A Comparative Study on Customer Adoption and Satisfaction towards the PhonePe and Google Pay among Higher Education Students in Sagar City

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Abstract: *The Unified Payment Interface is a secure, real time and single window mobile payment application developed by the National Payment Corporation of India (NPCI) and it is regulated by the Reserve Bank of India (RBI). This study focused on a comparing the Customer adoption and Satisfaction towards the two leading UPI applications, PhonePe and Googel Pay among the higher education students in Sagar City. The research used both primary and secondary data. Primary data gathered through a survey of 120 students and secondary data from the published sources. The descriptive statistics like tabulation, percentage analysis and Mean are used for anlaysing and interpreting the data. The Mann-Whiteny U test to analyse the difference in satisfaction level. The finding showed that PhonePe is the most prefereed app among the respondents (56.67%) compared to Google Pay (43.33%). A significant majority of respondents (63.33%) use UPI apps on a daily basis, indicating the habitual nature of these transactions. PhonePe demonstrated market leadership for routine and lifestyle transactions such as Entertainment (63.33%) and Mobile recharge/fees Payment (60%) , while Google Pay core strength was highlighed in Security (86.67%). Mann-Whitney U test yielded a Z-Score of -2.33 and p value is 0.020 and it rejected the Null hypothesis which indicates that there is a significant difference in overall customer satisfaction between the two apps. With a higher mean satisfaction score of 3.987 compared to Google Pay 3.787. The study concluded PhonePe user have a higher level of overall satisfaction than the Google Pay users within the population. The study suggested that Redressal Mechanism of both the applications need to be improved.*

Keywords: PhonePe, Google Pay, Satisfaction, Higher Education, Mann-Whitney U test

1. Introduction

A UPI is the smart phone application that allow users to transfer money between bank accounts. It is single window mobile payment system developed by National Payment Corporation India (NPCI) on 11th April 2016 by Ex RBI Governor Raghuram Rajan. UPI eliminate the need of entering bank details each time at every transaction. A UPI is the real time payment system. It is designed to enable peer to peer inter- bank transfers through a single two click factor authentication process. The interface is regulated by RBI. The system is said to be a safe and secure method of transferring money between two parties and eliminates the need to transact with physical cash or through bank.

In this today's busiest world people don't get their time to sit and relax then how can do their personal works like recharges, payment of electricity bills, insurance and so on. In order to make the people stress free we have UPI- Unified Payment Interface application. It is one of the digital payment mode used to send or receive a money through a virtual payment address. It runs on internet enabled cell phones. We have several UPI apps like BHIM, YONO SBI, Google Pay, Phone pay, Paytm, Uber, Axis pay, Amazon pay, Airtel pay, what's up pay and so on. People are using these applications in their mobile phones and it helping them to do their work simple and easy by saving the time. The study focused on two biggest UPI Apps i.e Google pay and Phone pay.

Phone Pay first UPI payment platform in India. Phone pay has tagged with the YES Bank for providing UPI services. Phonepay secured highest market share in UPI transactions volume as per NPCI report. Through the phonePe its possible to like our various e-wallets with this app and easily we can transfer money between these wallets. It comes up with some interesting features like

- This app provide an option to purchase the gold.
- It offers various cashbacks and rewards.
- With this we can pay all our credit card bills.
- The maximum limit of money transfer is Rs. 1,00,000 per day
- This apps allows us to pay all our utility bills like electricity, gas, landline, broadband, water bills and so on.
- Any type of store payment can be done using this app.
- There is no need to enter PIN or password to open this app.
- It is having good redressal mechanism to response to the negative feedback and works effectively for correcting them.

Google pay is dominating in the market due to its uniqueness and user- friendly interface. Google pay secured second highest market share in UPI transactions after Phonepe.

Google pay continue to grow over other counter parts due to its various unique features like

- It is very easy to operate the Google pay as only it need a bank account and a mobile number for installation there is no need of KYC documents.
- The wallet options are not available in this app.
- This is the first app which used the NFC technology.

- In this app the options like google play and Google Ad payments are available.
- Even the user can use it to chat before makes any payment.
- Purchasing opportunities are available here.
- 8 Indian languages are supported in this app for user convenience.
- In this app users can set the reminders for making the payments periodically.
- Google pay provide the option of Google pay Safe shield features in order to secure UPI payments using the biometrics.
- This app have Tex mode which allows the receiver to receive their money without disclosing any details.

Table 1: Transaction Details of Phone pay and Google pay

Year	Phone Pay		Google Pay	
	Volume (mn)	Value (cr)	Volume (mn)	Value (cr)
March 2022	2527.15	471401.26	1838.12	338873.25
March 2023	4076.32	707410.47	3054.44	482896.69
March 2024	6502.15	10,02,387.84	5061.18	695,196.05
March 2025	8647.78	12,57,075.54	6596.76	866568.18

Source: https://www.npci.org.in/product/ecosystem-statistics/upi

The above table shows that PhonePe consistently maintains a larger market share than Google pay in both the Value and volume of transaction across the four years.

2. Review of Literature

Dr. Meena Sharma (2021) "A Comparative analysis of two biggest UPI Payment apps: BHIM and Google Pay." In this paper researcher made an attempt to compare the services offered by the two biggest UPI apps and also tried to find the factors which influencing the customer to use the selected UPI apps in Mumbai City. The study was based On primary and secondary data. The primary data has been collected through questionnaire method. The total sample size was 150. The secondary data has been gathered from websites and journals. Charts and graphs are used to analyse the data. The conclusion of the study was the percentage of user of Google Pay is more than the BHIM payment apps. The factors which are influencing the customer to prefer the google pay was very comfortable and easy to use and have good features and speed compare to the BHIM app.

Rasna T.P.P.S.Susila (2022) "A comparative study on the usage pattern of UPI Payments among the rural and urban @ Kannur District of Kerala." The digitalisation taking place in each and every sector in this busy life schedule of people have changed the mindset of people towards making everything digital. The objective of this study was to analyse about preference of UPI payments and also attempt to make a comparative analysis among the usage of UPI apps between male and female region wise among rural and urban area at Kannur District of Kerala. A convenience sampling technique is used to collect primary data. Total sample size was 200. The percentage analysis is used for data analysis. The conclusion of the study the proportion of male user of UPI apps are more than the female respondents in rural as well as urban areas. The UPI mode of

payment are used more in urban areas comparing to rural areas.

Dinesh M Kotte and Dr. Veena R Humbai (2019) "A Study of third- party UPI apps and BHIM payment system in India." The researcher made an attempt to know the awarenss and use of third party UPI apps and BHIM apps services among the students of Aurangabad. The primary and secondary data was collected for the study. The percentage analysis had used to analyse the collected data. The conclusion of this paper was respondents are more comfortable with the 3rd party apps than BHIM app.

Mr. Devi S Nair and Ms. Rinu Jayaprakash (2021) "Customer Preferences between third party UPI apps and Banking Apps." In this research paper researcher analysed the customer preference towards usage of banking apps and third party UPI apps and to know the factors influencing the usage of respective UPI apps. The primary data has been collected through questionnaire and secondary data has been gathered from various websites and journals. The tabulations and percentage tools used to analyse the gathered data. The conclusion of the study was the customer preferences to use banking apps are more than the third party UPI apps. More than 75% of the respondents were satisfied with the services provided by the banks.

Mr. Milind A Bhuva (June 2023) "A comparative study on Banking Customer Preferences on using Mobile Banking Applications and UPI applications for payment in Mumbai." In this article researcher highlighted the trend and preference of banking customer towards UPI and mobile banking services. Study has been extended to investigate the effects of demographic factors on usage of UPI apps and mobile banking. A primary data has been collected through systematic questionnaire with closed ended questions. To evaluate the hypothesis descriptive statistics like mean and frequencies and inferential statistics like t test and regression analysis has been used. The conclusion of the study there is a correlation between demographic factor and the choice for mobile banking and UPI app.

Sapna S (2024) "A study to know the usage of bank app over UPI app." The main objective of the study was to know the level of satisfaction among the users regarding usage of banking apps. The structured questionnaire was used to gather the primary data. Percentage analysis has been used for analysing the data. The secondary data has been collected from various publications. The conclusion of the study was the UPI users are more as compare to banking apps. In reality banking apps have more features than the UPI apps. But users are not aware about those features. So the suggestion was the banks have to create awareness among their customers.

Research Gap

- The reviewed studies have focused on diverse geopgraphic locations and user groups such as Mumbai City, Aurangabad and Kannur district of Kerala. There is a clear gap regarding the specific adoption trends and satisfaction level of higher education students in Sagar city. This demographic is crucial as they are early

adopters of digital payment technology and their preferences significantly influence the future market. 4

- While some studies have anlaysed the usage pattern based on gender and region or demographic effect on UPI choice in general. This study extend this by investigating the preference for specific payment types between the PhonePe and Google Pay.

Objectives
1) To know the services offered by the PhonePe and Google Pay.
2) To find out the customer adoption towards the Phonepay and Google pay relates to the payments.
3) To compare the satisfaction level of customer towards usage of PhonePe and Google Pay among the higher education Students in Sagar City.

Hypothesis
H_0- There is no significant difference in the overall customer satisfaction level between PhonePe and Google Pay among the higher education students in Sagar City.
H_1- There is a significant difference in the overall customer satisfaction level between PhonePe and Google Pay among the higher education students in Sagar City

3. Methodology

The study used the mixed data approach where both primary and secondary sources to achieve the objectives. Primary data was collected through a survey method. A structured questionnaire was distributed to a sample of 120 Higher education Students in Sagar City. The selection of respondents was carried out using the Random Sampling Method. In order to measure respondents satisfaction level the Likert Scale type of questions is used in the questionnaire. The Secondary data was gathered for background and supportive information. This information is sourced from various websites and published research articles. The statistical tools like Tabulation, percentage and Mean are used to analyse and interpret the data. The inferential statistic/ like Mann-Whitney U Test is used for testing the hypothesis. The established significant level is 0.05.

4. Analysis and Interpretation

Table 2: Demographic Factors

SL. No	Factors	Category	F	%
1	Gender	Male	75	62.5
		Female	45	37.5
	Total		**120**	**100**
2	Age	18	4	3.33
		19	4	3.33
		20	48	40
		21& above	64	53.33
	Total		**120**	**100**
3	Stream	B.com	30	25
		BA	25	20.83
		B.Sc	20	16.67
		BCA	25	20.83
		BBA	20	16.67
	Total		**120**	**100**
4	Social Background	Rural	80	66.67
		Urban	40	33.33
	Total		**120**	**100**

Source: Primary Data

Interpretation: The above table shows the demographic factors of respondents. The data indicates a significant gender imbalance, with the male respondents are 62.5% and female respondents are 37.5% out of the total sample. The data relating to age group shows that the majority of the respondents 64 (53.33%) are belongs to the category of 21 years and above. 48 respondents (40%) are belonging to the 20 years age group. The sample includes the students from different academic streams. B.com is the most common stream with 30 respondents (25%) of the sample, BA and BCA streams are equally represented with 25 Respondents (20.83%) and 20 respondents (16.67%) from B.Sc and BBA stream. 80 respondents (66.67%) are belonging to the Rural background and 40 respondents (33.33%) are from the Urban background.

Table 3: Most Preferred UPI app

UPI Apps	F	%
PhonePe	68	56.67
Google Pay	52	43.33
Total	120	100

Source: Primary Data

Interpretation: The above table presents the most preferred UPI apps used by the respondents. The data shows very clear that 68 respondents (56.67%) most preferred UPI app is PhonePe as compared to 52 respondents (43.33%) prefer to use Google pay. second most used, with 52 respondents, accounting for 43.33% of the sample.

Table 4: Frequency of Usage of UPI apps

Frequency	F	%
Daily	76	63.33
Weekly	24	20
Monthly	16	13.33
Occasionally	4	3.33
Total	120	100

Source: Primary Data

Interpretation: The above table shows the frequency of using the UPI apps. The majority of respondents 76(63.33%) use the UPI on daily basis. 24 respondents (20%) use the UPI apps on weekly basis. 16 respondents (13.33%) use it monthly and only 4 respondents (3.33%) use the UPI apps occasionally. This indicates that UPI apps are routine and habitual behaviour of the respondents.

Table 5: Most Preferred app for the payment

Payments	PhonePe		Google Pay	
	F	%	F	%
Bill Payment	68	56.67	52	43.33
Mobile Recharge	72	60	48	40
Fund transfer	68	56.67	52	43.33
Ticket Booking	64	53.33	56	46.67
Food order	72	60	48	40
Fees payment	72	60	48	40
Entertainment	76	63.33	44	36.67
Others	64	53.33	56	46.67

Source: Primary Data

Interpretation: The above table shows that respondents most of the time prefer the Phonepe UPI app for their different categories of payments over the Google Pay. The highest PhonePe preference is for Entertainment (63.33%),

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which is lead to Google pay by about the 26.66 %. The respondents prefer the Phone pay for Mobile Recharge, Food order and Fees Payment (60%), which is lead to Google pay by about the 20%. The core utility transactions like Bill payment and Fund transfer shows the moderate preference for PhonePe (56.67%), which is lead to Google Pay by about the 13%. The lowest PhonePe preference towards ticket booking and others (53.33%), which is lead by 6.66%. The

PhonePe is the Market leader for the type of payments. It dominance in lifestyle and routine transactions such as Entertainment, Food order, Mobile Recharge. While Google Pay remains a strong in a ticket booking and other payments

Customer Satisfaction towards the Usage of Phonepe and Google Pay

Table 6: Aggregate Data of Satisfaction Level

Satisfaction Level	Score (X)	PhonePe (f1)	Google Pay (f2)	Total Frequency	Rank Tied	Average Rank
Highly Dissatisfied	1	12	40	52	1 to 52	26.5 (1+52/2)
Dissatisfied	2	8	32	40	53 to 92	72.5 (53+92/2)
Neutral	3	152	92	244	93 to 336	214.5 (93+336/2)
Satisfied	4	232	288	520	337 to 856	596.5 (337+856/2)
Highly Satisfied	5	196	148	344	857 to 1,200	1028.5 (857+1200/2)
Total Responses (n)		600	600	1,200		

Source: Primary data
Note: Due to multiple options by the respondents total percentage exceeds

Table 6: Mean score of PhonePe and Google Pay

UPI apps	Mean Score
PhonePe	3.987
Google Pay	3.787

Mann-Whitney U Test for Overall Satisfaction
The Mann-Whitney U test involves ranking the combined data and calculating the sum of ranks (R). The U statistic is then calculated, followed by the standardized Z-score for the large sample approximation.

1) **PhonePe Sum of Ranks (R_1) =** 3,73,476

2) **Google Pay Sum of Ranks (R_2)** = 3,47,124

3) **U-Statistics:**
   - U_1= 1,66,824
   - U_2= 1,93,176

The test statistic U_1 is the smaller value so U= 1,66,824

4) **Mean of U(μU)**

$$\mu U = \frac{n_1 n_2}{2}$$

= 1,80,000

5) **Standardized Z-Score (with Ties Correction):**
The Z-score measures how many standard deviations the calculated U is from the expected mean (μU)

$$Z = \frac{U - \mu U}{\sigma U}$$

Z= (-2.33)

Interpretation: In the above analysis the calculated Z score is (-2.33) which is outside the critical range ±1.96 and p value is 0.020 which is less than the significant level (α=0.05) here we reject the Null Hypothesis. There is a significant difference in the overall customer satisfaction level between the PhonePe and Google Pay among the higher education students in Sagar city. The PhonePe mean score is 3.987 is higher than the Google Pay mean score i.e. 3.787 and the test is significant and concluded that the PhonePe users have a

high level of satisfaction as compared to the Google Pay users.

5. Conclusion

The study found that PhonePe is the most prefereed app among the higher education students in Sagar city (56.67%) and it holds the market leadership for the routine and lifestyle transactions such as Entertainment (63.33%), mobile recharge and Fees payment (60%). A majority of the respondents (63.33%) use the UPI on daily basis on daily basis. It shows that the people have habitual behaviour towards UPI. PhonePe secured highest rate in convenience (76.67%) and good rating for speed and user- friendly features. Google pay demonstrate its core strength in Security (86.67%).

The result of Mann-Whitney U test yielded a Z score of -2.33 and an associated p value is 0.020. Since the p value is less than the established significance level 0.05. The study conclusively found a significant difference in the overall customer satisfaction level between the User of PhonePe and Google Pay. PhonePe recorded a higher mean satisfaction score i.e 3.987 which is higher than the Google pay 3.787 which concluded that PhonePe user have a higher level of Overall Satisfaction than the Google Pay user within the specific population.

The redressal mechanism emerged as the critical point requiring the attention for both the apps. For PhonePe large Neutral group suggest the process is less known and tested. For Google Pay this feature have a highest level of dissatisfaction**.**

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