

MOBILE WALLET AS INTELLIGENT PAYMENT WAY

ARUN MISHRA ¹, BRIJKISHORSHRAMA ², GUNJAN PAREEK ³,
KUNJ BIHARI TIWARI ⁴

¹ Research Scholar, Department of Computer Engineering,
Apex Institute of Engineering & Technology, Jaipur, Rajasthan, India

² Assistant Professor, Department of Computer Engineering,
Apex Institute of Engineering & Technology, Jaipur, Rajasthan, India

³ Assistant Professor, Department of Computer Engineering,
Apex Institute of Engineering & Technology, Jaipur, Rajasthan, India

⁴ Assistant Professor, Department of Computer Engineering,
Maharishi Arvind College of Engineering & Research Center, Jaipur, Rajasthan, India

mishra.arun.mishra29@gmail.com

ABSTRACT: In an era where smartphones are all over the place and seems to be an app for everything, "mobile wallet" technology is becoming more widespread every day. In today-world, smartphone has become essential part of daily life. As it has become more affordable, the number of smartphone users has augmented dramatically. A virtual mobile wallet that stores payment card information on a mobile device. Mobile wallets deliver a convenient way for a user to make in-store payments and can be used at merchants listed with the mobile wallet service provider.

Mobile wallet is a very young concept in India that has taken on consumer psyche rapidly. Everyone is loving mobile wallets and embracing them with open arms. Today, mobile wallet is one of the successful business ideas for start-ups. The evidence lies in the fact that it has surpassed credit cards in terms of the number of users in just a fraction of time.

Mobile Wallet is Intelligent Payment Way to pay for any service like Bill, Recharge, DTH, Cash Transfer, Travel booking, etc....

Keywords: Financial Inclusion, Wallet creation, Limited KYC Instrument, Mobile Money, Mobile Payment, Wallet Based Bank Account,

I. INTRODUCTION

Motivation of the research came from various factors. First of all, the mobile wallet is a recent term. In other words it is a recent research topic that has been discussed in technical forums and financial websites in several years lately. One can see the word "Mobile Wallet" multiple times from the internet, yet he does not know what mobile wallet is. Therefore, the research is made due to personal curiosity to gain practical knowledge about mobile wallet during the Research process in order to understand how consumers observe this new wallet service through which a customer do the transaction, shopping, ticket booking or any other services. Secondly, this review paper shows that customers have smartphone users and this paper would like to exploit the capability of the phone. Other users perhaps also have this desire. For that reason, I conduct this research to observe people's opinions about this new service [2].

2.1 Research purpose

The objective of the research is to understand about

the consumer adoption status of mobile wallet with the research area limited in India. It also examines the market situation of mobile consumers toward mobile wallet.

2.2 Research questions

In order to achieve the mentioned purpose, it is necessary to answer the following research questions:

A. How Mobile wallet is the Intelligent Way for Payment

B. What factors and how those factors influence the adoption of mobile wallet from the mobile consumers in India

C. How mobile wallet has been adopted by consumers in India [3].

3. Mobile wallet technologies

A) Mobile Wallet :-

This is one of modern way through which a customer without any restrictions perform a transaction instantly and consume services like bill payment, travel booking, also transfer amount one wallet to

another wallet or bank account.

For wallet creation customer need only smart phone and a valid mobile number, through which we can create a wallet and this wallet valid over all country with all services.

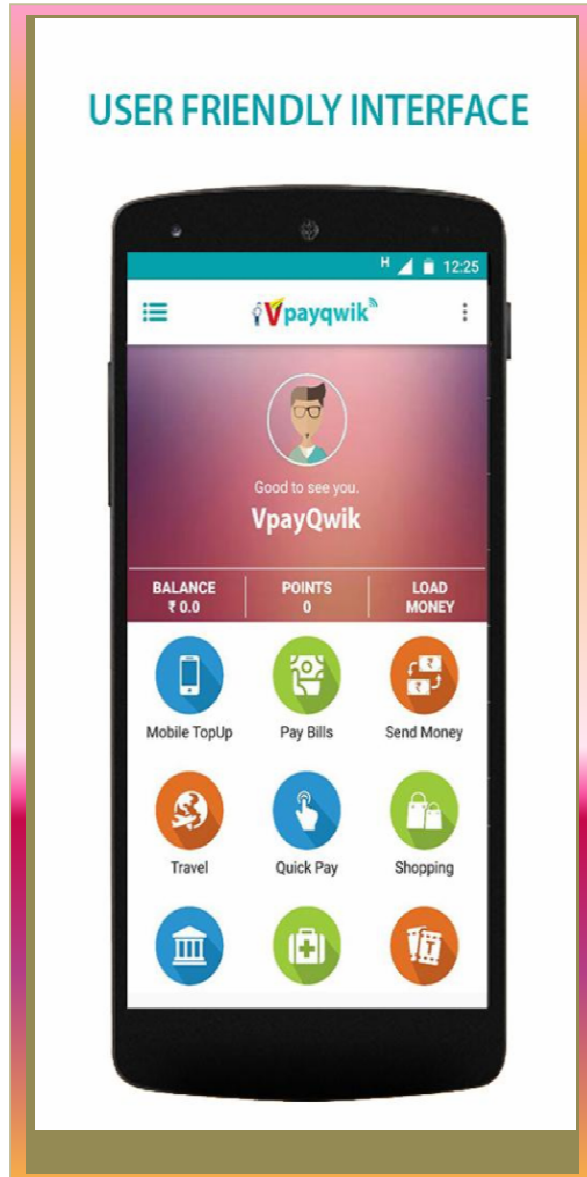


Fig 1. Wallet with Services

This wallet show all details of wallet holder like transaction or services details, with valid details it will be checked everywhere in any smart phone just need to login.

B.) QR and bar codes:

QR code (**Quick Response**) is the trademark for a type of matrix barcode (or two dimensional barcode) .A barcode is a machine-readable optical label that contains information about the item to which it is attached. A QR code uses four standardized encoding modes (numeric, alphanumeric, byte/binary, and kanji) to efficiently store data

A QR code consists of black squares arranged in a square grid on a white background, which can be read by an imaging device such as a camera, and processed interpreted. The required data is then extracted from patterns that are present in both horizontal and vertical components of the image.

QR codes can be used to store bank account information or credit card information, or they can be specifically designed to work with particular payment provider applications. There are several trial applications of QR code payments across the world.[6]

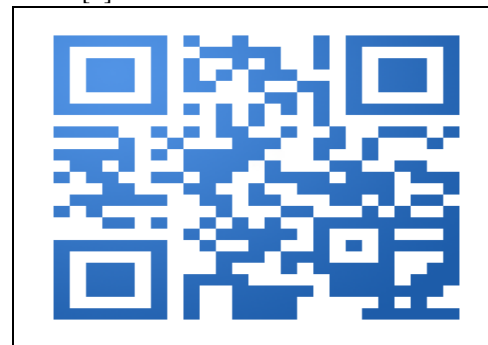


Fig 2. QR Code

4.Benefit of using Digital Wallet to various parties

Increased customer use of mobile wallet technology has benefits for businesses of all sizes.

- Reduced fraud - mobile wallets are harder to steal or duplicate than cards or cash
 - Decreased payment time - especially important for high-volume businesses
 - Lower fees - processing fees are expected to decrease over time relative to traditional cards
 - Better customer loyalty - built through sales and incentives sent directly to smartphones
- Digital wallet appears to be beneficial in generating real revenue stream to all the stakeholders of mobile ecosystem like- customers, banks, mobile-operators, financial institutions
- has benefits for businesses of all sizes



Fig 3. Pay by Mobile Wallet

Benefits of customers

- Anywhere, anytime payment experience which is the essence of immediacy & ubiquity.
- No dial-up, no configuration or booting requirement to ensure instant connectivity through wireless route.
- Substituting voice communication through texts & images for deaf or mute users.
- State of the art security platform [2].

Benefits to Bank

- Additional income stream through innovative user-friendly services.
- Enhanced brand image through alternate sales channel in mobile payment space and thus leading to loyalty development.
- Extending value-added services through 24x7 branchless banking experience.

Benefits to Financial Institutions

- Ensuring enhanced customer's satisfaction & their retention together with direct marketing promos for tailored offerings to specific clients.
- Generating new business leads by one to one bank client relationship.
- Enables FIs to keep constant connection with clients through 24x7 formats to serve their diverse needs everywhere, all the time.
- Increased reach to more customers, specially the unbanked segment due to increasing mobile usage rate and thereby reduced operating costs out of fewer direct teller interactions happened physical branches. [2][6].

Beneficial gains to mobile operators

- Promotion to create a differentiating factor to generate more new leads.
- Lucrative route to strengthen client loyalty base visa-vis lessen „churn“ & „attrition“ rates.
- FIs gain increased revenue by high mobile traffic build up.
- It enable users to check bank account status & recharge prepaid mobile account instantly using mobile payment gateway (IMPS).

5. Reasons to Use a Mobile Wallet

• **Mobile wallets offer increased security**

They're safer than carrying a credit card or cash in your wallet. That's because information stored in mobile wallets is encrypted, so the details of your credit card, for instance, aren't accessible to others. When mobile wallets transmit data to make payments, they never transmit your actual account numbers. Instead, they use encrypted payment codes. And your phone can't be opened without your fingerprint or a personal identification number, so getting to your data is much tougher than opening up your wallet or pocketbook.

Even if a thief bypassed all the security, the risk to you is low. Mobile wallets usually require an underlying credit or debit card to fund transactions, and those cards limit your liability for erroneous or fraudulent charges to little or nothing. (The prepaid cards we rated can also be stored in mobile wallets, but you must register those cards to qualify for the protection.)[4]

• **Retailers widely accept payment by mobile wallet**

Samsung Pay can be used at more than 10 million U.S. stores, Apple Pay at more than 3 million stores, and Android Pay at more than 1 million stores. The numbers will grow as retailers upgrade their payment card readers. The new readers come with near field communication (NFC) technology, which is used by mobile wallets to transact payments. Samsung is the most widely available because it uses NFC technology and works with a second technology, Magnetic Secure Transmission that mimics more securely the way a magnetic stripe works on a traditional credit card, according to Shruti Sehgal, a company spokesperson. That technology is already incorporated into many card readers [5].

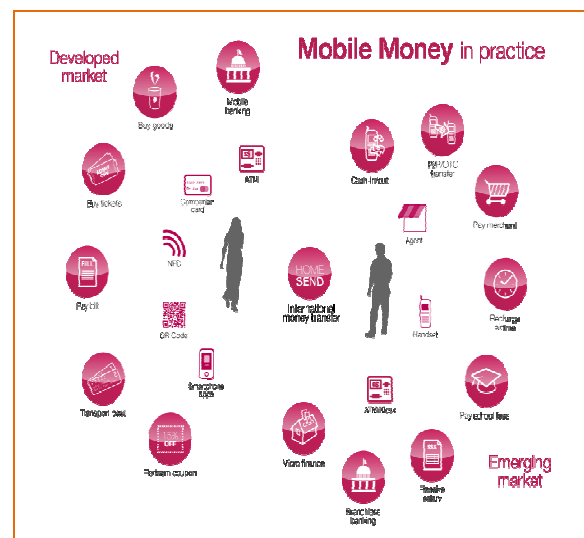


Fig 4 Online Shopping

Increasingly, retailers are making it easy to access your mobile wallet while you're on their websites. That can make online checkout much more convenient, removing the need to type in so many payment card numbers, especially on phone screens

- **Loyalty rewards programs can be stored in a mobile wallet**

When you go shopping and use your mobile wallet to buy, say, breakfast at Dunkin' Donuts, any points or discounts can be automatically applied at checkout. No need to carry a key chain with lots of store tags attached.

- **Mobile wallets may soon make store checkout faster**

There are apps being developed that will let you speed through a store's checkout lanes or use your mobile wallet to pay while you're still walking in the aisles, says Amitabh Malhotra, chief marketing officer for Omnia, which creates such functions for apps.

- **More secure :-**

There is no chance to theft, miss, carry the money, because it will always be available in our wallet or account, when we need then just we load in wallet pay or transfer

- **Intelligent Pay Way:**

Mobile Wallet is an intelligent approach because without our physical presence we can pay for service, or we can get reference no, Invoice all required things in a convenient way, without any efforts.

REFERENCES

[1]. Dr Hem Shweta Rathore, "Adoption Of Digital Wallet By Consumers" *Bvimsr's Journal Of Management Research*, April 2016, Vol

[2]. Kunj Bihari Tiwari, "Bank Independent Cashless Economy through Modern Rbi Instruments" *Issn: 0975 – 6760 | Nov 16 To Oct 17 | Volume – 04, Issue – 02*

[3]. Kunj Bihari Tiwari, "Automated Scheduling For Ppi Based E-Wallet", *Issn 2250-2459, Iso 9001:2008 Certified Journal*, Volume 7, Issue 10, October 2017

[4]. Ngoc Doan, (Kirjoita asiasanattähän. Etsi sopivia asiasanoja Onki -Ontologiapalvelun Ysa (Yleinen suomalainen Asiasanasto) Ja Musa (Musiikin Asiasanasto) Asiasanastoista "Adoption Of Digital Wallet By Consumers" (Ebook)

[5]. Prof. Eduardo Henrique Diniz, Prof. João Porto De Albuquerque, "Mobile Money And Payment: A Literature Review Based On Academic And Practitioner-Oriented Publications (2001-2011)"

[6]. "Scvng'r Unveils Qr Code Payment System". Archived From The Original On 8 December 2012.

[7]. Mia Olsendep. Of It Manage., Copenhagen Bus. Sch., Frederiksberg, Denmark, Jonas Hedman Dept. Of It Manage., Copenhagen Bus. Sch., Frederiksberg, Denmark, Ravi Vatrappudept. Of It Manage., Copenhagen Bus. Sch., Frederiksberg, Denmark, "E-Wallet Properties" *Isbn Details :- Inspec Accession Number: 12316015, Doi: 10.1109/Icmb.2011.48*

[8]. Tomi Niina, Jan, Agnieszka, "Past, Present And Future Of Mobile Payment Research", *Electronic Commerce Research And Application 7*, Elsevier, 2008.

[9]. Pradiptadecewit Korea & Suny Korea, Incheon, South Korea, Kuntaldehyibm Res., New Delhi, India, Vinod Mankaribm Res., New Delhi, India, "Towards An Interoperable Mobile Wallet Service", *Isbn Details :- Inspec Accession Number: 14041986, Doi: 10.1109/Cewit.2013.6713767*,