

AN EMPIRICAL ANALYSIS OF GROWTH OF ONLINE BANKING & MOBILE BANKING USAGE AFTER DEMONETIZATION AND ITS IMPACT IN INDIA

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ABSTRACT

Today, the most important agenda in Banking Industry in India is Digitalization. At Present time, Every Person is using Electronic Banking somewhere through some Medium. The maximum use of Online Banking and Mobile Banking has been possible only due to the Demonetization. Demonetization is a process of Stripping Currency unit of its status as Legal Tender. On 8 November 2016, Honorable PM Narendra Modi announced the Demonetization of all Rs. 500 and Rs. 1000 Banknotes. According to RBI report 2018, of India survey 99.3% of the Demonized Banknotes or some Rs. 15.3 trillion of the Rs. 15.4 Lakh Crore of the Demonized were deposited back with the Banking Industry. Its impact is felt by every Citizen of the India, and saw the rising uses of Online Banking, Mobile Banking and other Electronic payment. The objective of the Research paper is to Examine and Analyze the Growth of Online Banking & Mobile Banking usage after Demonetization and its Impact in India. This Research Paper also highlights how the Indian Economy is moving towards Cashless Society.

Keywords: Demonetization, Online Banking, Mobile Banking, Electronic Payment System & Cashless Economy.

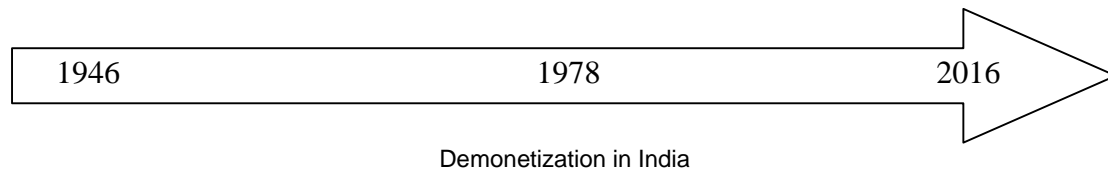
Introduction

Demonetization is the Withdrawal of a Particular form of Currency from Circulation. India saw Demonetization 1st time on 12th Jan 1946 before getting the Independence from British, 2nd time on 16th Jan 1978 Announced by PM Morarji Desai and 3rd time on 8th November 2016 by Government led by PM Narendra Modi. Narendra Modi has announced Demonetization move to Crackdown on Black money. The object of Demonetization was to help India move to a Cash-less Economy, Attack on Black Money & Black Marketing, Reduce the Corruption, Remove Fake Currency in the Economy, Digital Payment System. Technology has played an important role in Mobilizing the Economy from that Situation. Government is encouraging the uses of Online Banking, Mobile Banking, E- wallet, Debit Cards and Credit Cards by the Indian Citizens.

1000&10000
In British rule

1000 & 5000 & 10000
Govt.by Morarji Desai

500&1000
Govt.by PM Modi



Objectives of the Study

- To find the Growth of Online Banking & Mobile Banking Usage after Demonetization in India.
- To Analysis the Positive and Negative Impact of Demonetization in India Since 2016 to 2019.

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Literature Review

Sahadeb Sukla Das (2016) has studied about “**A Study of Digital Banking Facilities: With Reference to Guwahati in Kamrup (Metro) District of Assam**” in his research paper. He highlighted that respondent satisfaction level in the Guwahati and he observed 29 per cent of the respondents face network failure problems, 20.33 per cent of the respondents face error in operation, 27.67 per cent of the respondents feel that there is no security in e- dealings.

Deshwal Parul (December 2015) in their research paper “**A Study of Mobile Banking in India**” discusses about that 78% respondent use Mobile Banking and 22% are the non user’s of Mobile Banking.

J. Sethuraman, C. Vijayabanu and C. Therasa (July 2016) has examined about “**A Study on Channel Preferences among Urban and Rural Banking Customers**” He examined that thrown light on how the different channels were used by the bank customers and also indicated the awareness levels of these channels among different customer segments.

Research Methodology

This Research Study is Analytical and Descriptive in nature. In this Paper the Researcher finds out the Growth of Online Banking & Mobile Banking usage after Demonetization in India and Analyzed the Positive and Negative Impact of Demonetization in India since 2016 to 2019. This study is based on Secondary Data collected from various Online Sources such as Websites, Articles, Journals, News, etc.

In this present study the Researcher used the Statistical tool like Simple Growth Rate, Average, and Compound Annual Growth Rate for analysing the data. In his study the Researcher has collected the Data from Reserve bank of India Website between April 2014 and April 2019. In this study, the researcher calculated simple growth rate with the help of this formula:-

$$GR = (V_t - V_{t-1}) / V_{t-1} \times 100$$

Where: V_t indicates the value of a given parameter in the current year and

V_{t-1} indicates the value of a given parameter in the previous year.

In the Present Study the Researcher Calculate the Overall growth rate of Online Banking and Mobile Banking Usages After the Demonetization in India between April 2014 and April 2019 with the help of Compound Annual Growth Rate and its formula is given below:-

$$CAGR = (\text{Ending value} / \text{Beginning value})^{(1/t - \text{years})} - 1$$

Growth of Online Banking & Mobile Banking Usage after Demonetization in India

Mode of E-Banking in India

In the recent past, A large number of banking services shifted from Traditional banking to E-Banking. The present study focuses on the important forms of E-banking such as ATM, Debit cards, Credit cards, RTGS, NEFT, Mobile Banking, M- WALLETS and point of sale.

Automated Teller Machine

An ATM is a computerised machine that provides the customer to make a financial transaction without the help of a bank employee. For using ATMs, the customer has to obtain an ATM card or debit card from his bank. A customer can avail various service like withdrawal of cash, depositing money, check the balance inquiries etc through the ATMs.

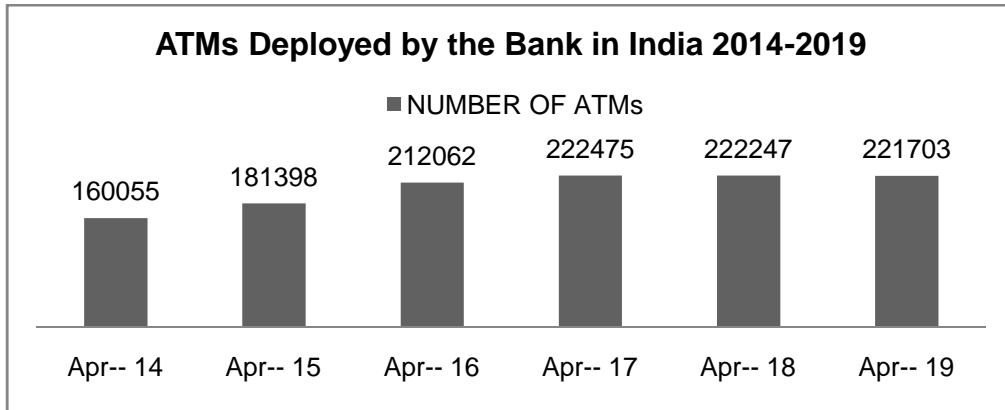
Table 1: ATMs Deployed by the Bank in India 2014-2019

Year	Number OF ATMs	Growth Rate
April 2014	160055	-
April 2015	181398	13.34%
April 2016	212062	16.90%
April 2017	222475	4.91%
April 2018	222247	-0.10%
April 2019	221703	-0.25%
Total	1219940	
Average	203323.333	
CAGR	6.73%	

(Source: Data collected from https://www.rbi.org.in/publication/monthly/RBI_bulletin and Researcher own Calculation)

The table and Figure 1 show the increase in ATM deployment by the banks in India from the Period 2014 to 2019. It is clear from the table and figure that the number of ATM deployed by the banks has increased from 1.6 Lakhs to 2.2 lakhs between the Periods 2014 to 2019 and overall compound annual growth rate of 6.73% percent.

Figure 1



Debit Cards

A debit card is a type of card used to access money from your bank account. Customer can use their cards to withdrawal cash and make purchases. Debit card usually have daily Purchase limit, it may not be possible to make an especially large purchase with debit card.

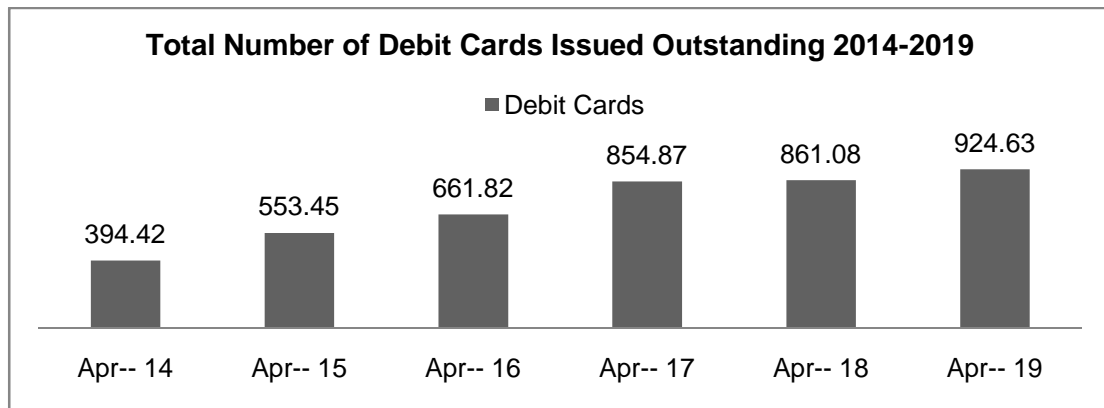
Table 2: Showing Total number of Debit Cards Issued Outstanding 2014-2019

Year	Debit Cards	Growth Rate
April 2014	394.42	-
April 2015	553.45	40.32%
April 2016	661.82	19.58%
April 2017	854.87	29.17
April 2018	861.08	0.73%
April 2019	924.63	7.38%
Total	4250.27	
Average	708.378333	
CAGR	18.58%	

(Source: Data collected from [https://www.rbi.org.in/publication/monthly/RBI bulletin](https://www.rbi.org.in/publication/monthly/RBI%20bulletin) and Researcher own Calculation)

The table and Figure 2 show the Number of Debit Cards Issued Outstanding from April 2014 to April 2019. As is clear there has been an increased from 39.42 Cr. to 92.46 Cr. in the issue of debit cards by the Banks.

Figure 2



Credit Cards

A credit card is also known as plastic money which permits its customer to buy goods and services on credit bases. The credit card is basically a plastic card issued by the financial institution which allows the cardholder to borrow funds from the issuer. A credit card transaction is often more secured than other forms of payment such as cash payments or cheque payments.

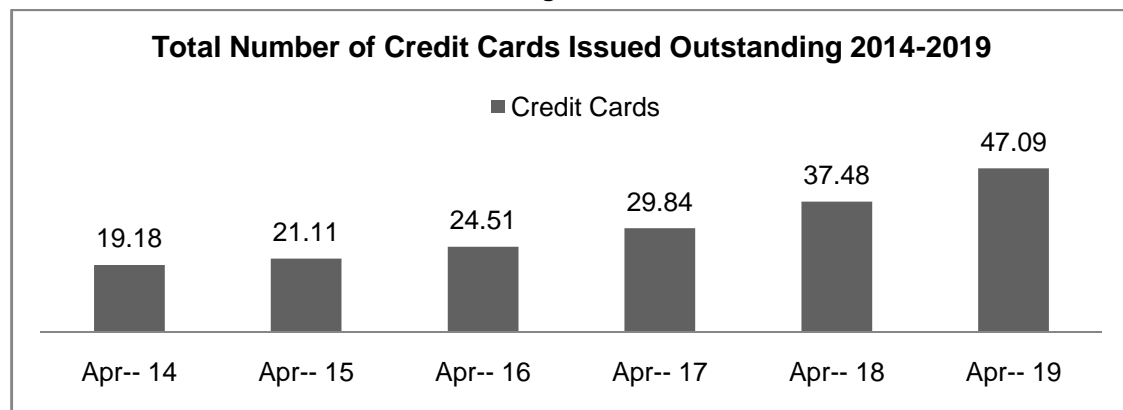
Table 3: Showing Total Number of Credit Cards Issued Outstanding 2014-2019

Year	Credit Cards	Growth Rate
April 2014	19.18	-
April 2015	21.11	10.06%
April 2016	24.51	16.11%
April 2017	29.84	21.75%
April 2018	37.48	25.60%
April 2019	47.09	25.64%
Total	179.21	
Average	29.8683333	
CAGR	19.68%	

(Source: Data collected from [https://www.rbi.org.in/publication/monthly/RBI bulletin](https://www.rbi.org.in/publication/monthly/RBI%20bulletin) and Researcher own Calculation)

The Table 3 shows the number of Credit Cards Issued outstanding from April 2014 to April 2019. It is clear from the table that the number of credit cards issued has been increased from 1.91 Cr. to 4.70 Cr. between the period 2014 and 2019. The Overall Compounded Annual Growth Rate Shows 19.68 percent Growth in number of Credit Cards issued respectively

Figure 3



National Electronic Fund Transfer

NEFT is a bank facility provided to bank customer to enable them to transfer funds easily and securely on a one to one basis. Funds are not immediately transferred, but are transferred in the next settlement Cycle. NEFT has settlement cycle running through the day.

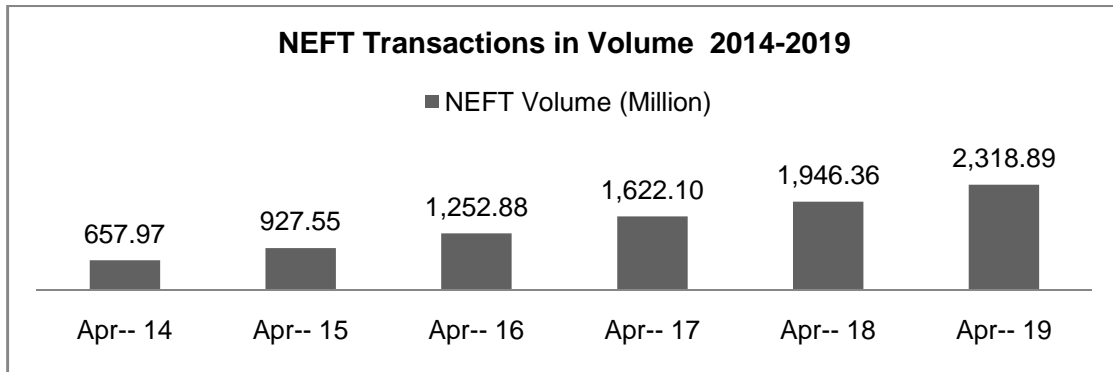
Table 4: NEFT Transactions in form of Volume and Value 2014-2019

Year	NEFT Volume (Million)	Growth Rate	NEFT Value (Billion)	Growth Rate
April 2014	657.97	-	43,559.98	-
April 2015	927.55	40.97%	59,803.83	37.29%
April 2016	1,252.88	35.07%	83,273.11	39.24%
April 2017	1,622.10	29.47%	120,039.68	44.15%
April 2018	1,946.36	19.99%	172,228.52	43.48%
April 2019	2,318.89	19.14%	227,936.08	32.35%
Total	8725.75		7,06,841.20	
Average	1454.29167		1,17,806.87	
CAGR	28.65%		39.23%	

(Source: Data collected from [https://www.rbi.org.in/publication/monthly/RBI bulletin](https://www.rbi.org.in/publication/monthly/RBI%20bulletin) and Researcher own Calculation)

The table and Figure 4 shows the NEFT transactions in forms of Volume (Million) and Value (Billion) made by banks from the year 2014 to 2019. From the below table we can observe that NEFT transactions increased in terms of volume of transactions from 657.97 million to 2318.89 million from the year 2014 to 2019. The overall Compounded Annual Growth Rate of Volume and Value shows 28.65 percent and 39.23 percent Growth respectively.

Figure 4



Real Time Gross Settlement

RTGS is used to send or receive funds. Money is transferred in Real Time, thus fastest method to transfer funds. RTGS systems are typically used for high value transactions that require and receive Immediate Clearing. Any amount more than 2 Lakhs can be remitted via RTGS to any bank in India.

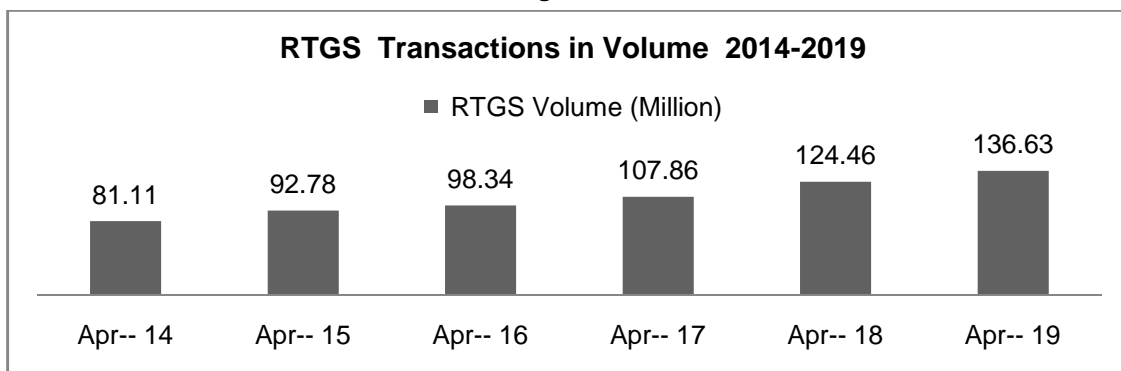
Table 5: RTGS Transactions in form of volume and value 2014-2019

Year	RTGS Volume (Million)	Growth Rate	RTGS Value (Billion)	Growth Rate
April 2014	81.11	-	904,968.04	-
April 2015	92.78	14.39%	929,332.89	2.69%
April 2016	98.34	5.99%	1,035,551.64	11.43%
April 2017	107.86	9.68%	1,253,652.08	21.06
April 2018	124.46	15.39%	1,467,431.99	17.05%
April 2019	136.63	9.78%	1,715,520.61	16.91%
Total	641.18		73,06,457.25	
Average	106.863333		12,17,742.88	
CAGR	10.990%		13.65%	

(Source: Data collected from [https://www.rbi.org.in/publication/monthly/RBI bulletin](https://www.rbi.org.in/publication/monthly/RBI%20bulletin) and Researcher own Calculation)

The table and Figure 5 shows the RTGS transactions in forms of Volume (Million) and Value (Billion) made by banks from the year 2014 to 2019. From the table we can observe that RTGS transactions increased over a period of time in the forms of volume as well as value. The overall Compounded Annual Growth Rate of Volume and Value of RTGS Transactions show 10.9 percent and 13.6 Percent Growth Respectively.

Figure 5



Mobile Banking

Mobile Banking can be defined as a facility Offered to its Customers by Banks to access its Bank Account and to carry out Transactions using Mobile Devices such as Smartphone, Tablets, or Cellular Devices. Mobile Banking Application of the Concerned Bank can be downloaded on the user Device to access the services.

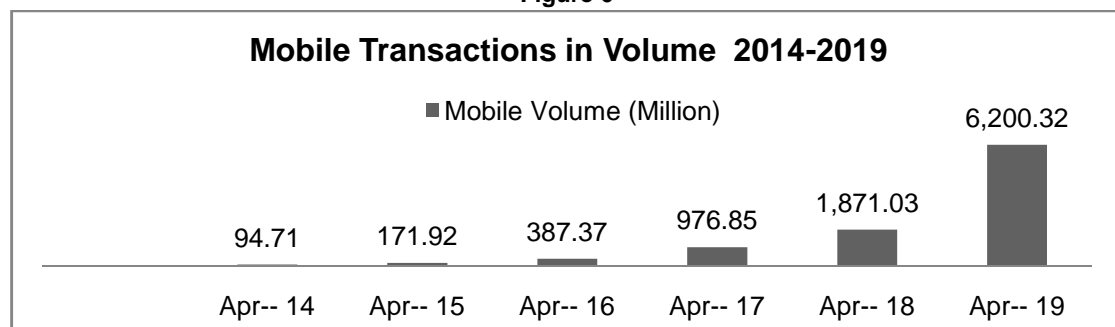
Table 6: Mobile Banking Transactions in Form of Volume and Value 2014-2019

Year	Mobile Volume (Million)	Growth Rate	Mobile Value (Billion)	Growth Rate
April 2014	94.71	-	224.18	-
April 2015	171.92	81.52%	1,035.30	361.82%
April 2016	387.37	125.32%	4,022.04	288.49%
April 2017	976.85	152.18%	13,104.76	225.82%
April 2018	1,871.03	91.54%	14,692.51	12.12%
April 2019	6,200.32	231.39%	29,584.07	101.36%
Total	9702.2		62662.86	
Average	1617.03333		10443.81	
CAGR	130.78%		165.52%	

(Source: Data collected from [https://www.rbi.org.in/publication/monthly/RBI bulletin](https://www.rbi.org.in/publication/monthly/RBI%20bulletin) and Researcher own Calculation)

The Table and Figure 6 shows the Mobile Banking Transactions in forms of Volume (Million) and Value (Billion) made by banks from the year 2014 to 2019. From the below table we can observe that Mobile banking transactions increased significantly over a period of time. The Overall Compounded Annual Growth Rate of volume and value of mobile banking transactions shows 130.78 percent and 165.52 percent Growth Respectively.

Figure 6



M- Wallets

Mobile wallet is an Application which can be installed on a Smartphone. Mobile Wallet is a type of Payment Service through which individuals can receive and send Money by using Mobile Device. The mobile wallet stores the information of user credit card or debit card. Mobile wallet can be used at merchant listed under the mobile wallet service provider.

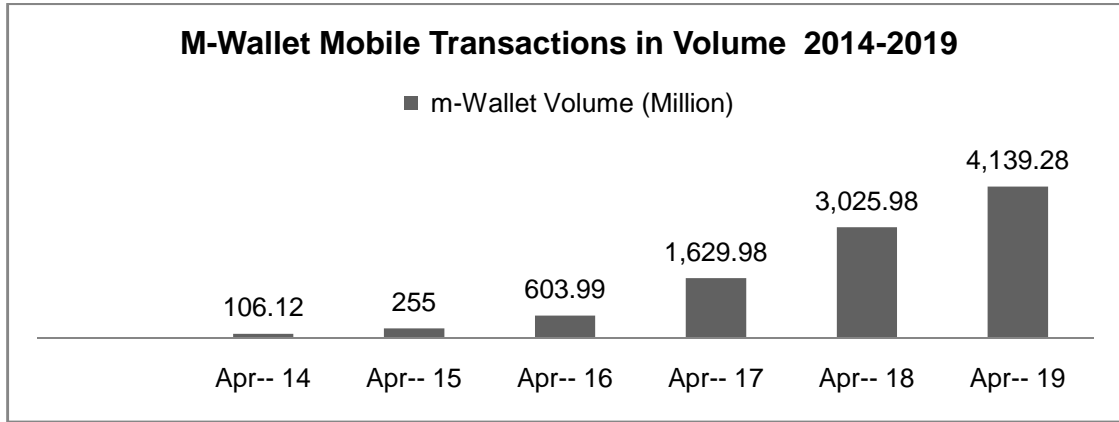
Table 7: M-Wallet Transactions in Form of Volume and Value 2014-2019

Year	M-Wallet Volume (Million)	Growth Rate	M-Wallet Value (Billion)	Growth Rate
April 2014	106.12		27.47	
April 2015	255.00	140.29%	81.84	197.93%
April 2016	603.99	136.86%	205.84	151.52%
April 2017	1,629.98	169.87%	532.42	158.66%
April 2018	3,025.98	85.65%	1,086.75	104.12%
April 2019	4,139.28	36.79%	1,836.55	68.99%
Total	9760.35		3770.87	
Average	1626.725		628.4783333	
CAGR	108.09%		131.76%	

(Source: Data collected from [https://www.rbi.org.in/publication/monthly/RBI bulletin](https://www.rbi.org.in/publication/monthly/RBI%20bulletin) and Researcher own Calculation)

The given table and Figure 7 shows the M-Wallet transactions in forms of Volume (Million) and Value (Billion) made by banks from the year 2014 to 2019. We can observe that M-Wallet transactions increased over a Period of time in the forms of Volume as well as Value. The overall Compounded Annual Growth Rate of Volume and Value of M-Wallet transaction shows 108 percent and 131.7 percent Growth respectively.

Figure 7



Point of Sale

POS stands for Point of Sale. At POS an Electronic device is used to conduct the Transaction between the Merchant and the Customer. At POS the Merchant calculates the amount owed by the Customer. The customer debit or credit card is used for the payment at the point of transaction. After Receiving the Payment the Merchant may issue the Receipt or sent it electronically. The overall Compounded Annual Growth Rate of Point of Sale transaction shows 28.41 percent Growth respectively.

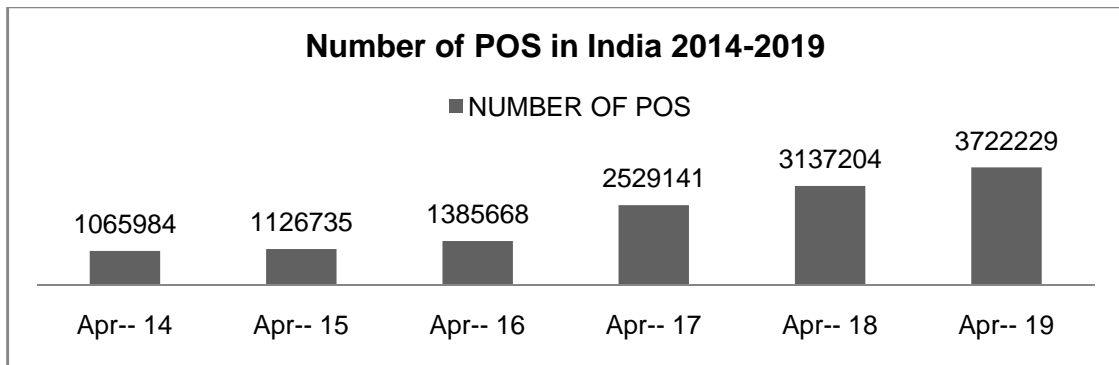
Table 8: Number of POS 2014-2019

Year	Number of POS	Growth Rate
April 2014	1065984	-
April 2015	1126735	5.70%
April 2016	1385668	22.98%
April 2017	2529141	82.52%
April 2018	3137204	24.04%
April 2019	3722229	18.65%
Total	12966961	
Average	2161160.17	
CAGR	28.41%	

(Source: Data collected from [https://www.rbi.org.in/publication/monthly/RBI bulletin](https://www.rbi.org.in/publication/monthly/RBI%20bulletin) and Researcher own Calculation)

The given Table and Figure 8 show the Increase in Number of POS deployment by the banks in India from the period 2014 to 2019. It is clear from the table and Figure that the Number of POS deployed by the banks has increased from 10.6 Lakhs to 37.2 Lakhs between the Periods 2014 to 2019.

Figure 8



Analysis of Positive and Negative Impact of Demonetization in India

On the Basis of Table and Figures we have analysed in our Research, we can show the Positive and Negative Impact of Demonetization in India on various Digital Banking Services for the period of April 2014 to April 2019 with the help of table:

Mode	Positive Impact			Negative Impact		
	2017	2018	2019	2017	2018	2019
ATMS	✓		✓		✓	
Debit Cards	✓	✓	✓			
Credit Cards	✓	✓	✓			
NEFT	✓	✓	✓			
RTGS	✓	✓	✓			
Mobile banking	✓	✓	✓			
M-wallet	✓	✓	✓			
POS	✓	✓	✓			

Factors Influencing E-Banking Success

The factors such as user friendliness of the website, simplicity and ease to operate influences Online Banking and Mobile Banking adoption in India. Indian Banking Industry has identified the importance of digital banking and use of technology in their system, which has played a big role in increasing customer satisfaction. Digital banking provides benefits to the customers in terms of saving cost and time in going to the bank, waiting in queues etc. Banks have encouraged their customers to use Online Banking and Mobile Banking frequently for their banking needs.

Conclusion

Internet Banking and Mobile Banking Services are available to everyone who has a bank account. It allows the customers to easily access the bank's website using their username and passwords; and carry on with the transactions even if the bank is closed. It enables us to perform financial transactions electronically, thus avoiding long lines and other hassles. Online Payments provides greater freedom to individuals in paying for the services any time of the day, 365 days of the year, Technology has arguably made our lives easier. Internet banking services are providing more benefits to the customers than the traditional banking. Technology has come to play a significant role in the area of development of newer modes of payment and settlement. After Demonetization People have started using Digital Banking Services like Debit Card, Credit Cards, RTGS, NEFT, Mobile Banking, Point of Sales and M-Wallet. On the basis of the Research Analysis we can easily state that between 2016 and 2019 there is an increase in the usage of internet banking and mobile banking services after the announcement of demonetization by government. Thus, the results show that there is a positive impact seen on the frequency of using different internet banking services as of the result of demonetization. Traditional Banking has moved towards the Digital Banking System. Virtual Banking has given a Momentum to the banks to Provide Quality Services to its customers through Digital Technology. Thus Demonetization has made a Positive Impact in Indian Society and Customers have started using the Digital modes of Transactions.

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