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## Digital Banking and Its Impact on Indian Economy

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### Abstract

A sound and effective banking system is the backbone of an economy. The journey from barter system to digital banking has made tremendous changes in the economy as globally. Within a lesser turnaround time, digital banking has made a deep leap in the new era. The impact of digitalization can be evidently seen in the global economy as it delivers extra ordinary gains in productivity, service quality and reach. Ecommerce success is largely attributed to the phenomenal growth of various digital payment technologies such as card payment technologies such as card payments, electronic fund transfers, payment gateways, E-payments, smart cards, mobile money, wallets etc. Going digital is no longer an option, but a simple bare necessity-to collaborate and flourish. Digital banking provides critical solutions to bankers for their short term and long term business and technological requirements

**Keywords:** Digitization, Digital Banking, Demonetization, Computerization, E-commerce, Smart cards, Artificial Intelligence

### Introduction

Digital banking is the digitization of all the traditional banking activities and programs that historically were available to customers when physically inside of a bank branch. The objective of financial inclusion is to provide financial resources to the consumers at affordable rates. Digitization is key to making financial inclusion work. To achieve high level of efficiency and reduce the rates of intermediation, digitalized banking is the best way to supplement and be an alternative to brick and mortar branch in near future. Today aspects such as enhanced customer satisfaction and value through unified customer experiences, fastest possible output, infinite banking volumes, operational efficiencies, scale of economy etc are being sought after through digital banking and mobile technologies. The push up factors like up gradation of Information Technology, recent policies of demonetization, matching up with international standards etc. flourished the importance and necessity of digital banking. Demand for digital cash can be highlighted by the use of peer-to-peer payment systems such as PayPal and crypto currencies such as Bit coins.

### Need of Computerisation

The need for computerization was felt in Indian banking sector in 1980's and the main purpose behind it was to improve book keeping, customer service and MIS reporting. 1988, RBI set up a committee on computerization headed by Dr. C. Rangarajan. Banks started to use Information Technology with the introduction of PCs and LAN connectivity. The concept of bank banking emerged and Core Banking Solution (CBS) enabled banks to increase the comfort level of customers through enhancing customer convenience through anywhere and anytime banking

### Process of Computerisation

India was a cash centric economy where cash accounted for 95 per cent of the transactions. Majority of the vendors didn't have card readers or the means of accepting electronic payments. 85 percent of the workers were paid in cash. Computerization gained popularity in India with the opening up of our economy in 1991-92. The new model of economic reform commonly known as LPG propelled by rising competition from private and foreign banks.

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Several commercial banks started moving towards digital customer service to remain competitive.

### **Present State of Indian Economy**

Emergence of digital banking has made a tremendous change in the economy. PwC's 2017 Digital Banking Customer Survey provides insights into the rapidly changing behavior of the digital banking customer. The research found out that 46 % of consumers use only digital channels today. Demonetization has largely been successful in educating the masses about the benefits of electronic payments and digitalization. Demonetization pushed millions of new bank customers on to the country's digital economic grid by virtual fiat. Emerging forms of digital banking are banking as a Service, Banking as a Platform, Cloud based Infrastructure and White Label Banking. Government of India is promoting digital transactions. The launch of Unified Payments Interface (UPI) and Bharath Interface for Money (BHIM) by National Payments Corporation of India (NPCI) are significant steps for innovation in the Payment Systems domain. UPI has witnessed over 1 million transactions as of January 10, even as 10 million people downloaded the app. As per RBI Survey 2016 digital wallets accounted for just Rs 95 billion in transactions and UPI only for Rs 7 billion, compared to Rs 314 billion for debit and Rs 270 billion for credit cards. According to RBI Report in 2016-2017 there are 2,22,475 Automated Teller Machines (ATMs) and 25,29,141 Point of Sale devices (POS). Major landmarks in the digital revolution in the banking sector include implementation of Electronic Payment system such as NEFT (National Electronic Fund Transfer), RTGS (Real Time Gross Settlement), IMPS (Immediate Payment Service), Debit & Credit cards, Mobile banking etc.

Projects such as Make in India and Digital India are now the buzzwords to a bright and sustainable industrial and financial progress of our nation. As part of Digital Transformation in India, Government also encourages the adoption of new technology or up gradation while providing connectivity with high speed bandwidth to every nook and corner of the country. RBI statistics indicate that the total number of PoS machines in the country increased from 15, 12, 608 at the end of October 2016 to 22, 24,977 at the end of February 2017. A study conducted in 2015 revealed that 47 % of bankers see digital banking as means to improve customer relationship, 44 % to generate competitive advantage, 32 % as a channel for new customer acquisition, and 16 % for cost saving.

### **Artificial Intelligence Applications in Indian Banks**

Robotics, enabled by Artificial Intelligence will bring a major change in banking sector. Many private banks are planning to deploy Robots for both back office and customer facing purposes. GFT's Digital Banking Expert Survey 2017 reveals that in large institutions the percentage of respondents who see value in Artificial Intelligence solutions reaches 94 percent. As per PwC Fin Tech Trends Report (India) 2017 in the past year, global investment in Artificial Intelligence applications reached \$ 5.1 billion, up from \$ 4.0 billion in 2015. 4 major banks in India such as SBI, HDFC, ICICI AND Axis bank have started to adopt Artificial Intelligence applications. Automation reduces the need for paper, which inevitably substitutes it with technology.

### **Few Trends and Opportunities**

#### **1. Changing Consumer Behavior in Favor of Digitalization**

India's demographic dividend is well suited to switch to digital behavior, with the median age of an Indian expected to be 29 years by 2020 and 900 million populations falling in the age group of 15-60 years by 2025. People have started to rely on technology to do banking transactions because they want more convenience.

#### **2. Unpenetrated Areas and Government Initiatives**

India is progressing towards the goal of financial inclusion and almost 1600 million accounts

Have been opened under PMJDY (Pradhan Mantri Jan Dhan Yojna) with Rs. 500 billion being targeted to be transferred directly under DBT (Direct Benefit Transfer).

#### **3. Increased Smartphone Usage and Mobile Penetration**

Mobile penetration of around 90% is likely to drive financial inclusion. Youth in India prefer to use smart phones rather than to stand in long queues to avail banking services. The current and expected widespread reach of smart phones in the country provides a disruptive and low-cost medium, to extend the reach of banking and payments services.

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**Benefits for Banks**

Banks have benefitted in several ways by adopting newer technologies. E-banking has resulted in reducing costs drastically and has helped to generate revenue through various channels. As per latest information, the cost of a bank transaction on Branch banking is estimated to be in range of Rs 70 to Rs 75 while it is around Rs 15 to Rs16 on ATM, Rs 2 or less on Online banking and Rs 1 or less in Mobile is banking.

The decision for the banks to add more digital solutions at all operational levels will have a major impact on their financial stability. The concept of digital cash economy is no longer just a futuristic dream but it’s still unlikely to outdate physical cash in the near future. Digital banking combines the benefits of two worlds: a new customer experience on the outside and an efficient, effective operating model on the inside-both enabled by digitization and the underlying technologies, processes and structures.

**Challenges Faced By Banks**

- The main challenges for banks in implementing a digital strategy are the integration of legacy systems with new technologies, security as well as privacy

implications and lack of internal expertise within the organization itself. Banks are cautiously approaching these new challenges. While Digitization is making internal processes more efficient, it is only slightly enhancing the customer offering with value added services such as wallet solutions, personal finance management tools and omni channel experience.

- As per the report of BCG, FICCI, and IBA; 17% of the respondents were unaware about bank’s digital offerings, 35% were aware but were not using, 7% were unsatisfied user and 42% were satisfied users. The challenge here is to convert awareness into usage
- 70% of the MSME and 90% of the shopkeeper transactions were done through cash & cheque, only 9% MSMEs collect orders online, and only 5% accept payments online. This is completely unacceptable in a digital world and thus becomes a challenge.
- The research on retail customers show that out of people not using Mobile Banking apps, 22% do not know how to use it, 18% don’t know about bank’s app and 14% of them have fear of hacking

**Digitization in Rural Areas**

The government departments and agencies in many small towns and rural areas are not equipped with PoS machines or receive NEFT, RTGS or IMPS transactions. The use of electronic wallets and smart phones has been restricted to educated youth. There are two ways of adopting digitalization. In Internet banking model, there is need for internet and robust landline connection. Smart phone is necessary for mobile banking model. To rapidly digitalize India, both the methods are required.

India’s Chief Economic advisor ‘Arvind Subramanian ‘said in ‘ The Economic Survey 2016-2017’ that the process of digitalization should be done gradually taking into account digitally deprived sections of the society. Digitalization is not a panacea, nor is cash all bad. Public policy must balance benefits and costs of both forms of payments. He also stressed that the government should “respect rather than dictate choice” of users when it comes to digitalization. The survey also pointed out that almost 350 million people are without cell phones while another 350 million have regular feature phones. Barely 250 million customers have smart phones in our country.

Table I below shows the technological milestones in Indian banks. Table II shows the value of transactions through PPI Cards(which include mobile prepaid instruments, gift cards, foreign travel cards & corporate cards) & mobile wallet have jumped drastically from Rs 105 billion and Rs 82 billion respectively in 2014-15 to Rs 277 billion and Rs 532 billion respectively in 2016-17

**Table I:** Technology Developments in Indian Banking

1980’S		MICR Standard Cheques, Encoders
1990’s	Automation	Electronic Fund Transfer, Branch Connectivity
2000-2010	Internet	IMPS,RTGS,NEFT,Online Banking, Tele banking
2011 +	Mobile	Mechanization

(Source :ICMAI, January 2017)

**Table II:** Increase in Volume of Digital Banking

(In Million)

Year	Rtgs	Retail Electronic Clearing	Debit & Credit Cards	Prepaid Payment Instruments	Mobile Banking
2015-16	98.4	3,141.5	10,038.7	748.0	389.5
2014-15	92.8	1,687.4	8,424.0	314.5	171.9
2013-14	81.1	1,108.3	7,219.1	133.6	94.7
2012-13	68.5	694.1	6,174.5	66.9	53.3
2011-12	55.1	512.4	5,731.6	30.6	25.6

(Source: RBI data and Dun &amp; Brodstreet Research)

It is the need of the hour to constitute a committee to understand the problem, become aware of the challenge, and then prepare a road map which would require geographical areas where one or both strategies would be required to achieve success. Smart phones should be made more affordable to public

### References

1. <https://www.capitaworld.com/digitalization-in-banks>
2. <https://www.google.co.in/amp/s/www.moneycontrol.com/news/business/economy/india-economic-survey-2017-digitisation-is-notpanacea-nor-is-cash-all-bad-says-cea-950229.html/amp>
3. [www.forbesindia.com/article/weschool/digital-revolution-in-the-indian-banking-sector/47811/1](http://www.forbesindia.com/article/weschool/digital-revolution-in-the-indian-banking-sector/47811/1)
4. [blog.ficci.com/digital-banking-technology/7295/](http://blog.ficci.com/digital-banking-technology/7295/)
5. <https://www.google.co.in/amp/s/www.thehindubusinessline.com/opinion/last-mile-issues-in-digitisation-drive/article21971581.ece1/amp/>
6. [www.investopedia.com](http://www.investopedia.com)
7. [www.Nlist.com](http://www.Nlist.com)
8. Agarwal, R. S. (2009). Customers perspectives regarding e banking in an emerging economy.
9. V. Raja, J. A. (2012). Global e-banking scenario and challenges in banking system.