Digital Economy: E-Wallet Pros and Cons
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Abstract

Demonetization is the hottest new topic in the country. Financial analysts everywhere are talking about what the long-term impacts could be while several businesses and people are caught up in the unprecedented cash crunch that has been caused. With the retail businesses taking an all new dimension thanks to the growth of the internet, the business models and the payment methods have all changed. E-wallet is an online prepaid account where one can stock money, to be used when required. As it is a pre-loaded facility, consumers can buy a range of products from airline tickets to grocery without swiping a debit or credit card. “Wallet” in the conventional sense of the term, refers to a purse or folding case for safely holding money or personal information such as identity card. Digital or Electronic Wallet (e-wallet) refers to an electronic, internet based payment system which stores financial value as well as personal identity related information. This study assesses what is e-wallet? Types of e-wallet apps available in India with their benefits and limitations to the consumers.

Introduction:

Demonetization is the hottest new topic in the country. Financial analysts everywhere are talking about what the long-term impacts could be while several businesses and people are caught up in the unprecedented cash crunch that has been caused. With the retail businesses taking an all new dimension thanks to the growth of the internet, the business models and the payment methods have all changed. And this complex model is now further complicated by the introduction of demonetization. Though it is true that this can lead to a more positive effect in the long term, talking about the short term effects, it has been predominantly adverse for the customers and businesses. Online money transactions and digital payments are not as difficult as they were before. This makes it easy for you to smartly tackle the sudden ban on old currencies. And online transactions do come with a lot of benefits. This is the right time to unleash the full potential of your debit cards. Make online payments, apply for easy loans, pay all your bills and do a lot more with just a debit card. There has been a significant growth in the mobile wallet sector. Transferring money as well as making payments for online orders is easy with mobile wallets. More people have begun to fill up their mobile wallets resulting in the growth of the mobile wallet providers like Paytm, Mobikwik and more. Unified Payments Interface (UPI) will see a steady growth. The support of the government has also been in favor of promoting UPI for online payments. The first main benefit is the freedom to choose an EMI option for your bigger purchases. If you purchase a smartphone or laptop on EMI, you short-term financial strain would be less. Banks like ICICI have introduced debit card EMI option for mobile and other purchases. This can also benefit customers making online purchases without a credit card. Imagine being to purchase all high-end smartphones and laptop on EMI even without owning a credit card! You could choose to purchase all the gadgets, furniture and appliances you have always hesitated to purchase due to your financial constraint through online loans and pay easily with your debit card. These micro-loans are paid through your debit cards and thus make it easy for you to purchase any gadget say like iPhone 5S on EMI without a credit card from any of your favorite online retailer. Online payments are quick, hassle free and time saving. And EMIs are the best part about online payments. This avoids causing a financial strain when you make a large value purchase. Know how easy it is to get instant loans for all your appliance, furniture and gadget purchases. So do not let the ban on currency notes of higher denominations stop you from buying all that you wanted.

E-wallet is an online prepaid account where one can stock money, to be used when required. As it is a pre-loaded facility, consumers can buy a range of products from airline tickets to grocery
without swiping a debit or credit card. “Wallet” in the conventional sense of the term, refers to a purse or folding case for safely holding money or personal information such as identity card. Digital or Electronic Wallet (e-wallet) refers to an electronic, internet based payment system which stores financial value as well as personal identity related information. Such electronic payment systems enable a customer to pay online for the goods and services, including transferring funds to others, by using an integrated hardware and software system. Hardware can be a mobile or computer. Communication between the buyer and the seller may happen over the internet or blue tooth or on mobile network. Thus, e-wallet is nothing but an online money account which does not require the use of a physical card for undertaking transactions/remittances. Unlike savings bank accounts, they, at present, do not offer any interest for keeping money in it, but rewards the holders through cash-backs for making purchases through it. Unlike credit cards, e-wallets are pre-loaded money. Hence, it resembles more to a debit card.

The electronic wallet (E-wallet) provides all of the functions of today’s wallet on one convenient smart card eliminating the need for several cards. The E-Wallet will also provide numerous security features not available to regular wallet carriers. Identification is required for every credit card transaction and the card is equipped with a disabling device if the card should be tampered with. Electronic-Wallet is a digital wallet (also known as a E-wallet) which allows users to make electronic commerce transactions quickly and securely. E-wallet is a component of the payment system. The word “payment system” is defined in India to mean a system that enables payment to be effected between a payer and a beneficiary, involving clearing (wherein the payment service provider acts as a counterparty between the buyer and seller by calculating the obligations between them and guaranteeing its settlement), payment (act of paying or transacting) or settlement service (the final act of changing the records of ownership of the asset transacted, either after netting all the cross obligations or on gross terms) or all of them. A “payment system” as understood in India, can include the systems enabling credit card operations, debit card operations, smart card operations, money transfer operations or such similar operations.

E-wallet is an online prepaid account where one can stock money, to be used when required. As it is a pre-loaded facility, consumers can buy a range of products from airline tickets to grocery without swiping a debit or credit card. A digital wallet refers to an electronic device that allows an individual to make electronic transactions. This can include purchasing items on-line with a computer or using a smart phone to purchase something at a store. An individual’s bank account can also be linked to the digital wallet. They might also have their driver’s license, health card, loyalty card(s) and other ID documents stored on the phone. The credentials can be passed to a merchant’s terminal wirelessly via near field communication (NFC). Increasingly, digital wallets are being made not just for basic financial transactions but to also authenticate the holder’s credentials. For example, a digital-wallet could potentially verify the age of the buyer to the store while purchasing alcohol. The system has already gained popularity in Japan, where digital wallets are known as "wallet mobiles". A digital wallet is a software component that allows a user to make an electronic payment with a financial instrument (such as a credit card or a digital coin), and hides the low-level details of executing the payment protocol that is used to make the payment. A digital wallet, functions much like a physical wallet. The digital wallet was first conceived as a method of storing various forms of electronic money (e-cash), but with little popularity of such e-cash services, the digital wallet has evolved into a service that provides internet users with a convenient way to store and use online shopping information.

A digital wallet has both a software and information component. The software provides security and encryption for the personal information and for the actual transaction. Typically, digital wallets are stored on the client side and are easily self-maintained and fully compatible with most e-commerce Web sites. A server-side digital wallet, also known as a thin wallet, is one that an organization creates for and about you and maintains on its servers. Server-side digital wallets are gaining popularity among major retailers due to the security, efficiency, and added utility it provides to the end-user, which increases their enjoyment of their overall purchase. The information component is
basically a database of user-inputted information. This information consists of your shipping address, billing address, payment methods (including credit card numbers, expiry dates, and security numbers), and other information. A digital wallet is a software component that provides a client with instrument management and protocol management services. A digital wallet is linked into an end-user, bank, or vendor application and provides the application with instrument management and protocol management services. The digital wallets that are linked into vendor and bank applications provide these management services in the same way that end-user digital wallets do.

**Need of the study:**

The need for the study of e-wallet includes the exposure to the latest technological innovations in the world. This leads to the great usability by the people mostly in digitizing and automating the e-commerce world. With the emergence of e-commerce and online purchases, the form required for the payment system also required to change, forcing it to go digital. The importance of the study of e-wallet is to how the transactions change the world without the need of maintaining the physical cash which bring a change in the transactions are done. Use of e-wallets helps in moving away from cash based economy. In the process, all the transactions get accounted in the economy, which has the effect of reducing the size of the parallel economy. With the introduction of e-wallets like ‘payment banks’ by telecom firms and retail chains, among others, making monetary transactions or paying utility bills is taking on a whole new meaning.

**Global mobile phone internet user penetration 2014-2020**

![Source: Technavio](image)

**Review of literature:**

Singal, Nidh (2016), The article discusses the mobile wallet that loads money for payment of bills which is hassle free and saves time. Topics mentioned include the high success rate on making payments with transactions in less than 10 seconds, the loading of money which does not risk the credit card and bank account limit, and the offered services by electronic commerce company Paytm including buying tickets, institutions fees payment, and money transfers.

Koreniowski, Paul (2014), The article discusses the emergence of mobile wallets and how it changed customer experience in payment process. Topics include the appeal of mobile commerce functions in smartphones to consumers, the use of more personalized shopping experiences, and the near field communication (NFC) system. Also mentioned is information on the role of PayPal, the formation of payment infrastructure company Merchant Customer Exchange (MCX), and the selection of an open or close loop design in transactions. INSETS: A Digital Wallet Versus a Mobile Wallet; Back to Square One.

Holmes, Tamara E. (2012), The article offers advice on how to protect one’s financial information in digital wallets from getting into the wrong hands. It warns of spoofed invoices which look legitimate and request payments through wire transfer or direct bank transfer. It also advises against clicking on links in e-mails and to avoid providing personal information such as Social
Security number. It suggests setting a passcode on smartphones to avoid becoming a victim of identity fraud.

Adams, John (2012), The article discusses the outlook for electronic wallet payment systems from the perspective that the U.S. banking industry has to attract users in the mobile wallet market and understand the mobile wallet market's ecosystem.

Bell, Stephanie (2011), The article presents information about a deal between Littlewoods Europe company and Optimal Payments PLC for Optimal's Neteller electronic wallet and discusses how the virtual payment method works for online shopping.

Quittner, Jeremy (2012), The article focuses on a security problem in Google Inc.’s digital wallet, which is linked to prepaid accounts where users store funds. The research firm zvelo Inc. found the PIN (personal identification number) code used for authentication and other user information in Google's Wallet application can be extracted by a computer hacker. With newer transaction methods appearing on the horizon, the need to carry cash may become redundant for people. It is no longer necessary to carry credit and debit cards either for main transactions- you can make use of the various e-wallets. More companies in telecommunication and e-commerce services are coming up with digital wallets. The recent RBI directive indicates these digital wallets can be turned into payment banks. The directive enables supermarket chains, telecom operators and electronic wallets to start these payment banks to offer basic saving facilities and accept deposits.

What is E-Wallet?
E-Wallet is a feature exclusively for customers who have registered and established a My Account profile. E-Wallet allows you to store multiple credit card and bank account numbers in a secure environment, and eliminate the need to enter in account information when making your payment. Once you have registered and created E-Wallet profiles, you can make payments faster and with less typing.

How does E-Wallet work?
E-Wallet provides the ability to store multiple credit cards, debit cards and back account information for making faster payments. You can create up to ten separate profiles for both credit and debit cards, and up to ten separate profiles for checking and savings accounts. You can edit and delete these profiles as needed. When making a payment after logging in to My Account, you will save time by having your credit or bank account information filled in automatically.

Who can sign up for E-Wallet?
Anyone can setup an E-Wallet. To create an E-Wallet profile, simply click "E-Wallet" from the My Account Dashboard tab. Then follow the simple process to enter credit card and bank account information to complete the set-up.

Why use E-Wallet?
E-Wallet saves you time because you don't have to look for your credit card or bank account information every time you make a payment. The payment information from your Primary account is conveniently pre-filled during the payment process, and you can quickly select another payment account if you have more than one set up.
Wallet Characteristics:

- **Extensible.** A wallet should be able to accommodate all of the user’s different payment instruments, and inter-operate with multiple payment protocols. For example, a digital wallet should be able to hold a user’s credit cards and digital coins, and be able to make payments with either of them, perhaps using set in the case of the credit card, and by using a digital coin payment protocol in the latter case. As banks and vendors develop new financial instruments, a digital wallet should be capable of holding new financial instruments and make payments with these instruments. For instance, vendors should be able to develop electronic coupons that offer discounts on products without requiring that users install a new wallet to hold these coupons and make payments with them.

- **Client-Driven.** The interaction between the wallet and the vendor, we believe, should be driven by the client (i.e., the customer). Vendors should not be capable of invoking the client’s digital wallet to do anything that the end-user may resent or consider an annoyance. For example, a vendor should not be able to automatically launch a client’s digital wallet application every time the user visits a web page that offers the opportunity to buy a product. Imagine what life would be like if, simply by walking into someone’s store, the store owner had the right to reach into your pocket, pull out your wallet, hold it in front of you, and ask you if you wanted to buy something from him! A client-driven approach for building a digital wallet is important because software which customers consider intrusive will hinder the success of electronic commerce for all participants involved.

- **Symmetric.** Vendors and banks run software analogous to wallets, which manages their end of the financial operations. Since the functionality is so similar, it makes sense to re-use, whenever possible, the same infrastructure and interfaces within wallets, vendors, and banks. For example, the component that manages financial instruments (recording for instance account balances, authorized uses) can be shared across these different participants in the financial operations. If the wallet components that are re-used are extensible, then we automatically get extensibility at the bank or vendor. So, for instance, an extensible instrument manager will allow the bank or vendor to easily use new instruments as they become available.

- **Generalized.** Interfaces should be similar regardless of what type of device or computer that the wallet, bank, or vendor application is running on. A digital wallet running on an alternative device, such as a personal digital assistant (PDA) or a smart card, for example, has substantial functionality in common with a digital wallet built as an extension to a web browser. Thus, a digital wallet in these two environments should re-use the same instrument and protocol management interfaces.

**Client-Side E-Wallet:-**

* Some people prefer to access the Internet using one machine (e.g. those who stay home most of the time or access sites from their work PC only). A Client-side e-wallet is more suitable for these kinds of people. The client-side e-wallet is an application running on the client PC that holds e-coin information. * Fig.1 shows how a vendor application server debits e-coins from the client-side e-wallet. When buying an article content a customer clicks the title of the article on the web browser (1) and then the web server sends the request to the vendor application server (2). The vendor application server sends the price of the article to the e-wallet application (3) and then the e-wallet application returns the e-coins, paying for the content to the vendor application server (4-5).
* Customers can buy article content using the client-side e-wallet at different newspaper sites without the need to log in after the e-wallet application is downloaded to their PC. Their e-coins are resident on their own PC and so access to them is never lost due to network outages to one vendor. The e-coin debiting time is slower for a client-side e-wallet than the server-side e-wallet due to the extra communication between vendor application server and customer PC’s e-wallet application.

**Server-Side E-Wallet :-**
* Some people prefer to access the Internet from multiple computers (e.g. a business person who often travels around). A Server-side hosted e-wallet is suitable for these people. The server-side e-wallet is stored on the vendor server and is transferred from the broker to each vendor when required.

* Fig. 2 shows how a vendor application server debits e-coins from the server-side e-wallet. When a customer clicks title of an article on his/her browser (1), the web server sends the request to the vendor application server (2), which then debits e-coins from the customer’s e-wallet (3) paying for the content. Customers can buy articles using the server-side e-wallet anywhere in the world and the e-coin debiting time is very fast on the server-side e-wallet system. However customers are required to remember e-coin IDs and password in order to log into a newspaper site when changing vendor. When a customer moves from one vendor to another, their e-wallet contents must be passed from the previous vendor site to the new one. If the first vendor site becomes unavailable, the customer temporarily does not have access to their e-wallet.

**Types of e-wallets permitted in India**
As per the Reserve Bank of India, there are three kinds of e-wallets in India: closed, semi-closed and open.

- **Closed e-wallets:** These are wallets issued by an entity for facilitating the purchase of goods and services from it. These instruments do not permit cash withdrawal or redemption. As these instruments do not facilitate payments and settlement for third party services, issue and operation of such wallets are not classified as payment systems. Hence, RBI approval is not required for issuing them. Eg. Cab services, e-commerce and mobile companies create e-wallets for making payments towards purchase of products from them /for usage of their services. They provide cash backs for payments made through this channel. This is one way of ensuring loyalty of their customers.
• **Semi-Closed e-wallets:** These are wallets which can be used for purchase of goods and services, including financial services at a group of clearly identified merchant locations/establishments which have a specific contract with the issuer to accept them. These wallets do not permit cash withdrawal or redemption by the holder. Wallets for amounts up to Rs.10,000/- can be created under this category by accepting minimum details of the customer, provided the amount outstanding at any point of time does not exceed Rs. 10,000/- and the total value of reloads during any given month also does not exceed Rs. 10,000/-. Amount up to Rs.50,000/- can be created in wallets by accepting any ‘officially valid document’ which is compliant with anti-money laundering rules. Such wallets are non-reloadable in nature. Amount up to Rs.1,00,000/- can be created by with full Know Your Client norms (KYC) and can be reloaded. Eg. AirTel Money, which is used for making payments for a range of services like money transfer from Airtel Money to another bank account or any other Airtel Money Wallet or paying select utility bills.

• **Open e-wallets:** These are wallets which can be used for purchase of goods and services, including financial services like funds transfer at any card accepting merchant locations [point of sale (POS) terminals] and also permit cash withdrawal at ATMs / Banking Correspondents (BCs). However, cash withdrawal at POS is permitted only up to a limit of Rs.1000/- per day subject to the same conditions as applicable hitherto to debit cards (for cash withdrawal at POS). Eg. M-Pesa is an open wallet run by Vodafone in partnership with ICICI Bank. Axis Bank’s e-Wallet Card’, can used for making payments on sites that accept Visa cards, with a minimum limit of Rs 10, and a maximum limit of Rs 50,000, and a validity of 48 hours.

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**Top mobile payment apps in India**

<table>
<thead>
<tr>
<th>App</th>
<th>Market Share</th>
<th>Time Spent by Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paytm</td>
<td>39%</td>
<td>70</td>
</tr>
<tr>
<td>Freecharge</td>
<td>26%</td>
<td>40</td>
</tr>
<tr>
<td>Mobikwik</td>
<td>17%</td>
<td>29</td>
</tr>
<tr>
<td>My Airtel</td>
<td>10%</td>
<td>18</td>
</tr>
<tr>
<td>Oxigen Wallet</td>
<td>7%</td>
<td>17</td>
</tr>
<tr>
<td>My Vodafone</td>
<td>6%</td>
<td>17</td>
</tr>
<tr>
<td>Paytm Money</td>
<td>5%</td>
<td>14</td>
</tr>
<tr>
<td>Pockets by ICICI</td>
<td>4%</td>
<td>23</td>
</tr>
</tbody>
</table>

Source: Technavio

**Pros of E-Wallet**

- Send and receive payments anywhere in the world.
- Unlimited transfers.
- Easy recurring payments and transfer.
- Manage our account from our mobile phone.
- World Ventures-branded prepaid MasterCard available.
- Security for our bank account and credit card numbers.
- Email or SMS notifications after transactions.
- We are in complete control.
- Access our commissions faster.
- Pull money into our E-wallet from any bank account.
- Receive wired funds/transfers directly into our E-wallet.
- Any bank account worldwide.
- Transfer money from E-wallet to E-wallet without sharing personal account numbers.
- Request paper commissions checks.
Cons of E-Wallets

- **KYC:** The monthly limit shackles both consumers and merchants. There’s the option of getting an eKYC and raising the limit to Rs 1 lakh for consumers, but again those without Aadhaar are left out.

- **Digital transactions work:** Digital wallets are for those with some experience of the way digital transactions work. The unlettered, the elderly, and those without smartphones will be largely left out. Poor connectivity and patchy Internet are serious challenges.

- **Cash back:** However, most cash back offers prominently advertised by e-wallet firms come with a rider – a minimum purchase amount that you have to meet to cross to get money back. For mobile phone recharges or bill payments, this threshold may not be too high, but it is essential to see the fine print.

- **Taxation question:** While tax authorities in other countries, such as the United States, have addressed the issue of taxation of cash backs, Indian authorities have not specified this. Financial experts caution that section 56 of the Income Tax Act, which applies to levies on income from other sources, may be applicable to cash backs in India. This means that it could levy tax if the individual’s “income received without any consideration” through cash backs exceeds Rs 50,000. The tax treatment is also likely to differ depending upon whether the purchase was for a business purpose. Hence, those who have received significant amounts through such offers should to discuss the issue with their tax advisors.

Reference: