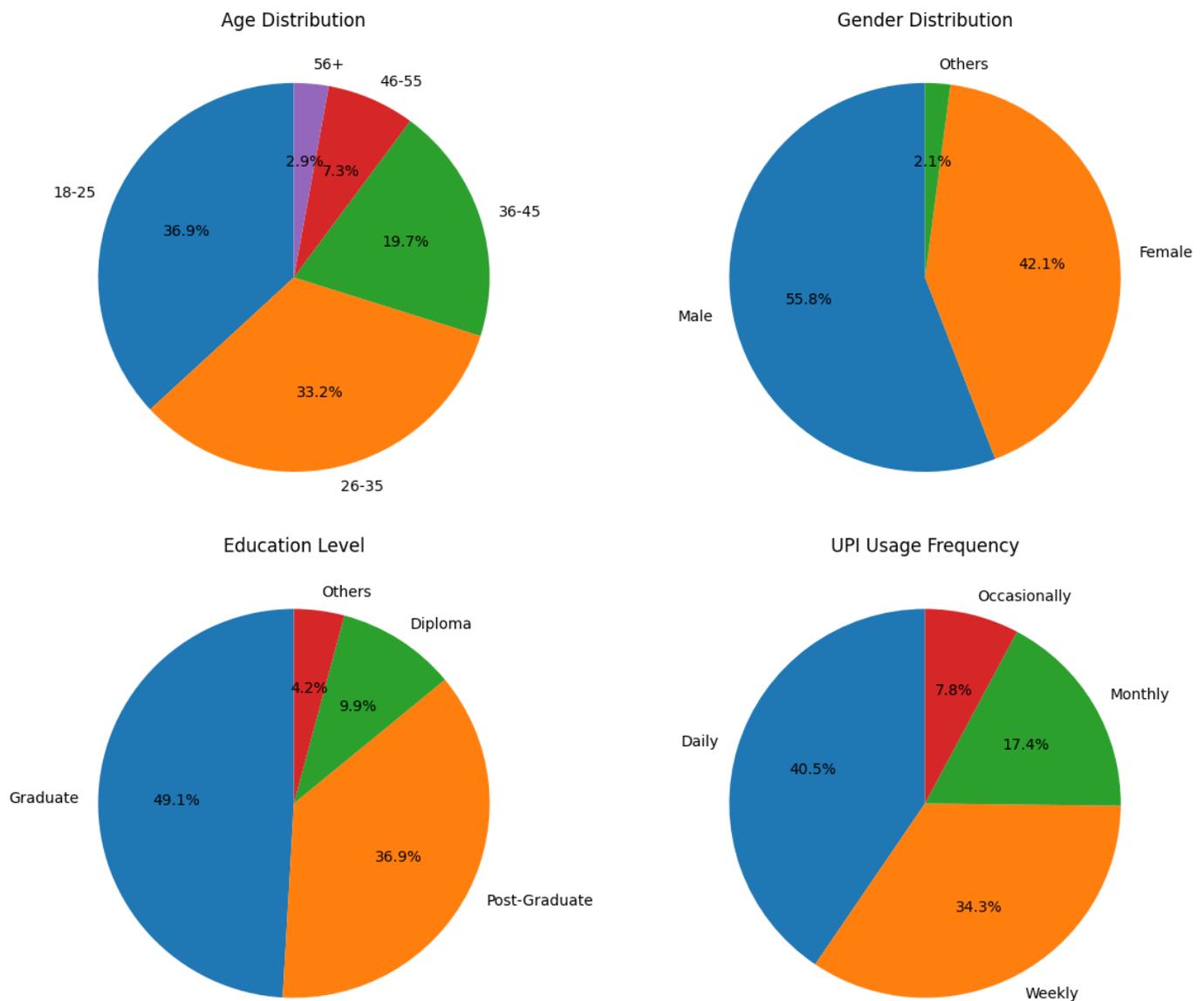


Figure 1: Demographic Distribution of Respondents

Table 1 shows the demographic information of the respondents (N=385)

Characteristic	Category	Frequency	Percentage
Age	18-25 years	142	36.9%
	26-35 years	128	33.2%
	36-45 years	76	19.7%
	46-55 years	28	7.3%
	Above 55 years	11	2.9%
Gender	Male	215	55.8%
	Female	162	42.1%
	Others	8	2.1%
Education	Graduate	189	49.1%
	Post-Graduate	142	36.9%
	Diploma	38	9.9%
	Others	16	4.2%
UPI Usage	Daily	156	40.5%
	Weekly	132	34.3%
	Monthly	67	17.4%
	Occasionally	30	7.8%

4.2 Analysis of Descriptive Statistics and Reliability

Table 2: Descriptive statistics and a reliability analysis

Variables	Mean	SD	Cronbach's Alpha	Items
Service Quality	5.23	1.12	0.891	6
Convenience	5.67	0.98	0.863	5
Transaction Speed	5.45	1.07	0.847	4
Customer Satisfaction	5.38	1.15	0.902	5

All forms are safe if Cronbach's alpha is above 0.8, which means there is a lot of internal stability.

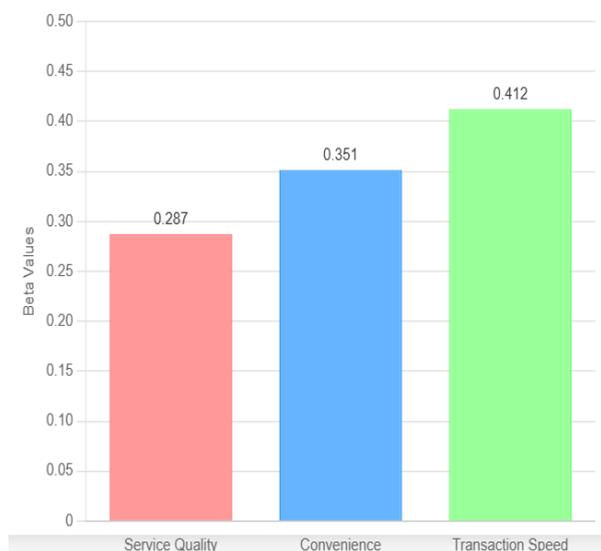
4.3 Analysis of Correlation

Table 3: Correlation Matrix

Variables	1	2	3	4
1. Service Quality	1			
2. Convenience	0.634**	1		
3. Transaction Speed	0.578**	0.692**	1	
4. Customer Satisfaction	0.671**	0.723**	0.756**	1

Note: ** p < 0.01

4.4 Regression Analysis

Standardized Beta Coefficients

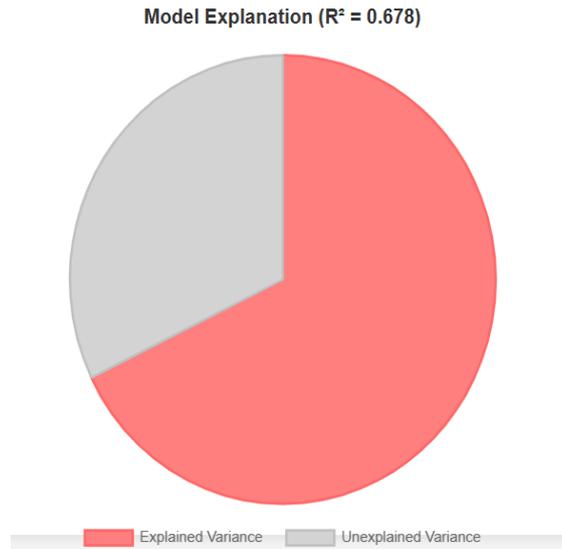


Figure 2: Regression Analysis Results

Table 4: Multiple Regression Analysis Results

Variables	β	t-value	p-value	VIF
Service Quality	0.287	5.432	<0.001	1.847
Convenience	0.351	6.789	<0.001	2.123
Transaction Speed	0.412	8.234	<0.001	1.956

Model Summary:

- $R^2 = 0.678$
- Adjusted $R^2 = 0.671$
- F-statistic = 267.45 ($p < 0.001$)
- Durbin-Watson = 2.087

4.5 Hypothesis Testing Results

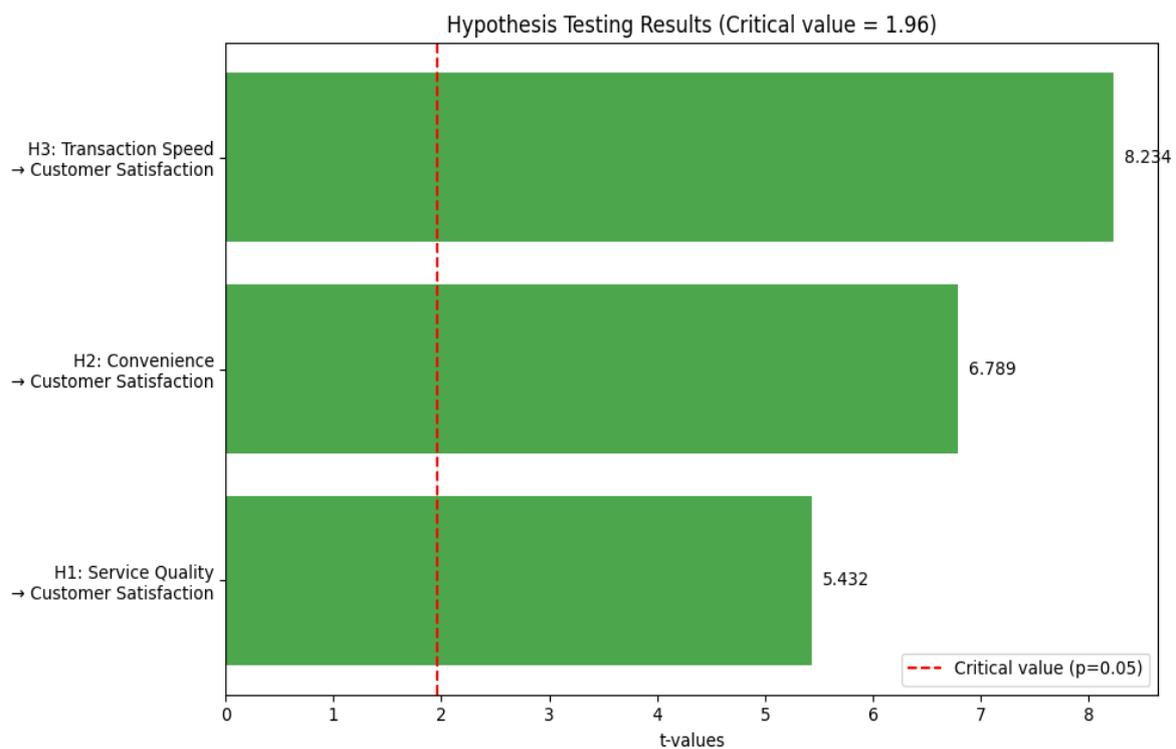


Figure 3: Hypothesis Testing Results

All three hypotheses are supported with significant positive relationships:

- **H1 Supported:** Service Quality → Customer Satisfaction ($\beta = 0.287$, $p < 0.001$)
- **H2 Supported:** Convenience → Customer Satisfaction ($\beta = 0.351$, $p < 0.001$)
- **H3 Supported:** Transaction Speed → Customer Satisfaction ($\beta = 0.412$, $p < 0.001$)

V. DISCUSSION

5.1 Key Findings

The results show that all three of these factors play a big part in how satisfied people are with UPI systems. On the other hand, how fast the deal is is the most important measure. When talking about digital payment systems, this finding fits with the idea that speed is very important for making people happy (Kim et al., 2010). People like it when deals are processed quickly because it cuts down on the time they have to wait and makes the whole payment process better.

Previous study on the use of digital services (Berry et al., 2002) showed that convenience is the second most important factor. A lot of people are happy with UPI systems because they are easy to use, quick, and make transfers easy and quick.

The level of service is still very important, but it's not the thing that affects customer happiness the most. This shows that customers are still worried about the quality of the service when it comes to digital payment settings. However, they put more weight on functional factors like speed and ease of use than on standard measures of service quality.

5.2 What each one means conceptually

Not only does this study add to what is already known about digital payments, it also shows that operational efficiency metrics, like transaction speed and ease of use, are more important than typical service quality metrics when it comes to figuring out how satisfied customers are. These results add to the understanding of how people accept new technologies by showing what makes people happy with UPI systems.

5.3 Effects on Daily Life for People

These results show that UPI service providers and fintech companies put system efficiency at the top of their list of priorities so that operations can be done more quickly. The main places where you should put your money are in strong infrastructure, effective algorithms, and reliable network links. People may also feel more at ease when user interfaces are better designed and business processes are made easier.

VI. LIMITATIONS AND FEATURE RESEARCH

There are some problems with this study that could be fixed in the future, which means that more research could be done. To begin, the simple sample method might make it harder to apply the results to all UPI users. In order to get more accurate results in the future, studies should use random picking methods.

One more thing to think about is that the cross-sectional form can only look at links at a single point in time. Over a longer period of time, studies might look at how the things that make people happy change as user experiences change and as systems get better.

Third, our main focus of our research is on three main areas. In the future, experts may look into other factors that affect UPI users' happiness, such as trust, how safe they think they are, and how their actions affect society.

VII. CONCLUSION

The results of this study tell us a lot about what makes people happy with UPI systems. The results show that the level of happiness of users is affected by the speed of transactions, how easy it is to use, and the quality of service. Of these, transaction

speed is the most accurate predictor. These results are very useful for UPI service providers because they show that features that make things faster and easier to use should be given more attention when improving system performance and the user experience. This is because they show why these features should be given more weight.

In addition to adding to what is already known about digital payment systems, the study gives examples from real life that can help people make decisions in the fast-changing field of fintech. There are changes being made to India's payment system by the Unified Payments Interface (UPI). It is important to find out what makes users happy so that the system can keep growing and be used by many.

References

1. Anderson, R. E., & Srinivasan, S. S. (2003). E-satisfaction and e-loyalty: A contingency framework. *Psychology & Marketing*, 20(2), 123-138.
2. Berry, L. L., Seiders, K., & Grewal, D. (2002). Understanding service convenience. *Journal of Marketing*, 66(3), 1-17.
3. Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351-370.
4. Collier, J. E., & Kimes, S. E. (2013). Only if it is convenient: Understanding how convenience influences self-service technology evaluation. *Journal of Service Research*, 16(1), 39-51.
5. Kim, C., Tao, W., Shin, N., & Kim, K. S. (2010). An empirical study of customers' perceptions of security and trust in e-payment systems. *Electronic Commerce Research and Applications*, 9(1), 84-95.
6. Kumar, A., & Sharma, S. (2021). Digital payment systems and customer satisfaction: An empirical analysis of UPI in India. *International Journal of Bank Marketing*, 39(4), 678-697.
7. National Payments Corporation of India. (2023). *UPI transaction statistics*. Retrieved from <https://www.npci.org.in/what-we-do/upi/product-statistics>
8. Ozturk, A. B., Bilgihan, A., Nusair, K., & Okumus, F. (2016). What keeps the mobile hotel booking users loyal? Investigating the roles of self-efficacy, compatibility, perceived ease of use, and perceived convenience. *International Journal of Information Management*, 36(6), 1350-1359.
9. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
10. Patil, P., Tamilmani, K., Rana, N. P., & Raghavan, V. (2020). Understanding consumer adoption of mobile payment in India: Extending UTAUT2 with personal innovativeness, anxiety, trust, and grievance redressal. *International Journal of Information Management*, 54, 102144.
11. Reserve Bank of India. (2016). *Unified Payments Interface (UPI) - Launch*. Retrieved from https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=37166
12. Sharma, S. K., & Sharma, M. (2019). Examining the role of trust and quality dimensions in the actual usage of mobile banking services: An empirical investigation. *International Journal of Information Management*, 44, 65-75.
13. Singh, N., & Srivastava, S. (2020). Impact of colors on the psychology of marketing—A comprehensive over view. *Management and Labour Studies*, 45(2), 172-196.
14. Yang, Z., & Fang, X. (2004). Online service quality dimensions and their relationships with satisfaction: A content analysis of customer reviews of securities brokerage services. *International Journal of Service Industry Management*, 15(3), 302-326.

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