



Short Review Paper

# Emerging digital economy – a cashless perspective in India challenges in India

Parishkrit Agrawal

G.S. College of Commerce, Wardha, MS, India  
parishkritagrawal@gmail.com

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## Abstract

Today's economic activities are driven by the use of digital platforms which enable transmission of information by the use of worldwide network. Use of digital technologies enables transformation of public life and has a significant impact on socio-economic development of people and economic development of the country. The government initiatives are driven towards creating an environment where good governance is possible by use of digitization. The growing use of technologies, in commercial environment leads to various innovation in digital payments like debit cards, credit cards, ECS, NEFT, RTGS USSD, UPI, Aadhar based payment system etc. making access to various products and service at the doorstep of the consumer. Digital economy on the one hand provides easy access to products and services, but on the other hand transmission of personal information poses financial risk as well. Digital platforms have two potential risk i.e., transmission of confidential information of business and public and lack of network security resulting to unauthorized access. Evolution and innovation is prerequisite for digital economy but the cashless model is still at nascent stage and yet to answer how effectively and efficiently it is to be used. This paper elucidates the various initiatives taken by the government towards digital economy before and after demonetization and its contribution to India's GDP in near future.

**Keywords:** Digital, Payments, Economic, Innovations, Demonitisation.

## Introduction

India remains a largely cash based economy with cash accounting for more than 78% of all retail payments. Compared to some other countries, like China, Mexico and Brazil, India ranks very low relating to Pay Points (for digital payments) which is only 1080 per 1,000,000 people and per capita cashless transactions done through Non Banking Financial Institution during a year<sup>1</sup>. The cash dependence has impacted government's ability to widen tax compliance and improve tax revenue. Digitization of transactions is an obligation for India; it will benefit the poor, the middle class, the businesses and the nation. India is significantly behind peers on digital transactions, and digitization will create a multiplier benefit in efficiency of capital and resource allocation through greater transparency, traceability of transactions, enforce ability of law and significantly buoyed tax revenues which will augment State's resources for social welfare.

India ranks 91 on the Networked Readiness Index (NRI) 2016 among 139 Economies. Out of every three people of India, one is illiterate and the same proportion of youth lacks access to secondary education. Only 15% of Indian households have access to the Internet and 5.5% subscription for mobile broadband<sup>2</sup>. Data pertaining to payment, clearing and settlement systems in 23 major economies, recently released by the Bank for International Settlements<sup>3</sup> (BIS) shows that India lags far

behind both emerging market and developed peers in the move towards a cashless economy<sup>4</sup>. Non-cash payments transactions in India amounted to only 11 per inhabitant in 2015, much lower than other BRIC economies; with China reporting 17 such transactions per inhabitant in 2014 (data for China is unavailable for 2015). India with Just 1080 pay-points per million of people as compared to more than 60,000 in China and over 31,000 in Singapore, is one of the least digitized economies of the world.

**Table-1:** Ranking-Cashless Transaction and No. of Pay Points.

Country	Non-cash payments transactions by non-banks per capita per annum	No. of pay points per million people
India	11	1080
China	26	16,602
Mexico	32	7,189
South Africa	70	7,267
Brazil	142	25,241
UK	355	30.078

Singapore	728	31,096
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(NITI Ayog – Interim Report 2017).

The country saw an increase in digital payments in the post demonitisation period from 8<sup>th</sup> November 2016 due to cash crisis. There was surge of upto 300% in the number daily transaction and value of transaction by the use E-wallet during one month period of post demonetisation<sup>5</sup>.

Transactions through RuPay Cards (e-commerce and point-of-sale) were up 316% at 16 lakh daily (3.85 lakh on November 8)<sup>5</sup>, while in terms of value the growth has been 503% at Rs 236 crore (Rs 39 crore). Use of mobile platforms to transfer money had showed a significant growth, transaction grew nearly 200% and the value of transaction grew around 400% over a period of one year ending October 2016<sup>6</sup>.

### Literature Review

The consumer choice depends on the variety of products available for purchase. They always prefer to spend on those products on which they can make a choice out of many which are available. Online Retailer provides variety of books which are typically unavailable in traditional stores. It is also difficult to find specific books in bookstore. Amazon.com is having in excess of 56 times number of book titles available in large independent bookstore. The price at which books are available at online sales is less as compared to traditional stores which increase consumer surplus. Consumer can easily find their books through internet access which reduces their time and cost of searching those books in traditional stores will result in gain in product categories that are available online<sup>7</sup>.

Transforming the life's of people and empowering society will come closer with the help of digital economy. The Digital India programme will provide environment for innovations and technological changes which will emerge new progressions in every sector and build participative, transparent and responsive system<sup>8</sup>. The government is taking various initiative to make through its planned programmes such as national optical fibre

network in all 2.5 lakh gram panchayats to mobile connectivity in all rural areas. Training is also provided for IT sector jobs where 10 million people can be accommodate in both rural and urban areas in 5 years. The initiative will make India leader in the usage of IT and will help India to boost its GDP<sup>9</sup>.

**Objective of study:** i. To study the initiative taken by the government towards Digital Economy in India. ii. To study challenges that will affect the implementation of Digital Economy. iii. To study the Impact of Digital Economy on India's GDP.

### Data Collection

In this paper the research is based on secondary data. The data is taken from different research reports, journals, websites, and research paper. The research is based on the study of India's current status as compared to other countries for digital economy, challenges and its impact on GDP.

### Initiatives by Government

Pay Digital and Win Prizes! In order to promote digital payments, two schemes were announced by the Government on 15<sup>th</sup> December, 2016 to give cash awards to consumers and merchants who utilize digital payment instruments for personal consumption expenditures. The prizes range from Rs 1000 to Rs 1 crore and the transactions permitted are from Rs 50 to Rs 3000 to keep the focus on the common man. The schemes will not only give a boost to cashless transactions, but will particularly influence those people to use cashless mode who are currently depended on hard cash for their transaction.

The government step to demonetize Rs. 500 and Rs. 1000 currency notes on 8<sup>th</sup> November 2016, wiped 85% of cash circulation from economy. From an initial withdrawal Rs. 2,500 raised to Rs. 4,500 to a maximum of Rs. 24,000 week. In the month of January, withdrawal limit was raised to Rs. 50,000 weekly on February 20, 2017. On 13<sup>th</sup> March 2017 RBI removes limit on cash withdrawal.

**Table-2:** Number of Transaction from different cashless modes.

Month	No. of Transaction						
	Debit Card Transactions		Mobile Banking	RTGS	NEFT	ECS (in Billion)	
	ATM	POS	(in Billion)		(in Billion)	Credit	Debit
Jan-17	712347249	328623459	106.12	9330505	164.19	0.76	0.2
Dec-16	630466234	415461956	110.64	8840374	166.31	0.91	0.25
Nov-16	561355720	236466565	87.47	7874669	123.05	0.76	0.28
Oct-16	802064418	140586967	78.12	9006720	133.21	0.96	0.82
Sep-16	742134866	125190417	72.63	8467531	120.15	0.85	0.82
Aug-16	756738440	130529004	71.7	8557454	118.56	0.95	0.85

**RBI Data Release.**

Public were disposing the old currency notes in the month of November 2017 and restriction on cash withdrawal had decreased the ATM card usage in the month of November 2016 as compared to October 2016. The debit card transaction had seen 200% increase as compared to October 2016 and 175% increase from November 2016. Due to Increase in withdrawal limit in the month of January 2017 the number of Transaction has decreased marginally from December 2016 (Table-2).

Total value of transaction done through all digitally was highest in the month of December 2016 except in the case of ATM cards. 200% increase in debit card transaction though POS both in Value and number of transactions. The consumer will get 0.75% waiver on the bill amount for the purchase of petrol and diesel, if the payment is made through cards at petrol pump outlet<sup>10</sup>. The government though its scheme providing incentives to use digital.

To provide basic infrastructure to support digital payments in rural areas for agriculture related transactions, NABARD as facilitator of Government will extend financial support to eligible banks for deployment of Two Point of Sale machine in 1,00,000 villages having population less than Ten Thousand at PCS, DCS and Agriculture Input Dealer<sup>11</sup>. This will benefit farmer for transacting cashlessly in their villages for their agricultural needs. If the rail booking is made digitally, service tax have been waived and free accidental insurance is also provided. Insurance companies had also provided 10% waiver in premium on general insurance policies where as in New Life Policies there was 8% waiver on premium if the payment is made digitally though customer portal<sup>12</sup>.

**Challenges in Implementation**

The main security concern in digital payments is hacking of data which leads to financial loss of public. ATM Software provider,

Hitachi Payment Services system were compromised by malware enabling scammer to unauthorised access had compromised 32 lakh debit cards which later on replaced by various banks in India<sup>13</sup>. Pubic suffered financial loss due to unauthorized usage of their financial data.

34.8% of Indian population has access to Internet. Expansion is required in current infrastructure to promote internet access like Wi-fi Spots, routers, routers, fiber optic links and servers. Rural as well as low income urban areas does not have adequate infrastructure to support faster speed of broadband connections. Lack of financial literacy is also one of the major challenges toward digital economy. Where people ver-50-age group are not comfortable using computers and mobile phones and depends upon their children, illiteracy and unaffordable cost of internet and smart phones poses a major challenge for digitization.

**Contribution to India’s GDP**

The people using digital payments will reduce hard cash requirement which will intern reduce the cost of printing and minting automatically reducing the cost of producing that cash. Consumer decision on products and services they wish to purchase depends on the cash holding. If they are holding less cash than required for purchase, they tend to postpone of not to purchase decision.

But if they are making payment digitally, they tend to purchase immediately without any time delay. Because of availability of funds digitally they will make purchase decisions more quickly which will ultimately result in the enlargement of consumption in the economy as a whole. Financial education and digital infrastructure will facilitate the public with more digital transactions in future which will directly contribute to the growth of the economy.

**Table-3:** Value of Transaction from different cashless modes.

Month	Value of Transactions						
	Debit Card Transactions (in Millions)		Mobile Banking	RTGS	NEFT	ECS (in Billion)	
	ATM	POS	(in Billion)	(in Billion)	(in Billion)	Credit	Debit
Jan-17	1516436.7	490041.9	1382.98	77486.07	11355.08	10.51	1.43
Dec-16	849340.9	580312.5	1498.18	84096.48	11537.63	12.84	1.55
Nov-16	1234516.2	321742.8	1365.7	78479.19	8807.88	7.89	1.38
Oct-16	2547814.47	219412.84	1139.41	76473.29	9504.5	16.55	2.04
Sep-16	2219762.32	159321.18	1042.6	86687.35	9880.17	8.35	2.06
Aug-16	2196575.02	183704.93	1038.97	77588.32	8764.14	9.65	2.55

### RBI Data Release.

Analysis of macroeconomic data of 70 countries by Moody's Analytics extrapolate that higher card usage contributed an additional \$296 billion to GDP between 2011 and 2015 which is equivalent to 2.6 million jobs on average per year over the five-year period. Each 1% increase in usage of electronic payments produces, on average, an annual increase of \$104 billion in the consumption of goods and services<sup>14</sup>. The Indian digital payments industry is estimated to reach a size of \$500 billion by 2020 and will contribute around 15% to the country's gross domestic product (GDP), a survey conducted by Google and Boston Consulting Group revealed.

### Conclusion

Increasing use of electronic payments - which include credit, debit and prepaid cards in this report—boosts consumption and GDP. Moreover, the impact increases as penetration rises. Electronic payments usage also promotes consumer confidence and improves access to credit for the population. Government initiative to promote digital economy has provided the use of latest digital infrastructure for quick delivery of financial service thereby reducing time span for consumption of goods and services which ultimately adds towards GDP of the country. The mainstream of Indian economy lies in rural areas, where 70% population is largely depended on agriculture. If they are digitally connected their socio-economic conditions will improve through development of non-agricultural economic activities which will be possible only by providing them digital infrastructure and financial literacy. The government move towards digital economy is a dynamic move which require working all factors simultaneously like literacy, infrastructure, overall business environment, regulatory framework, etc.

### References

1. NITI Aayog (2017). Interim Report of the Committee of Chief Ministers on Digital payments.
2. Samtani Kanchan and Sarawgi Sumit (2017). Building India's digital highway. <http://www.livemint.com/Politics/xLnErGf2Mq9xDQYj3VHWmI/Building-Indias-digital-highway.html>, 24<sup>th</sup> January 2016.
3. Securities Exchange Commission (2015). Securities and Exchange Commission, Security-Based Swap Data Repository Registration, Duties, and Core Principles. Federal Register, 19<sup>th</sup> March 2015.
4. BCG (2020). Boston Consultancy Group, Digital Payments 2020. [http://image-src.bcg.com/BCG\\_COM/BCG-Google%20Digital%20Payments%202020-July%202016\\_tcm21-39245.pdf](http://image-src.bcg.com/BCG_COM/BCG-Google%20Digital%20Payments%202020-July%202016_tcm21-39245.pdf)
5. Doval Pankaj (2016). Digital payments soar by up to 300% after demonetization. <http://timesofindia.indiatimes.com/business/india-business/Digital-payments-soar-by-up-to-300-after-demonetisation/articleshow/55902284.cms> 10<sup>th</sup> December 2016.
6. Waghmare Abhishek (2016). The year cashless payments trended upwards. [http://www.business-standard.com/article/economy-policy/post-demonetisation-digital-payments-are-down-15-116122700098\\_1.html](http://www.business-standard.com/article/economy-policy/post-demonetisation-digital-payments-are-down-15-116122700098_1.html) 27 December 2016.
7. Brynjolfsson Erik, Hu Yu and Smith Michael (2003). Consumer surplus in the digital economy: estimating the value of increased product variety at online. *Management Science*, 49(11), 1580-1596.
8. Soni Surekha (2017). Digital India is s first step for a Grand Triumph. *IJARIE*, 3(1), 174-180.
9. Narang Uma (2017). Digital India and its Impact. 1-6. <http://pggc46.ac.in/images/DIGITAL%20INDIA%20AND%20ITS%20IMPACT.pdf>.
10. PIP (2016). Petrol, insurance premia get cheaper in govt's cashless push. [http://www.domain-b.com/finance/general/20161208\\_cashless.html](http://www.domain-b.com/finance/general/20161208_cashless.html) 8<sup>th</sup> December 2016.
11. Bussiness Standerd (2016). Government announces sops to promote digital payments. [http://www.business-standard.com/article/news-ians/government-announces-sops-to-promote-digital-payments-116120801023\\_1.html](http://www.business-standard.com/article/news-ians/government-announces-sops-to-promote-digital-payments-116120801023_1.html) 8<sup>th</sup> December 2016.
12. Cloud affairs (2016). Government announces several incentives on payment through digital modes. <https://www.affairsccloud.com/govt-announces-several-incentives-payments-digital-modes/> 9<sup>th</sup> December 2016.
13. Shukla Saloni and Bhakta Pratik (2016). 3.2 million debit cards compromised; SBI, HDFC Bank, ICICI, YES Bank and Axis worst hit. <http://economictimes.indiatimes.com/news/industry/banking/finance/banking/3-2-million-debit-cards-compromised-sbi-hdfc-bank-icici-yes-bank-and-axis-worst-hit/articleshow/54945561.cms> 20<sup>th</sup> October 2016.
14. Zandi Mark, Singh Virendra and Irving Justin (2013). The Impact of Electronic Payments on Economic Growth. *Moody Analytics*, 1-16. <https://usa.visa.com/dam/VCOM/download/visa-everywhere/global-impact/impact-of-electronic-payments-on-economic-growth.pdf>
15. RBI (2017). Reserve Bank of India. Data Release, Bank-wise In ECS/NEFT/RTGS/Mobile Transactions
16. RBI (2017). Reserve Bank of India. Data Release, Bank-wise ATM/POS/Card Statistics.