

A Review: Mobile Payment Applications

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Abstract: Advanced world needs advancement in technology resulting in need of cashless payment and effortless transactions. Due to this there is a huge requirement of cashless payment methods. These increases in requirements of cashless methods lead to emerging apps for the same. These apps provide payment facility for many utilities like DTH recharge, Postpaid and prepaid bills, Ticket booking, Electricity bills, Broadband bills, Gas bills, Water bills, Insurance and many more. There are several transaction methods like net banking, using debit cards, credit cards or splitting of bills. Splitting of bills facility allows user to divide the bill among number of users. Some of these apps also provide their own wallet where user can store and use money for buying and paying purpose. Recently new features like QR scanning, UPI's are introduced. They allow simple user interface for money transaction. Failure in transaction can be refunded within given working days. These apps verify and check authentication before transaction and hence provide security like privacy and encryption. These apps are approved by banks and government.

Keywords: Cashback, offers, rewards, bills, transaction, payments, QR (Quick Response), UPI (Unified Payments Interface), apps (application)

Date of Submission: 27-02-2019

Date of acceptance: 13-03-2019

I. Introduction

As we are moving towards cashless era, there are number of apps available in play store supporting the cashless transaction. Government of India has taken their first step towards cashless era by providing UPI's through BHIM app. Major app supports this BHIM UPI for transaction and considered as trustworthy way. Many other apps have high level security like Google and some are directly associated with banks like RBI, Axis bank, etc. These apps record history of all transaction as well as provide transaction security by applying encryption. In this paper we are focusing on the features of various apps available on play store like Google pay (Tez), Amazon Pay, BHIM, FreeCharge, Paytm, PayPal, PhonePe and MobiKwik. This paper contains comparison table 1 which helps in understanding the basic difference between these apps. Some of the features need to be focused are cashbacks and offers, transaction charges, bill payments available, support for QR scanning and UPI, and many more. Every app has their own advantages and disadvantages embedded with some special features, they are listed in paper.

II. Google Pay (Tez) [1]



Google Pay (Tez) is owned by Google in 2017. Refer and earn rewards facility is available. There are several offers for cashback on transactions. It provides online shopping facility. Ticket booking is available. Payment of utilities like Mobile recharges, Electricity bills, DTH recharge, Broadband bills, Gas bills, Water bills and insurance. Splitting of bills can be done. No transaction charges. It supports UPI and QR code scanning. Tez allows users to pay without sharing private details.

1. Advantages

- 1.1. Many amazing offers and cashbacks on transactions.
- 1.2. Privacy is reserved in Tez mode.

2. Disadvantages

- 2.1. It has complex User Interface.

III. Amazonpay [2]



Amazon Pay is owned by Amazon. Refer and earn rewards facility is not available. There are several offers for cashback on transactions; they get added to amazon pay balance. It provides online shopping facility. Ticket booking is available. Payment of utilities like Mobile recharges, DTH Recharge, Electricity bills, Broadband bills, Gas bills. No splitting of bills facility is available. No transaction charges. It doesn't support UPI and QR code scanning. Amazon Pay offers Gift cards and many Brand vouchers.

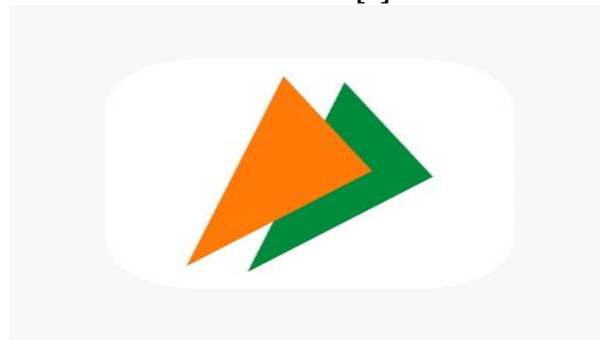
1. Advantages

- 1.1. Many amazing offers and cashbacks on Amazon Online shopping.

2. Disadvantages

- 2.1. It does not support UPI or QR scanning.

IV. Bhim [3]



BHIM (Bharat Interface for Money) is owned by NPCI (National Payments Corporation of India), in 2016. Refer facility is available. There is Rs. 150 cashback on 10 unique transactions of Rs. 50 or more. It provides online shopping facility. Ticket booking is available. Payment of utilities like Mobile recharges, Electricity bills, DTH recharge, Broadband bills, Gas bills and Water bills. Splitting of bills can be done. No transaction charges. It supports UPI and QR code scanning. BHIM can be used without internet. BHIM UPI is compatible with other payment applications.

1. Advantages

- 1.1. It supports offline transactions.
- 1.2. Users are authenticated by Government of India.

V. Freecharge [4]



FreeCharge is owned by Axis bank. Refer and earn rewards facility is available and various rewards on first transaction of referred account. There are amazing offers for cashback on transactions. It provides online shopping facility. Ticket booking is available. Payment of utilities like Mobile recharges, DTH Recharge, Electricity bills, Broadband bills, Gas bills. Splitting of bills facility is available. No transaction charges. It supports UPI and QR code scanning. Many more facilities like Donation, Mutual Funds and shopping in supported brands.

1. Advantages

- 1.1. Many facilities like donation, mutual funds, etc. are available.
- 1.2. Simple to use.

VI. Paytm [5]



Paytm is owned by Vijay Shekhar Sharma in 2010. Refer and earn facility is available. There are several offers for cashback on transactions which are added in Paytm wallet. It provides online shopping facility with built in Paytm mall. Ticket booking is available. Payment of utilities like Mobile recharges, Electricity bills, DTH recharge, Broadband bills, Gas bills, Water bills, Fees payment and Google Play payments. Splitting of bills can be done. No transaction charges. It supports UPI and QR code scanning. It has LIC premium payment facility. It is compatible with BHIM UPI.

1. Advantages

- 1.1. It is simple to use.
2. Disadvantages
 - 2.1. Refund of failed transaction sometimes may require 7-14 days.

VII. Paypal [6]



PayPal is owned by Ken Howery, Luke Nosek, Max Levchin, Peter Thiel, and Elon Musk in 1998. Refer and earn rewards facility is not available. There is no cashback on money transfer. It does not provide online shopping facility. Ticket booking is not available. Payments of utilities are not available. Splitting of bills can be done. No transaction charges. It doesn't support UPI and QR code scanning. Ease of transaction with PayPal cash card. It has high security with fingerprint and two factor authentication and fraud detection.

1. Advantages

- 1.1. Easy way to transfer money.
- 1.2. It provides special discount to the customers who shop using PayPal.
- 1.3. It provides high security using fingerprint and fraud detection.

2. Disadvantages

- 2.1. It does not support UPI and QR scanning.
- 2.2. Payment of utilities cannot be done.

VIII. Phonepe [7]



PhonePe is owned by Vijay Sameer Nigam and Rahul Chari in 2015. Refer and earn facility is available. There are several offers for cashback on transactions which are added in PhonePe wallet. It provides online shopping facility. Ticket booking is available. Payment of utilities like Mobile recharges, Electricity bills, DTH recharge, Broadband bills, Gas bills, Water bills, Insurance, Municipal Tax and Google Play payments. Splitting of bills can be done. No transaction charges. It supports UPI and QR code scanning. It has POS (Point of Sale) payments.

1. Advantages

- 1.1. Many amazing offers and cashbacks on transaction.
- 1.2. It helps to search nearby shops, food, healthcare and other utilities.

IX. Mobikwik [8]



MobiKwik is owned by Reserved Bank of India. Refer and earn rewards facility is available and various rewards when referred account adds money to wallet. There are amazing offers for cashback on transactions. It provides online shopping facility. Ticket booking is available. Payment of utilities like Mobile recharges, DTH Recharge, Electricity bills, Broadband bills, Gas bills. Splitting of bills facility is available. No transaction charges. It supports UPI and QR code scanning. Many more facilities like instant redemption, Insurance, Mutual Funds and shopping in supported brands.

1. Advantages

- 1.1. Many amazing offers and cashbacks on transaction.
- 1.2. Bill payments.

X. Table: Comparison table

Parameters	Google Pay(Tez)	Amazon Pay	BHIM	FreeCharge	Paytm	PayPal	PhonePe	MobiKwik
Cashback	Yes	Yes (Wallet only)	No	Yes	Yes (Wallet only)	No	Yes (Wallet only)	Yes
Transaction charges	No	No	No	No	No	No	No	No
Bill Payments	Mobile, DTH, Gas, Water, Electricity, Broadband	Mobile, DTH, Gas, Electricity, Broadband	Mobile, DTH, Gas, Water, Electricity, Broadband	Mobile, DTH, Gas, Electricity, Broadband	Mobile, DTH, Gas, Fees, Water, Electricity, Broadband	Not available	Mobile, DTH, Gas, Tax, Water, Electricity, Insurance	Mobile, DTH, Gas, Electricity, Broadband
Refund on transaction fail	Up to 3 days	3-5 business days	Up to 3 days	Up to 2 days	4 hours (Sometimes 7-14 days)	3-5 business days	Up to 7 days	Within 1 day (Bank take 3-5 days)
QR code and UPI	Yes	Not available	Yes	Yes	Yes	No	Only QR code scanning	Yes
Refer and earn	Yes	No	Only refer	Yes	Yes	Not available	Yes	Yes

XI. Conclusion

Hence, we can conclude features of stated apps from above study. Above apps are used for mobile payments instead of using cash, credit and debit cards or cheque. These apps have multiple cashback offers on transactions. These apps also give rewards on transactions. Various bill payments facility like mobile recharges, electricity bill, gas bills, water bills, etc. are available. Ticket bookings like bus, train, movies can be done using these applications. Some of these apps have facility to work without internet. Most of these apps have QR code scanning which makes the transaction easier. Every app is best in its own way. As per our perception, Paytm is best amongst them considering UI and offers.

References**Google Pay (Tez) App:**

[1] <https://play.google.com/store/apps/details?id=com.google.android.apps.nbu.paisa.user>

Amazon Pay:

[2] <https://play.google.com/store/apps/details?id=in.amazon.mShop.android.shopping>

BHIM App:

[3] <https://play.google.com/store/apps/details?id=in.org.npci.upiapp>

FreeCharge:

[4] <https://play.google.com/store/apps/details?id=com.freecharge.android>

Paytm:

[5] <https://play.google.com/store/apps/details?id=net.one97.paytm>

PayPal:

[6] <https://play.google.com/store/apps/details?id=com.paypal.android.p2pmobile>

PhonePe:

[7] <https://play.google.com/store/apps/details?id=com.phonepe.app>

MobiKwik:

[8] https://play.google.com/store/apps/details?id=com.mobikwik_new

IOSR Journal of Computer Engineering (IOSR-JCE) is UGC approved Journal with Sl. No. 5019, Journal no. 49102.

Prof. Ramdas P. Bagawade. " A Review: Mobile Payment Applications." IOSR Journal of Computer Engineering (IOSR-JCE) 21.2 (2019): 39-43.