

**A COMPARATIVE ANALYSIS OF SATISFACTION LEVELS OF BHIM APP AND  
GOOGLE PAY USERS IN NORTH BENGAL, (WEST BENGAL)**

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**Abstract:**

The 'Digital India' plan is currently boosting the use of digital payment system in India. After demonetization, there has been tremendous growth in digital payments in India. The government of India had an initiative to launch BHIM UPI for transparency and quick services for the people of India. Bharat Interface for Money (BHIM) is a payment app by the National Payments Corporation of India (NPCI) that lets you make simple, easy, and quick transactions using the Unified Payments Interface (UPI). Due to this initiative, there is tremendous growth in the use of mobile phones and the internet which directly helps increased growth in digital payments. The use of Digital Payment system gives more transparency in money transactions which improves the economy of the country. Another simple and secure means of transferring money quickly is Google Pay which is developed by Google that enables users to make payments through Android phones, tablets, or watches. The research paper aims to study the use of the BHIM app and Google Pay app by the young users of North Bengal. The main objective of this study is to identify and compare the problems and preference of young users between the BHIM app and Google Pay app in North Bengal, West Bengal.

**Keywords:** Bharat Interface for Money (BHIM), Google Pay (G Pay), Digital Payments.

**Introduction**

Young age individuals are particularly concerned about technology. The Indian government has been implementing several initiatives to support and promote digital payments. As part of the "Digital India" initiative, the government want to create a "digitally empowered" economy that is "Faceless, Paperless, and Cashless". Use of Debit Card, Credit Card, online banking, mobile wallets, digital payment apps, the Unified Payments Interface (UPI) service, and unstructured supplemental services are few of them. Digital payment options are frequently simple, more practical, and give clients the freedom to make payments whenever they want, from anywhere. These facilities have shortened transaction cycles and are a good substitute for conventional payment systems. After demonetization, people gradually began to accept digital payments, and today even small-time business owners and shop owners have begun to do so.

**Bharat Interface for Money (BHIM)**

Based on the Unified Payments Interface (UPI), the National Payments Corporation of India (NPCI) created the Indian mobile payment software known as BHIM (Bharat Interface for Money). It was introduced on December 30th, 2016 with the goal of facilitating bank-to-bank electronic payments and promoting cashless transactions. It bears the name of Dr. Bhimrao Ambedkar, the architect of the Indian Constitution. The application supports all Indian banks that use UPI, which is based on the IMPS (Immediate Payment Service) infrastructure and enables users to send money immediately between any two of the 170 member institutions.

Users of BHIM can send and receive money to or from UPI payment addresses as well as to non-UPI accounts by scanning a QR code including the account number, IFSC code, or MMID (Mobile Money Identifier) code. The BHIM app solely functions as a means of transferring money between multiple bank accounts, as opposed to mobile wallets such as Paytm, MobiKwik, M-Pesa, Airtel Money, etc. that store money. On BHIM, transactions can be made at any time, including on weekends and federal holidays, and are almost instantly processed. Through Aadhaar authentication, BHIM now also enables users to send and receive digital payments. Currently, there is no charge for transactions from ₹1 to ₹100,000. Some banks might, however, levy a fee for UPI or IMPS transfers.

### **Google Pay**

In order to support in-app and tap-to-pay transactions on mobile devices, Google developed Google Pay, a digital wallet platform and online payment system that enables users to make payments with Android phones, tablets, or watches. The autofill feature of Google Chrome was rebranded by it. Through its in-store, peer-to-peer, and online payment services, Google Pay incorporates the functionalities of both Android Pay and Google Wallet. Near Field Communication (NFC) is used by Google Pay to send card information, allowing money transfers to merchants. By enabling the user to upload them in the Google Pay wallet, it replaces the credit or debit card chip and pin or magnetic stripe transaction at point-of-sale terminals. With the inclusion of two-factor verification, it is comparable to contactless payments, which are already popular in many nations. Using an NFC antenna, host-based card emulation (HCE), and Android security, the service enables wireless communication between Android devices and point-of-sale systems. Where available, Google Pay makes use of physical authentications like fingerprint ID. Google Pay requires a PIN in order to be activated on smartphones lacking fingerprint ID. Google Pay does not communicate the credit or debit number together with a user's payment to a merchant. Instead, it creates a virtual account number that reflects the details of the user's account. By transmitting a one-time security code rather than the card number or user information, this service protects the privacy of client payment information.

### **Review of Literature**

**K. Suma Vally and K. Hema Divya. (2018)** in their Paper “A study on digital payments in India with the perspective of consumers Adoption” concludes that the adoption of technology for digital payments has enhanced the banking industry's performance and allowed it to attain the country with less money motive. Additionally, this study emphasizes the percentage of people who are aware of how best to use technology. Banks should create successful plans through awareness of the efficient use of technology and security.

**Rahul Gochhwal (2017)** in his paper “Unified Payment Interface—An Advancement in Payment Systems” concluded that mobile phones can now be utilized as the primary payment instrument for sending and receiving money. UPI takes advantage of the high teledensity in India to allow every person with a bank account to conduct digital transactions using a mobile phone. Even the smallest retailer can start collecting digital payments without the POS unit requirement because of India's weak commercial payment acceptance infrastructure.

**Anjali R., and Suresh A. (2019)** in their paper” A Study on Customer Satisfaction of Bharat Interface for Money (BHIM)” remarked that the BHIM application is one of the best moves made by the Indian government for quick bank-to-bank transactions and that many Indians have embraced it.

**Dr. Virshree Tungare (2018)** in his research paper “A Study on Customer Insight Towards UPI (Unified Payment Interface) - An Advancement of Mobile Payment System” explained that UPI is the most sophisticated payment system in the world, in contrast to all other payment systems. Using a smartphone and the UPI payment system, one can transfer money between any two bank accounts. Without having to type in credit card information, IFS codes, or net banking or wallet passwords, a client can pay various retailers straight from their bank account, both online and offline. It strives to make things simpler and offer a single interface for hassle-free, rapid, and straightforward money transactions. These UPI characteristics encourage respondents from the service industry to use the platform, and the study also demonstrated a substantial difference between the adoption rates of UPI by gender.

**Dr. Dhani Shanker Chaubey & Piyush Kumar (2017)** in their study on “Demonetization and its impact on the adoption of digital payment: opportunities, issues and challenges” speak about the analysis of digital payments following demonetization and how customers see digital transactions following demonetization. According to the study, the demonetization of currency has given digital payment a fresh impetus to teach people how digital transactions operate. People were ready to switch to digital payments, but they were not willing to pay more for them. This was because they

are convenient and make transactions simpler, digital payments are being adopted quickly in many nations.

**A S Suresh and Trilok Singh (2017)** This study of Changing Consumer Behaviour for Mobile Banking Services in India demonstrates that security, efficiency, cost-effectiveness, and ease of demand fulfillment are the primary elements that affect customer satisfaction with mobile banking in India. There has been a significant rise in the number of users of mobile banking services. His research has found that, as usage of mobile banking rises, there is a need to raise the level of knowledge for it. Customers are really happy with mobile banking and the advantages it provides.

### **Objectives of the study:**

1. To identify the preference of Usage between Google Pay and BHIM app.
2. To understand the relationship between gender and preference of usage.
3. To identify the problems of Usage between Google Pay and BHIM app.
4. To compare the satisfaction level of users between Google Pay and the BHIM app.

### **Research Methodology**

Comparing the issues that online payment applications, especially BHIM and G-PAY, encounter is the main goal of this study. The study's target population consisted of young adults who utilize payment applications. A systematic questionnaire was used to gather primary data. The questionnaire used a 5-point Likert scale, with 1 representing "highly dissatisfied" and 5 representing "highly satisfied." Data were collected from 178 respondents of North Bengal using the Convenient Random Sampling Method. Secondary data were gathered using readily available published research papers, books, articles, and journals. The survey instrument was distributed by the researchers between December 2023 and February 2024. Using SPSS, the results were reported using the chi-square test, which was used to statistically test the data's relevance. Cramer's V rule was used to gauge how strongly the variables were associated. To ascertain the degree of satisfaction among users of the BHIM and G-Pay applications, the Likert scale mean was computed.

### **Data Analysis and Interpretation**

**Table 1:**

**Preference of Usage between Google Pay and BHIM app**

<b>Gender</b>	<b>(BHIM)</b>	<b>GPAY</b>	<b>Total</b>	<b>Percentage (%)</b>
Male	18	82	100	56.18
Female	4	74	78	43.82
Transgender	0	0	0	0
<b>Total</b>	<b>22</b>	<b>156</b>	<b>178</b>	<b>100</b>
<b>Percentage (%)</b>	<b>12.36</b>	<b>87.64</b>	<b>100</b>	

Table 1 reveals that the maximum users of payment mobile application use G-PAY whether male or female. Whereas, it also reveals that male and female use G-PAY almost at the same level. Hardly, there is a difference of 13% among the male and female users of G-PAY.

### **Hypothesis of the Study**

There is no association between gender and the preference for usage of payment mobile application.

**Analysis 1:**

**Table 2:**

**Relationship between gender and preference of usage**

**Chi-square test**

<b>Pearson chi-square</b>	<b>6.703</b>
<b>Degree of freedom</b>	<b>1</b>
<b>Significance</b>	<b>0.010</b>
<b>Cramer's V value</b>	<b>0.194</b>

*Source: Primary data*

Table 2 shows that Pearson's chi-square is 6.703, which appears to be statistically significant at the 5% level and 1 df. Given that the P value is less than 0.05 which is 0.0160 there is substantial support for rejecting the null hypothesis and accepting the alternative hypothesis. Thus, it can be said that there is an association between gender and preferences for using mobile payment applications. However, Cramer's V value is 0.194, which infers a weak association between gender and preference for using mobile payment applications. Therefore, it can be concluded that gender differences have very little impact on the preference for using mobile payment applications.

**Analysis 2:**

**Table 3:**

**Comparison of Problems of Usage between Google Pay and BHIM App**

<b>Particulars</b>	<b>BHIM</b>		<b>GPAY</b>		<b>BOTH</b>	
	<b>Frequency</b>	<b>percentage</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Frequency</b>	<b>percentage</b>
<b>Lack of technical Knowledge</b>	56	63	26	29	32	36
<b>Insecure</b>	62	70	18	20	32	36
<b>Fraudulent Activity</b>	44	49	20	22	46	52
<b>Lack of trust</b>	48	54	20	22	44	49
<b>Server issues</b>	30	34	62	70	50	56
<b>Fear of incomplete transactions</b>	32	36	50	56	58	65
<b>Amount debited but not received</b>	28	31	50	56	54	61
<b>Lack of maintenance</b>	48	54	28	31	40	45
<b>Restrictions on the number of transactions</b>	38	43	40	45	46	52
<b>Restrictions on the amount of transaction</b>	40	45	50	56	44	49
<b>Others</b>	32	36	42	47	46	52

From Table No. 3, it reveals that most of the users of the BHIM Application are unsecured while making any transaction compared to GPAY. Nearly 70% of the respondents disclosed the major problem for not using the BHIM App is Insecurity. On the contrary, we see that GPAY users do not struggle with the feeling of insecurity. Only 20% of the respondents reported the problem of

insecurity which is the lowest of any other problems among all. Whereas, 70% of the respondents reported the server issues with the GPAY App to be the biggest problem among all other problems. This is also observed that the majority of the respondents that is nearly 65% have a fear of incomplete transactions from both Apps which means it appears to be a common problem of using any mobile application.

Among all the problems listed, the BHIM users reported minimal problems with regard to the debit of amount but not received on the other account whereas the users of GPAY reported it among the major issues. It was revealed that the young users who appear to be very proficient in using technology reported that they lack of technical knowledge for using both Apps. It gives an implication that even young users lack the technical knowledge to use any mobile application.

### **Analysis 3:**

**Table 4**

#### **Comparison of Satisfaction Level among users of G-PAY and BHIM**

<b>Characteristics</b>	<b>BHIM</b>	<b>GPAY</b>
<b>Convenient</b>	<b>3.3146</b>	<b>4.2135</b>
<b>User Friendly</b>	<b>3.2809</b>	<b>4.2584</b>
<b>Speed</b>	<b>3.3371</b>	<b>4.1685</b>
<b>Security</b>	<b>3.4270</b>	<b>4.1573</b>
<b>Communication Language</b>	<b>3.3596</b>	<b>4.1461</b>

The above table displays the mean of the 5-Point Likert Scale where '1' denoted 'Highly dissatisfied' and '5' denoted 'Highly Satisfied'. Thus, table 4 indicates that the users of BHIM are neutral for each of the characteristics. In contrast, the users of G-PAY are satisfied with each of the traits such as 'convenient', 'user-friendly', 'speed', 'security', and 'communication language'. There is a scope for improvement for G-Pay users.

### **Recommendations:**

The mobile application technologists would be suggested to train the users to use the applications and their features so that the applications could be used at ease and comfortably. The BHIM technologists would be highly suggested to improve the application in respect of insecurity which appears to be the biggest problem for not being used by the users. Also, BHIM is the only government-approved Indian Mobile Payment Application that demands improvement with respect to insecurity which ultimately leads to fraudulent activity and lack of trust among the users.

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