

Transitioning From Cash to Cashless Economy: Challenges & Opportunities Facing the Indian Economy

Dr. Susan Alex

Assistant Professor, Department of Economics, K. P. B. Hinduja College of Commerce, Mumbai

ABSTRACT

Demonetization announcement (2016) is a radical move towards the digital cashless economy in India. On 8th November, 2016 the Indian government executed a major policy change in economy by demonetizing INR 500 and INR 1000 – the high value currency notes which aimed to push India towards cashless future. The main aim behind this step was towards digitization of India (Digital India) through demonetization and at the same time to attack the scourges of counterfeit currency, currency used for terrorist financing, black money and corruption. The main objective of the study is to present the current status of India in usage of digital currency and find the opportunities which are associated with such digital transactions in India. The study seeks to understand the challenges faced by a predominantly cash economy transitioning to cashless economy by encouraging electronic money instruments, developing electronic financial infrastructures and spreading digital transaction habits among people.

Keywords: Economic Growth, Cashless Economy, Digital Currency, Electronic Cashless Transactions, Unified Payments Interface, Information Technology

INTRODUCTION

Shri. Narendra Modi the Indian Prime Minister, on 8th November, 2016 implemented a major change in economic environment and demonetized the two largest denominations of currency notes of INR 500 and INR 1000. This step was dual pronged and aimed to attack the scourges of counterfeit currency, currency used for terrorist financing, black money and corruption. The Prime Minister of India aimed towards digitization of India (Digital India) through demonetization. Thus, both moves demonetization and digitization, if worked upon effectively will help the Indian economy to become Cashless Economy.

While transitioning to cashless economy, one of the key challenges being faced at the global level is to check the continuing rise ratio of the total value of the currency in circulation and its share in the overall GDP or Cash to GDP ratio, a trend particularly seen in many developed countries. Such a persistent increase in the Cash to GDP ratio for economic activities could pose to be a major impediment in the transformation to a cashless and digital economy.

REVIEW OF LITERATURE

Digital payment methods aim to provide more economic freedom to people. Digitization of India is an opportunity to establish new technologies and integrate the Indian economy with global developments, which will result in growth of the country's GDP and economy. Rashmi Gujrati (2017) in the research paper, "India's march towards faceless, paperless, cashless economy" states that the increasing effect of the profits, lead make developing economies accept the cashless method by going digital. This is a massive task and requires the economic infrastructure to be strong and also have an access to the complete consumer base along with the traders and businessmen. Governing authorities of the nations have to push banks and telecom companies to develop a mobile and net banking system which will provide entire process answers to customers as well as brokers.

Ananya Mitra, Sonali Rath and Jayant Kumar Nayak (2017) in their research paper, "Impact of Demonetization on Cashless Transaction" examined the status of Jan Dhan Yojna before, during and after demonetization. Although various infrastructure facilities and POS terminals were increased during

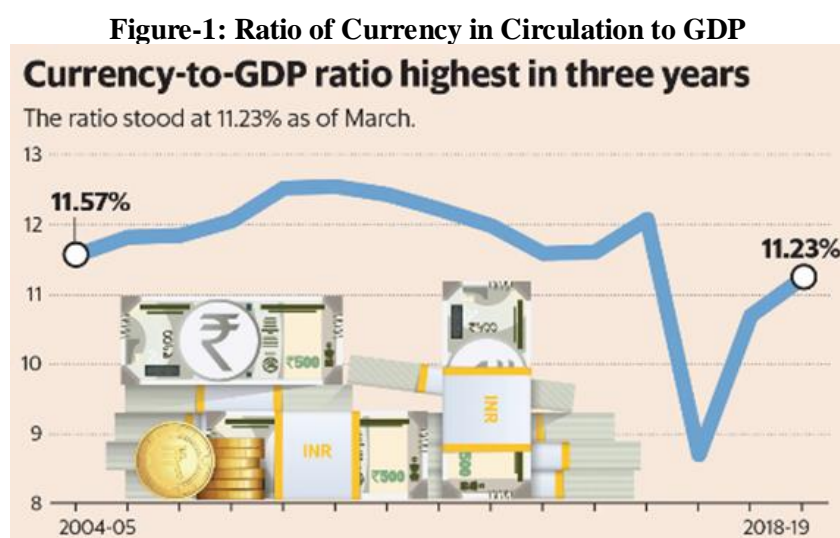
demonetization, this growth lasted only for a few months. As new currencies entered the Indian economy, the digital changes gradually disappeared and authors state that to further digital economy it is necessary to encourage customers through incentives and discounts to use cashless transactions.

RESEARCH METHODOLOGY

This study focuses more on secondary data collected from various Government records, articles, journals, reports, and other websites information. For this purpose relevant literature was searched and used from electronic databases and online libraries for information relating to cashless technology of different countries including India.

INDIA'S CASH TO GDP RATIO

One of the objectives of the note ban of November 8, 2016, which made almost 86 per cent of the currency notes unusable and paralyzing the entire Indian economy, was to encourage digital payments and reduce the use of cash in various economic transactions.¹ In spite of efforts to change to digital payments and bring in a digital payment economy, the currency in circulation has jumped by 17% to Rs 21.10 lakh crore as of March 2019, as per the annual report published by Reserve Bank for 2019.² Cash-to-GDP Ratio shows the amount of Currency in Circulation (CIC) to GDP Ratio and shows the value of cash in circulation as a ratio of GDP. Studies by the Reserve Bank of India highlighted the fact that households even today prefer to use and hold cash for many transactional needs, showing the importance to cash and liquidity, and this probably was the result of the sudden demonetization shock.³



Source: Reserve Bank of India

India is a currency driven economy⁴ and currency in circulation as percentage of GDP declined after demonetization.¹ The ratio of currency in circulation to GDP declined to a low 8.8% in March 2017, and then

¹TelegraphIndia.com. (2019). *Cash transactions up by 17%, says RBI report*. [online] Available at: <https://www.telegraphindia.com/business/cash-transactions-up-by-17-says-rbi-report/cid/1701221> [Accessed 1 Jan. 2020].

²*Ibid*

³The Economic Times. (2019). *Do not fret about India's cash economy*. [online] Economic Times Blog. Available at: <https://economictimes.indiatimes.com/blogs/et-editorials/do-not-fret-about-indias-cash-economy/> [Accessed 27 Dec. 2019].

⁴Allirajan, M. (2016). *India's currency-GDP ratio highest among BRICS nations* - Times of India. [online] The Times of India. Available at: http://timesofindia.indiatimes.com/articleshow/55576351.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst [Accessed 26 Dec. 2019].

increased in March 2018 to 10.9%, which then rose in March 2019 to 11.23%.² The above figure shows the changes in currency-to-GDP ratio from March 2017 to March 2019 show a growth of the currency-to-GDP ratio in these years.

India’s currency in circulation as a proportion of GDP is the highest amongst developing economies, in spite of the vast rise in plastic cards usage and digital transactions in recent years. This ratio — a pointer to the quantity of cash being used in the economy — is around 12 to 13%, which is much higher than other key economies including the US, the UK and Euro area but less that of Japan (about 18%).³ In fact, India has the highest currency-GDP ratio among BRICS (Brazil, Russia, India, China, South Africa) nations.⁴ Surprisingly, another developing economy like Indonesia has much lower cash to GDP ratio of around 5%.

Table-1: Ratio of Currency in Circulation to GDP of Select Countries

Countries	Ratio of currency in circulation to GDP (%)	Number of cards (debit+credit) per inhabitant	Average number of cashless payments per inhabitant	Average value of cashless payments per inhabitant (USD)	Number of POS terminals per inhabitant
Argentina	6.8	2.4	46.7	35,278	0.01
Australia	4.5	2.8	497.2	539,748	0.04
Brazil	3.8	2.3	150.2	72,549	0.02
Canada	4.3	2.9	366.7	129,441	0.04
China	9.5	4.9	96.3	386,045	0.02
India*	11.2	0.7	18.3	3,910	0.003
Indonesia	5.1	0.7	34.3	6,993	0.005
Japan	20.4	3.5	NA	234,401	NA
Korea	6.2	5.1	499.9	426,066	NA
Mexico	6.7	1.4	36.7	132,776	0.01
Russia	10.4	1.9	175.7	86,527	0.02
Saudi Arabia	7.9	1	29	563,294	0.01
South Africa	3.4	NA	80.5	40,524	0.01
Turkey	4.3	2.1	65.9	51,419	0.03
United	NA	2.5	410.9	1,791,862	0.04

¹The Economic Times.(2019). Digital economy? RBI says currency in circulation soars 17 per cent to Rs 21.1 lakh crore in FY19. [online] Available at: <https://economictimes.indiatimes.com/news/economy/finance/digital-economy-rbi-says-currency-in-circulation-soars-17-per-cent-to-rs-21-1-lakh-crore-in-fy19/articleshow/70896210.cms?from=mdr> [Accessed 28 Dec. 2019].

²Kaul, V. (2019). Why currency in circulation going up is good news. [online] <https://www.livemint.com>. Available at: <https://www.livemint.com/market/stock-market-news/why-currency-in-circulation-going-up-is-good-news-1554702838049.html> [Accessed 1 Jan. 2020].

³The Economic Times. (2016). Going cashless: Rising currency-GDP ratio key impediment. [online] Available at: <https://economictimes.indiatimes.com/news/economy/indicators/going-cashless-rising-currency-gdp-ratio-key-impediment/articleshow/55648619.cms?from=mdr> [Accessed 23 Dec. 2019].

⁴Allirajan, M. (2016). India’s currency-GDP ratio highest among BRICS nations - Times of India. [online] The Times of India. Available at: <https://timesofindia.indiatimes.com/business/india-business/Indias-currency-GDP-ratio-highest-among-BRICS-nations/articleshow/55576351.cms> [Accessed 26 Dec. 2019].

Kingdom					
United States	8.2	4.2	473.4	601,977	NA

Source: https://www.rbi.org.in/scripts/BS_ViewBulletin.aspx?Id=18409

According to the Annual Report published by Reserve Bank of India for 2019, despite many efforts to shift to digital payments and usher in a digital payment economy, the currency in circulation has jumped by a hefty 17% to Rs. 21.10 lakh crore as of March 2019.¹ However, economic analysts feel that continuing rise in the circulation of currencies in economic activities could well be a key obstacle in the transformation to a cashless and digital economy. There are concerns that higher circulation of currencies in the system could be a crucial factor in fueling the black money menace as these individuals tend to hoard money.

What is cashless economy?

India is a cash centric nation where 98% of total economic transactions by volume is being done with the help of the physical money like coins, currency notes etc., much of the cash transactions being done in the country are small exchange for goods or services. Physical money means the paper currency notes and coins issued by the government as legal tender. Plastic money involves the use of plastic cards such as debit cards, credit cards, pre-paid cards, contact less cards etc. Electronic payment modes include all kinds of mobile wallets and payments made done through smart phones, laptops etc.

In a cashless economy, most of the financial transactions are not done in the terms of currency notes, coins or physical cash money but where all the transactions are done through electronic channels like ATM/Debit cards, Credit cards, Immediate Payment Service (IMPS), National Electronic Funds Transfer (NEFT), Real Time Gross Settlement (RTGS), digital wallet e.g., Paytm, PhonePay, etc. The main rationale for a cashless economy is that to encourage the usage of digital payment methods for transactions of goods and services fully and at the same time without abolition of physical cash from economic system completely.

The Benefits of Cashless Economy

Cashless economy is a system where all the transactions or payments are made through digital mode, transferred or paid via bank account through electronic mode. Digital Economy helps governments to have full control over the banking system, which also includes tracking and recording all economic transactions. Digital money is fast becoming popular as it has many advantages over traditional cash system. Some of the benefits of it are as follows:

- **Convenience**

The ease of conducting financial transactions is probably the biggest motivator to go digital, as it is not necessary to carry wads of cash, plastic cards, or even queue up for ATM withdrawals. Digital money is a safer and an easier spending option especially while travelling.

- **Tracking spends**

It becomes easier for an individual to track and keep a record of all transactions and will also help while filing income tax returns.

- **Budget discipline**

A written record will help to keep tabs on spending, help people analyze their spending patterns and will result in better budgeting. Better budgeting results in controlled spending and also could result in higher investing habits.

¹The Economic Times.(2019). Digital economy? RBI says currency in circulation soars 17 per cent to Rs 21.1 lakh crore in FY19. [online] Available at: <https://economictimes.indiatimes.com/news/economy/finance/digital-economy-rbi-says-currency-in-circulation-soars-17-per-cent-to-rs-21-1-lakh-crore-in-fy19/articleshow/70896210.cms?from=mdr> [Accessed 28 Dec. 2019].

▪ **Lower risk**

Digital money in form of a credit card or mobile wallet remotely if stolen is easier to block. As stated earlier, digital money poses less risk while travelling, especially abroad, as loss of cash can cause great inconvenience.

▪ **Track the black money and illegal transactions**

Another benefit of cashless economy is that it is easier to track the black money and illegal transactions as cash transactions are difficult to trace especially if these transactions does not come into the banking system. However digital transactions are easier to track as all these records are available with the banks, resulting in more transparent transactions which in turn lead to decreased corruption levels in the country.

▪ **Less Money laundering**

Another benefit of a cashless economy is that it is easier to track the black money and illegal transactions. There will be less money laundering because digital transactions always leave a paper trail and financial crime will dry up. It is harder to hide income and evade taxes when there's a record of every economic transaction available to the tax authorities.

▪ **Increase in tax revenue**

Another advantage of cashless economy is that since all transactions are done through organized financial channels like banks and financial institutions it results in increased tax revenue for the government and used for betterment of economy of the country. While in case of illegal cash transactions in is difficult for the government in track all transactions and levying tax on them leading to loss of tax revenues for the state exchequer.

DRAWBACKS OF CASHLESS ECONOMY

While there definite advantages for a cashless economy, digital economy does have a variety of loopholes like lack of digital security and knowledge, personal data leakages, identity theft which can create huge losses for the economy. There are number of issues which are required to be resolved completely before seeing traditional cash economy transforming to a modern cashless economy completely. The following are the various drawbacks of cashless economy:

• **Higher risk of identity theft**

Privacy of personal information will also be an important issue and today one of the biggest fears of digital economy is the risk of identity theft. Digital economy today has seen a rising prevalence of online fraud and an increased usage will definitely increase the threat of hacking.

• **Loss of phone leads to increased risks**

Loss of cell phone used for digital transactions increase the susceptibility of identity theft, and at the same time can pose immense problems for individuals who are travelling abroad or in areas lacking banking infrastructure or other payment options.

• **Lack of Digital Literacy**

The next issue is the lack of data security and spurt in frauds. India has a low Internet penetration of 36% (2019) with 451 million monthly active internet users at end of financial year 2019,¹ and less than 25% of all mobile phone users have a smartphone. People who are cyber illiterate maybe exposed to cyber fraud and may end up losing their hard earned money to online scam and hacking of bank accounts. They feel comfortable with cash transactions rather than doing digital transactions.

• **Technology problems**

Lack of internet facilities makes it difficult for a country to convert to digitalization. Even today there are many rural and urban areas in India that lack access to 2G network, let alone 3G, 4G networks. Technology

¹Mandavia, M. (2019). India has second highest number of Internet users after China: Report. [online] The Economic Times. Available at: <https://economictimes.indiatimes.com/tech/internet/india-has-second-highest-number-of-internet-users-after-china-report/articleshow/71311705.cms> [Accessed 27 Dec. 2019].

problems like the loss of net connectivity in between transactions, or due to a slow connection, or the bank's server is down can create further problems.

- **Inequality**

Poor people, people working in the unorganized sectors and ones with no bank accounts are particularly vulnerable and will face a harder time in a digital economy as they have access to digital technology for economic transactions and would have no way to get paid or receive financial aid.

- **Loss of control**

One of the chief concerns of transitioning to digital economy is the perception of many consumers about the loss control over their finances. Many consumers feel comfortable with physical money be it currency or coins.

- **Changing habits and attitude**

India is cash oriented economy functioning primarily on cash and lack of penetration of e-payment channels, digital illiteracy along with the in-built habit of handling cash makes it difficult to change to digitalization quickly.

- **Urban – Rural divide**

While urban areas mostly enjoy high speed internet connectivity, semi-urban and rural areas are deprived of a stable internet connectivity which increases the problems of cashless economy. Today with the increased presence of ATMs, POS terminals and bank branches there still exists a significant urban-rural divide in many parts of India and it is absolutely necessary to bridge this divide to enable a successful cashless economy.

INNOVATIVE SOLUTIONS TO ENABLE A CASHLESS ECONOMY

The main advantage of cashless transactions is that a proper documentation of all economic transactions in an economy. It is a possible cure to eliminate black market or underground economies that often prove damaging national economies. Since, cash transactions are a primary mode for money laundering and terrorism financing, a cashless economy discourages such activities.

In today's world characterized by ever rapid technological changes, production and financial dynamics which are globally interconnected, alternative payment methods to cash are becoming increasingly important. These alternative payment methods like credit/debit cards and smart phones and computers.

- ❖ **Improving Financial Security**

Financial security over the digital payment channels is essential for pushing the cashless economy initiative. Hackers and cyber thieves compromising the personal data of lakhs debit cards users highlight the questionable security of Indian financial institutions to safeguard electronic currency and exchanges came into question. The ever present threat of lack of digital security and personal theft require huge investment in anti-fraud systems, which can mitigate the risk of using electronic payment systems. This security tools have grown significantly tougher and now surpass those for traditional payments systems.

- ❖ **Promote digital payments and receipts within Government**

Government may adopt digital payments for all its payments needs. Requisite infrastructure and mechanisms should be created in terms of facility for online payments by customers and installation of POS or mobile based acceptance infrastructure, withdraw convenience fee / service charge / surcharge presently being levied by some departments / agencies as well as bear cost of electronic transactions and not pass them on to consumers.

- ❖ **Mobile POS**

A mPOS (mobile point-of-sale) is a smartphone, tablet or dedicated wireless device that executes the duties of a cash register or electronic point-of-sale terminal (POS terminal) wirelessly.¹ In order to implement a

¹ <https://searchcio.techtarget.com/definition/mPOS-mobile-point-of-sale>

mPOS, a businessman needs an internet connection, a credit and debit card reader, and an application downloaded to whatever electronic device to be used for the transactions and this can also be paired with additional POS hardware like a barcode scanner and a cash drawer.

❖ **Enhancing Online Transactions**

Efforts should be made both by the government, bank and the public to encourage online transaction, thereby promoting digital cashless society and if possible increase the limit above Rs.2 lakh through credit cards in a year for the income tax regulations of scrutiny for transactions. This is an optimistic sign for the Indian economy to move towards a digital cashless direction.

❖ **Stringent legal measures to fight cyber crime**

Most of the cyber crimes like hacking, data theft, virus attacks, denial of service attacks, illegal tampering with source codes are listed under the Information Technology Act (IT Act), 2000, which was amended in 2008 and offenders could be prosecuted under S.66 r/w S.43 of the IT Act. Along with the IT Act, prosecution against cyber crimes can be initiated under the Indian Penal Code (IPC). Cases of credit or debit card forgery or even mobile SIM cloning with dishonest or fraudulent intentions, to cause wrongful loss or wrongful gain could be prosecuted under IPC provisions (S.463 to S.471 IPC, as applicable). Stringent legal measures against cyber crime offenders will help to deter such crimes and pave way for data security and digital economy.

CONCLUSION

The objective of this study was to examine the challenges and opportunities e-economy and measures required to move to a digital cashless economy. Digital economy in India is in its nascent stage and most of the population is reliant on cash-based transactions mainly due of lack of access to proper internet connectivity, lack of digital awareness and knowledge of financial transactions, fee charges on card payments as well as charges for operational bank accounts. Cashless economy can be achieved by adoption of proper methods of digital payments.

The Indian economy is undergoing the process of modernization and is gradually transitioning from a cash-centric to cashless digital economy. Digital transactions are traceable, hence easily taxable, and as a result are paving the way for eradicating the circulation of black money. It is a possible cure to eliminate black market or underground economies that often prove damaging to national economies.

In a world characterized by ever rapid technological changes, ever changing global production and financial dynamics, cashless economy is the need of the hour and right changes both in technology and mindset of the users supported with appropriate security can help the country reap benefits in the long run.

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