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MOBILE BANKING IN INDIA: OVERVIEW AND ANALYSIS OF CURRENT STATUS

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Abstract
Contribution of mobile banking towards economic development plays a crucial role in developing countries like India. The banks are adopting IT-enabled tools and techniques for mobile banking operations which improve in offering quality service to the customers. In the recent days banks are concentrating on value-based service through M-banking. With the help of study three main reasons has been find out from several general reasons in all over India. Those three reasons are lack of awareness, unbanked villages and fear of fraud. Furthermore, mobile banking has some advantages and disadvantages due to the some disadvantages it has low adoptability. To gain insight about the mobile banking all factors effecting mobile banking in India are studied. Benefits which are to be provided to the individual under the M-banking are highlighted in the paper. The study also analyzes the awareness among the customers for internet banking in rural and urban India. The present study throws light on the growth of mobile banking and its impact which are used in the banking sector. The future prospects of mobile banking in India are also mentioned. Nowadays, mobile banking is becoming popular because of the continuous struggle of government and banks.

Keywords: Mobile-Banking, Internet, Prospects

INTRODUCTION

Technology adoption has changed the face of banking in India. It started as mere automation of some routine work processes in banks in the mid-eighties, now it has moved on to become business process reengineering which has resulted in making banking services branchless, anytime and anywhere, facilitated new product development, and enabled near real time service delivery. Technology has helped banks to reach the customer by overcoming the limitations of geographical/physical reach in branch banking. All the stakeholders have benefitted from the expansion of delivery channels, product innovation and efficiency enhancement which have been facilitated by technology adoption. Banks, however, need to be secure against losing personal contact with their customers in such a technology driven environment as this would result in their losing valuable information needed for their business. Overall, technology that began its journey in Indian banking as an enabler, has now become a business driver, and is poised to be an inseparable part of banking business process.

Meaning of Mobile Banking

Mobile phones, as a medium for extending banking services, have attained greater significance because of their omnipresent nature. The rapid growth of mobile users in India, through wider coverage of mobile phone networks, have made this medium an important platform for extending banking services to every segment of banking audience in general and the unbanked segment in particular.

In order to ensure a level playing field, Reserve Bank brought out a set of operating guidelines for adoption by banks. The guidelines, finalised following a wide consultative process with the stakeholders, were first issued in October 2008 and since then have been updated keeping in view the developments taking place.

For the purpose of the instructions contained in this Master Circular, 'Mobile Banking transaction' means undertaking banking transactions using mobile phones by bank customers that involve accessing / credit / debit to their accounts

Banks are permitted to offer mobile banking services (through SMS, USSD or mobile banking application) after obtaining necessary permission from the Department of Payment & Settlement Systems, Reserve Bank of India. Mobile Banking services are to be made available to bank customers irrespective of the mobile network.

M-banking refers to the use of the internet and mobile device to bring financial services to customers. Customers use m-banking through a USSD, SMS, or mobile app to access banking services. As a result, it has eliminated the customers' need to visit the bank branch for every other financial necessity. Mobile banking enables clients and users to carry out various transactions, which may vary depending on the M-Banking services provided by the institution. Busy lifestyle and, more recently, the COVID pandemic have forced people to opt for mobile banking. Round-the-clock banking services at the fingertips provide customers with an easy, quick, and hassle-free experience. At the same time, banks also benefit from a reduction in operating costs due to savings in time and resources.

Though beneficial, m-banking is exposed to security threats like hacking that raise safety concerns among customers. In order to secure transactions, banks keep updating the security features of their m-banking app regularly. In addition, they also use a virtual private network (VPN), biometric login, and two-step OTP-based verification to ensure safety of customers.

To access m-banking, customers must download the bank's m-banking app from the app store. Then, proceed to create an online account to register for the same. It involves answering some questions, selecting a username and password, and setting up security preferences. After that, set an MPIN to be used every time a transaction is made.

Once the bank verifies the credentials, the customer becomes the registered user and can perform all the financial transactions using the mobile app. It includes shopping online, paying utility bills, making account information inquiries, transferring funds, using forex-related services, and booking tickets.

Review of Literature

Wondwossen and Tsegai (2005) observed the following reasons for the hindrance of the use of electronic payment system in Ethiopia lack of appropriate
infrastructure for E-payment, lack of internet facilities with customer and learning how to interact with bank website. Moreover, factors that can affect adoption of Ebanking in the country are technological factor, organizational factor and Environmental factor.

Prerna Sharma Bamoriya and Preeti Singh (2011) said that from consumers' perspective mobile handset operability, security/privacy and standardization of services are the critical issues.

Rehman (2012) pointed out that the E-commerce mainly
target customers by getting closer to customers, serving them better, cost cutting, introducing new products and services and creating new opportunities through the
Internet.

Wu, *et al*., (2014) stated that the online banking makes use of electronic payment processes that allow both customers and financial institutions to perform
a wide range of banking transactions through their website. Some online banks are traditional banks which also offer online banking, while others exist only in
cyberspace and have no physical presence. Online Banking is changing the way customers interact with the banks

Obeidata and Saxena (2015) pointed out that the convenience; safety and security are the main driving factors in acceptance of the internet banking. Poor quality of internet services, slow computers, absence of direct contact with the bank officials, lack of familiarity with computers and internet are the main barriers in
the growth of internet banking in Dubai. Finally, the study suggests measures to improve banking operations with the use of internet banking in Dubai.

Navpreet Kaur, *et al*., (2015) revealed that the comparison of traditional banking of online banking, it is quite difficult, if not impossible, to suggest that which online banking is best. Online banking provides the flexibility, efficiency of work, provide the better security of net banking than net banking increased.

Alain Yee-Loong Chong(2015) aim to empirically examine the factors that affect the adoption ofonline banking in Vietnam. Perceived usefulness, perceived ease of use, trust and government support were examined to determine if these factors are affecting online banking adoption.

Khan, M.S., Mahapatra, S.S. and Sreekumar (2016) in a study evaluated the quality of internet banking services in India from customers‟ perspective. The analysis showed that the customers are satisfied with the quality of service on four dimensions such as reliability, accessibility, privacy and responsiveness, but least satisfied with user friendliness. The study provides guidelines to bankers to focus on user friendliness to improve upon internet banking.

RESEARCHOBJECTIVE

- To gain insight about the mobile banking in India.
- To study the growth pattern of M-Banking
- To gain insight about the future prospects of mobile banking in India
- To study the benefits which are to be provided to the individual under the M-banking.
- To analyze the awareness among the customers for internet banking in rural India.
- To analyze the awareness among the customers for internet banking in urban India.

History of Mobile Banking

Before the introduction and enablement of mobile web services in 1999, mobile banking was completed primarily through text or SMS; it was known as SMS banking the earliest form of m-banking was performed using SMS in the 1990s. Banks in Europe were on the frontier of mobile banking service offering, using the mobile web via WAP support in 1999.

In the year 1994 India was licensed to provide cellular mobile services granted by the government of India for the Metropolitan cities of Delhi, Mumbai, Kolkata and Chennai. Kolkata became the first metro to have a cellular network in 1995.

- SMS banking and mobile web were the most popular mobile banking products before 2010. But after 2010, the advent of the following factors revolutionized the m-banking completely. the launch of web-based and mobile-based applications for banks on Android and Development of iOS by Apple and Android by Google for smart phones
- Emergence of web-based technologies (WBT) like CSS3, HTML 5, and JavaScript

With the development of smart phones with iOS or Android operating systems, mobile banking applications (apps) began to evolve. Clients were able to download the banking apps onto their smart phones with more sophisticated interfaces and improved transactional abilities.
To date, many financial institutions make use of both SMS and mobile applications to keep their clients informed of their account activities or to send out alerts regarding possible fraud and/or updates and maintenance of service provision. The enhanced functionality of apps with easy accessibility worked as bait for the customers. Thus, over the years, these m-banking apps emerged as the new normal globally.
Importance of Mobile Banking In India

Mobile banking allows consumers to be able to access banking services from anywhere. Businesses and business owners are now able to save time by making use of mobile applications to process their payments or even receive funds from clients directly to their phone numbers.

With mobile technology, banks are able to cut down on operational costs while still maintaining client satisfaction. The fact that any client of a bank can make use of their app to request a service, such as opening an account or even the ability to schedule debit orders or other payments from an application, allows for larger transactional volumes, eventually driving business growth.

Following points list the importance of mobile banking in India:

- Through mobile banking, customers would be able to conduct transactions safely
- One can transfer money digitally at any time and from anywhere
- With 24/7 availability, mobile banking can be carried out anytime and anywhere One can avail of a number of different banking services through internet banking
- Mobile applications save time and effort compared to traditional banking.
- Money transfers are done in a transparent way, with the source clearly defined through mobile banking.
- Mobile banking enables one to receive mobile notifications from time to time regarding the status of one's account balances, money transfers, etc.
- M-Banking facilitates larger transactions to be done within seconds.
- Mobile banking enables one to pay one's bills without the need to go out physically
- Allows one to view all one's transactions clearly in one place so that one can keep a track of one's finances
- There is no need to get one's bank statements updated physically with internet banking
- One can get offers, discounts on purchases and transactions
- Internet banking works instantly, allowing one to conduct monetary transactions within seconds
- One also get several value-added services with internet banking such as mobile recharges, bill payments, etc.
- One can also use mobile banking for investment purposes in the form of securities, pension accounts, etc.

Mobile Banking Features

M-banking has features that ensure customers can access their accounts and carry out financial transactions on the go. Some key features of m-banking are:

- *Accessibility*

M-banking offers 24-hour access to all customers. Customers can log in to their app and view and track their account balances anytime anywhere. Besides, they can engage in fund transfers even during bank holidays.

- *Security*

The banks recognize the importance of providing a secure environment to customers for transactions based on the banking app. Hence, m-banking asks for SMS access, location access, biometric access, and application password from the customers to ensure their privacy and security.

- *Transferability*

Transferring funds from one bank account to another is the most basic m-banking activity. All the banking app-based transfers are now secured using two-step verification via app password and OTP-based transactions. The two-step verification is applicable in fund transfers, utility bill payments, and online shopping for the safety and convenience of customers.

- *Investment Management*

Many big banks offer the facility of securities trading through their banking app. It makes it easier for the customers to trade hassle-free. Also, m-banking enables customers to track their deposits and other investments from the convenience of their homes.

- *Digital Payments*

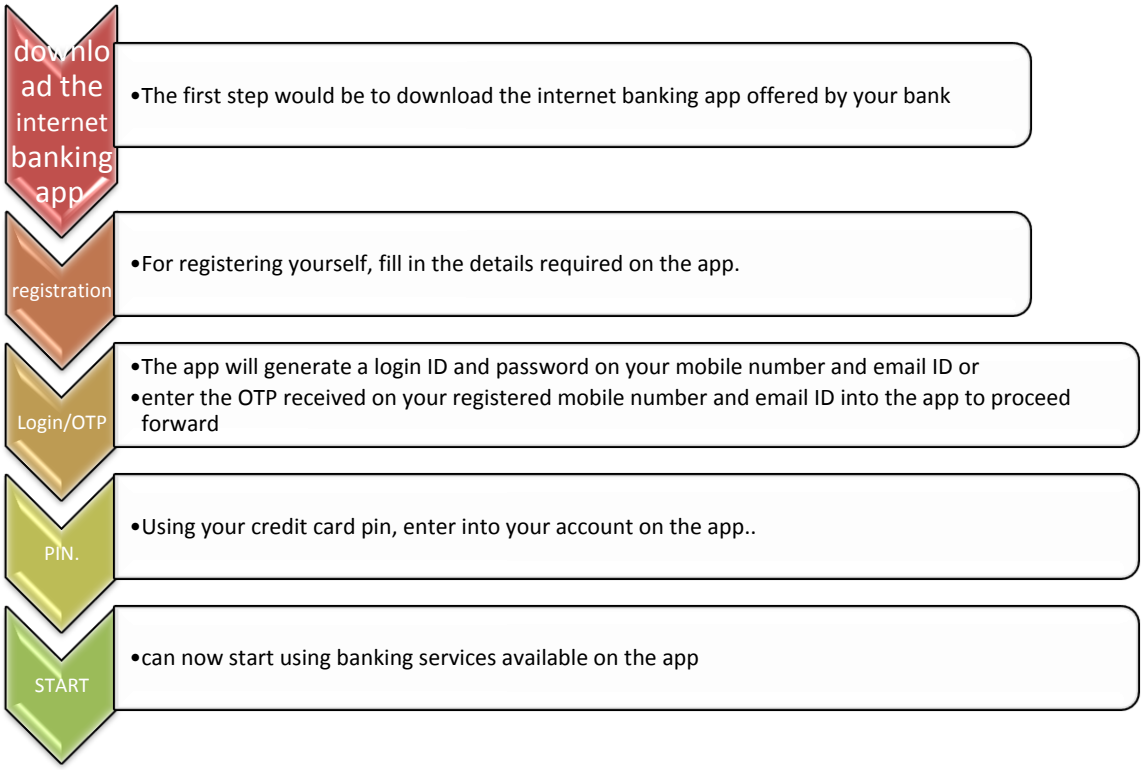
At present, all m-banking apps have a QR code reader for payment at merchant locations. So the customer has to point at the QR code of the merchant at their shops and pay the price of the goods using the account details from the QR code.

- *Customer Service*

M-banking provides personalized service to customers through live chat, phone, notifications, etc. This helps customers to get the required assistance without visiting the bank directly.

Registration Process for Mobile Banking

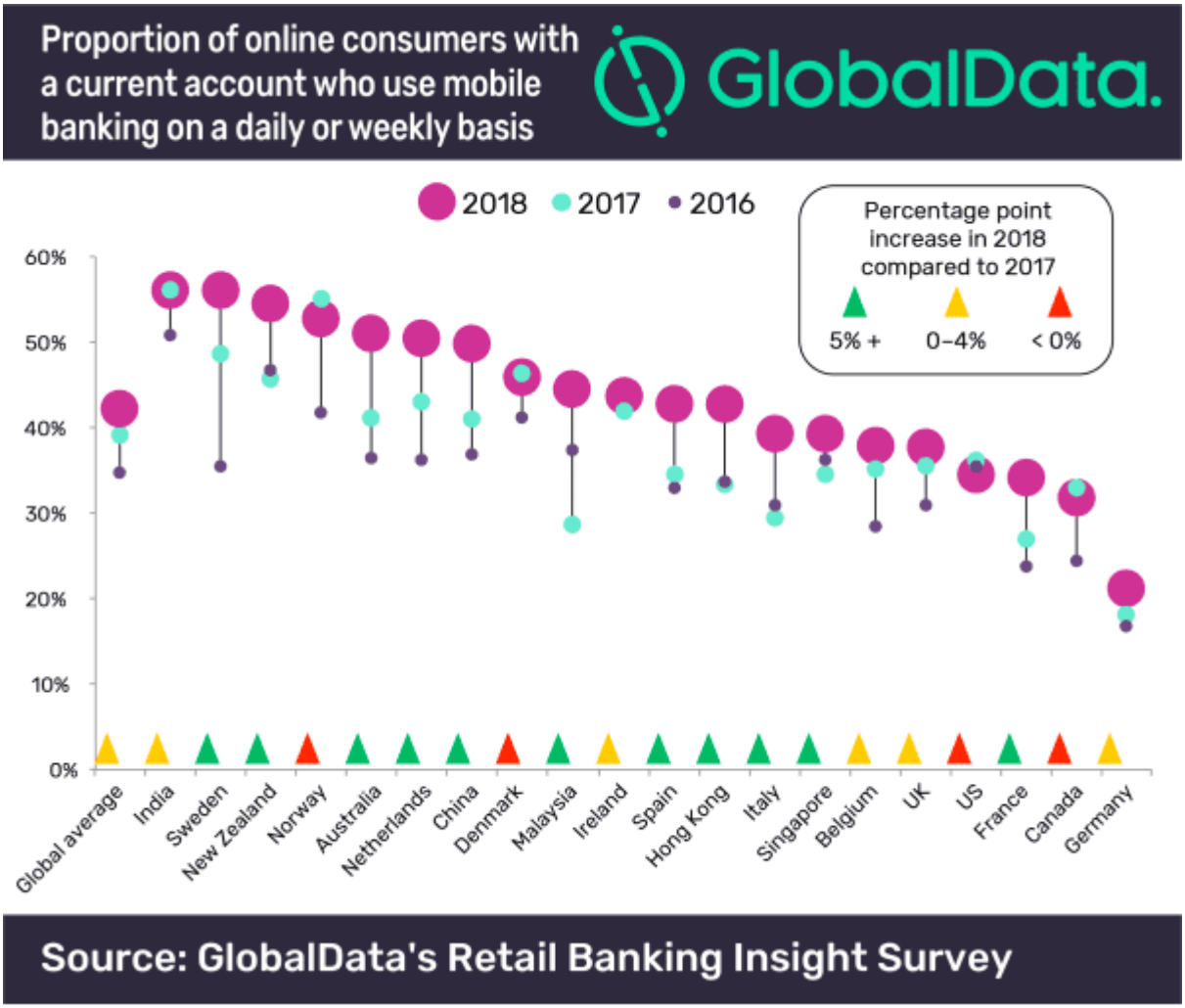
Mobile banking registration is extremely simple and straightforward. One's bank or financial institution can be reached to learn more about the entire process. The basic steps involved in registering for internet banking are:



M-Banking Around The World

India leads the world for regular mobile banking usage as a proportion of online consumers with current accounts, while Sweden has risen to second place in the global rankings thanks to the fastest growth of any country between 2016 and 2018, according to leading data and analytics company GlobalData.

Consumers in the majority of global markets, both developed and developing, are using mobile banking services more often than ever before. In 11 of the 20 countries covered by GlobalData's Annual Retail Banking Insight Survey, the proportion of online consumers who use mobiles for banking at least once a week increased by at least five percentage points between 2017 and 2018.



Overall, the global proportion of frequent mobile banking users witnessed a 3% growth from 39% in 2017 to 42% in 2018, but there was significant regional variation.

Malaysia, Australia and Italy saw the biggest increases from 2017 to 2018, all having registered double-digit growth. Over the two-year period from 2016, Sweden witnessed the biggest gains, driven by the efforts of its banks and regulators to encourage a cashless society.

At the other end of the scale, India, Norway, Demark, Canada and the US all registered negligible or negative growth.

Daoud Fakhri, Principal Financial Analyst of Retail Banking at GlobalData, says: "India maintains a leading position, bolstered by the government's demonetization program and the rapid uptake of Paytm's mobile wallet.

"However, Germany remains a significant outlier as use of mobile banking is far lower than in any other market, and there has been virtually no growth in recent years."

The Growth of M-banking in India

Traditional method of banking over branch banking was adopted by banks till 1990. After financial reforms, the banking business also observed the innovative movement of banking services. To cope up increasing overload and incompatibility of the manual system the Indian banking sector had to accept computerisation in 1993, more out of sheer compulsion and necessity to sustain further growth.

The employees' association of the Indian banks (IBA) contracted an agreement in 1993, with the bank management about the introduction of computerised application in banks. This agreement proved to be a major breakthrough in the introduction of computerised applications and the development of communication networks in banks.

- The first initiative in the area of bank computerisation, however, stemmed out of the landmark reports of the two committees headed by former RBI governor, Dr. C Rangarajan. Both the reports had strongly recommended- "computerisation of banking operations at various levels and suggested appropriate architecture."
- In the year 1994 Reserve bank of India created a committee under the head of W. S. Saraf, the committee strongly recommended the use of electronic fund transfer (EFT), the introduction of electronic clearing services and extension of Magnetic Ink Character Recognition (MICR) beyond metropolitan cities and branches.
- TRAI was set up in the year 1997 for the regulation of telecommunication sector in India.
- In 1996 Industrial Credit and Investment Corporation of India was the first to use electronic banking in India by introducing online banking services in branches.
- Its initiatives were followed by HDFC Bank, IndusInd Bank and Citibank, who started provided online banking facilities in 1999.
- In March 1999 National Telecom Policy (NTP) was announced.
- The government of India passed the IT Act, 2000 which delivers a legal acknowledgement to e-transactions and E-commerce.
- In 2003 CDMA network was launched.
- In 2004 Broadband policy was announced.
- Mobile phone subscribers had reached 100 Million by 2006.
- In 2008, RBI issued operative guidelines for banks for mobile banking transactions in India.
- By the year 2009, wireless subscriber base crossed 400 million
- Reserve bank of India and government of India have been taken various initiatives for the expansion and smooth functioning of electronic banking in India.
- At present wireless mobile phone subscribers are 867 Million i.e. it has almost doubled in the last four years.

The significant technical growths viewed in the new age payment structures in India are:

1980 to 1990's	Arrival of debit card and credit card
1984 to 1988	From Banks started using computers, MICR cheques were introduced.
In 1987	HSBC is the first bank to introduce the ATM concept in India
In 1990	ECS payment was introduced in India by the RBI
In 1991	India joined Society for Worldwide Interbank Financial Telecommunication.
In 1997	Shared payment network system has been set up
In 1999	A pilot project for Smart cards conducted jointly by Reserve bank of India, IIT (Mumbai) and IDRBT, Hyderabad
In 2000	Information Technology act was passed
In 2002	mobile banking was started in India by way of SMS banking
In 2003	Introductions of Special Electronic fund transfer
In 2004	– Introduction of Real-time gross settlement
In 2005	overall 11 Percent of branches of public sector banks have been brought under Core banking solutions and the introduction of national electronic funds transfer.
In 2007	the payment and settlement system act, 2007 was passed
In 2008	Introduction of Cheque truncation system and operative guidelines on mobile banking transactions were issued.
15. In 2009	Free cash withdrawal from ATMs.
In 2010	Introduction of Immediate payment service
In 2016	Bharat bill payment system & Unified Payments Interface is stated in banks across the country started to upload their interface in August 2016.
In 2016	Bharat Interface for Money (BHIM) is a mobile app developed by National Payments Corporation of India (NPCI), based on the Unified Payment Interface (UPI).

FINDINGS

The Indian telecom sector is the second largest in the world in terms of the number of subscribers. The sector has witnessed exponential growth over the last few years as a result of many factors such as affordable tariffs, wider service availability, rolling out of new facilities and services such as 3G and 4G, evolving consumption patterns of subscribers, and conducive regulatory environment. At the end of March, 2021, the subscriber base was 1201.20 million, out of which 1180.96 million were wireless subscribers. During the year, wireless subscriber base recorded an increase of 23.21 million, with the overall telex-density of 88.17% at the end of March, 2021. During the year 2020-21, 89.33 million subscribers submitted their porting requests for availing Mobile Number Portability (MNP) facility. With this, the cumulative MNP requests increased from 487.33 million at the end of March, 2020 to 576.66 million at the end of March, 2021, which shows that subscribers are exercising their preferences of service providers. The Internet subscriber base in the country as on 31 March, 2021 stood at 825.30 million as compared to 743.19 million as on 31 March, 2020. The total broadband subscriber base in the country has increased from 687.44 at the end of 31 March, 2020 to 778.09 at the end of March, 2021.

At the end of the financial year 2020-21 the overall telecom subscriber base reached 1201.20 st million in comparison to the subscriber base of 1177.97 million as on 31 March, 2020 registering an increase of 23.23 million subscribers during the financial year 2020-21. The overall subscriber base and tele-density is depicted in

Table-1 : Overall Subscriber base and Tele-density

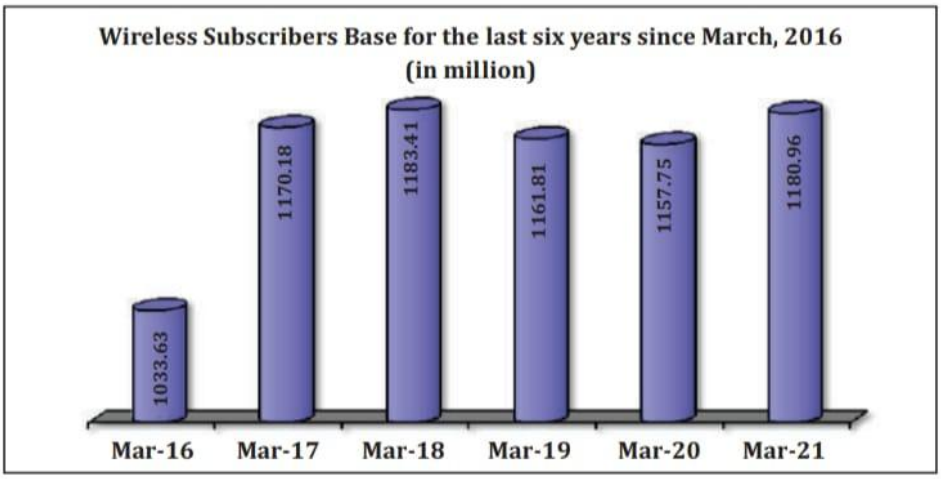
Particulars	Wireless	Wireline	Total (Wireless+Wireline
Total Subscribers (million)	1180.96	20.24	1201.20
Urban Subscribers (million)	645.20	18.57	663.77
Rural Subscribers (million)	535.75	1.67	537.42
Overall Tele-density	86.68%	1.49%	88.17%
Urban Tele-density	137.08%	3.95%	141.03%
Rural Tele-density	60.08%	0.19%	60.27%
Share of Urban Subscribers	54.63%	91.76%	55.26%
Share of Rural Subscribers	45.37%	8.24%	44.74%
No. of Internet Subscribers (Million)	799.30	25.99	825.30
No. of Broadband Subscribers (Million)	755.35	22.75	778.09

The details of subscriber base in wireless & wireline segments; requests for Mobile Number Portability (MNP); Tele-density; Internet subscribers and Quarterly Telecom Services Performance Indicators are explained in subsequent paragraphs.

Wireless subscriber base

The wireless subscriber base was 1180.96 million at the end of 31 March, 2021 in comparison to the subscriber base of 1157.75 million as on 31 March, 2020 registering an increase of 23.21 million subscribers during the financial year 2020-21. The status of wireless subscriber base during the last 6 years is depicted in the Figure-1. Fi

Figure-1 : Wireless Subscriber Base for the last six years since March, 2016 (in million)



The highlight of the press release on the Telecom Subscription data as on 31 March, 2021, is given as under table 2:

Particulars	Wireless	Wireline	Total (Wireless+Wireline)
Total Telephone Subscribers (Million)	**1180.96**	**20.24**	**1201.20**
Net Addition in March, 2021 (Million)	13.25	0.05	13.30
Monthly Growth Rate	1.13%	0.26%	1.12%
Urban Telephone Subscribers (Million)	**645.20**	**18.57**	**663.77**
Net Addition in March, 2021 (Million)	5.96	0.10	6.06
Monthly Growth Rate	0.93%	0.53%	0.92%
Rural Telephone Subscribers (Million)	**535.75**	**1.67**	**537.42**
Net Addition in March, 2021 (Million)	7.29	-0.04	7.24
Monthly Growth Rate	1.38%	-2.60%	1.37%
Overall Tele-density*(%)	**86.68%**	**1.49%**	**88.17%**
Urban Tele-density*(%)	137.08%	3.95%	141.03%
Rural Tele-density*(%)	60.08%	0.19%	60.27%
Share of Urban Subscribers	54.63%	91.76%	55.26%
Share of Rural Subscribers	45.37%	8.24%	44.74%
Broadband Subscribers (Million)	**755.35**	**22.75**	**778.09**

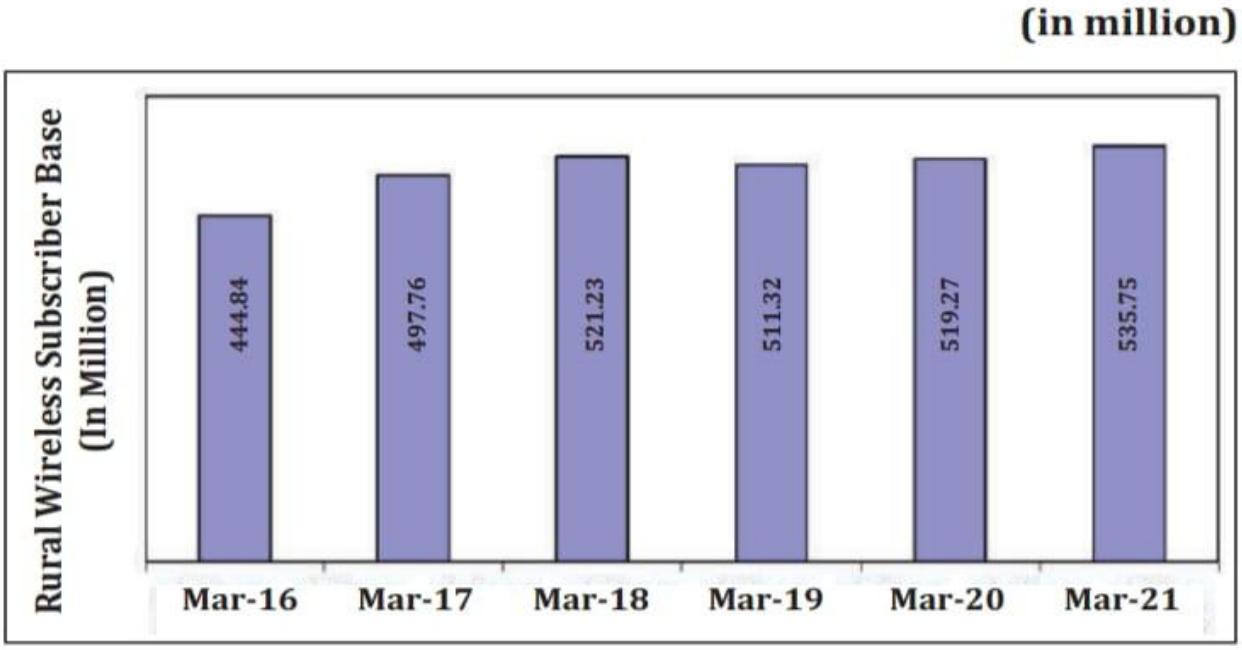
Source: annual report TRAI 2022

In the month of March, 2021, 12.74 million subscribers submitted their requests for Mobile Number Portability (MNP). With this, the cumulative MNP requests increased from 563.92 million at the end of February, 2021 to 576.67 million at the end of March, 2021, since implementation of MNP. Number of active wireless subscribers in March, 2021

Rural Telephone Network Wireless

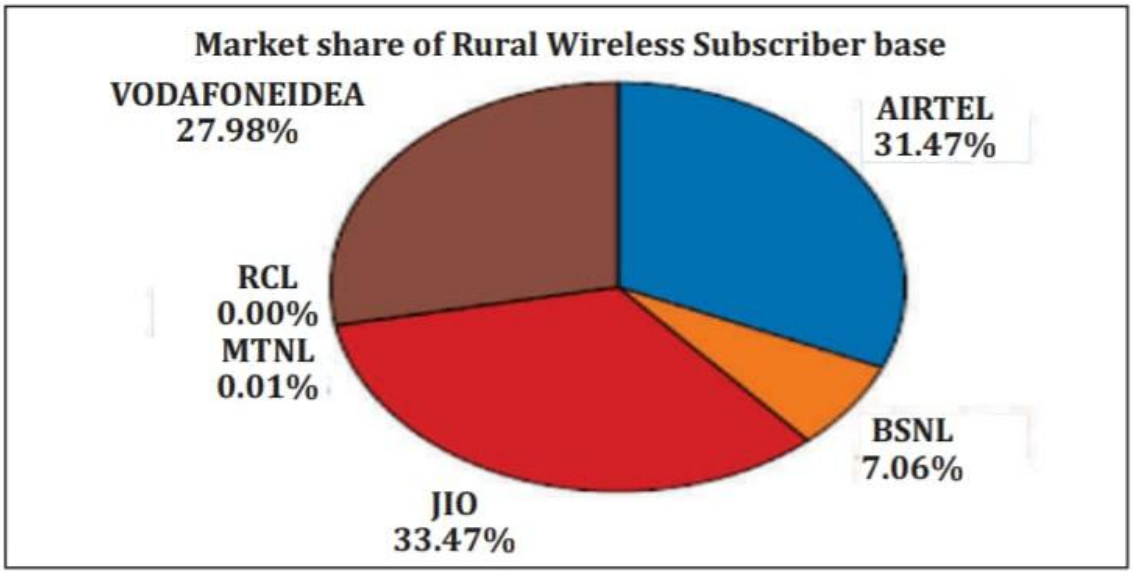
As on 31 March, 2021, the Wireless rural [Mobile and WLL (F)] subscribers increased from 519.27 million as on 31 March, 2020 to 535.75 million at the end of 31 March, 2021. The share of rural subscribers is now 45.37% of total wireless subscribers. The rural wireless subscriber base since March, 2016 is indicated in Figure-2

Rural Wireless Subscriber Base Since March, 2016



The service provider wise rural wireless subscriber base & their market shares are shown in figure :3

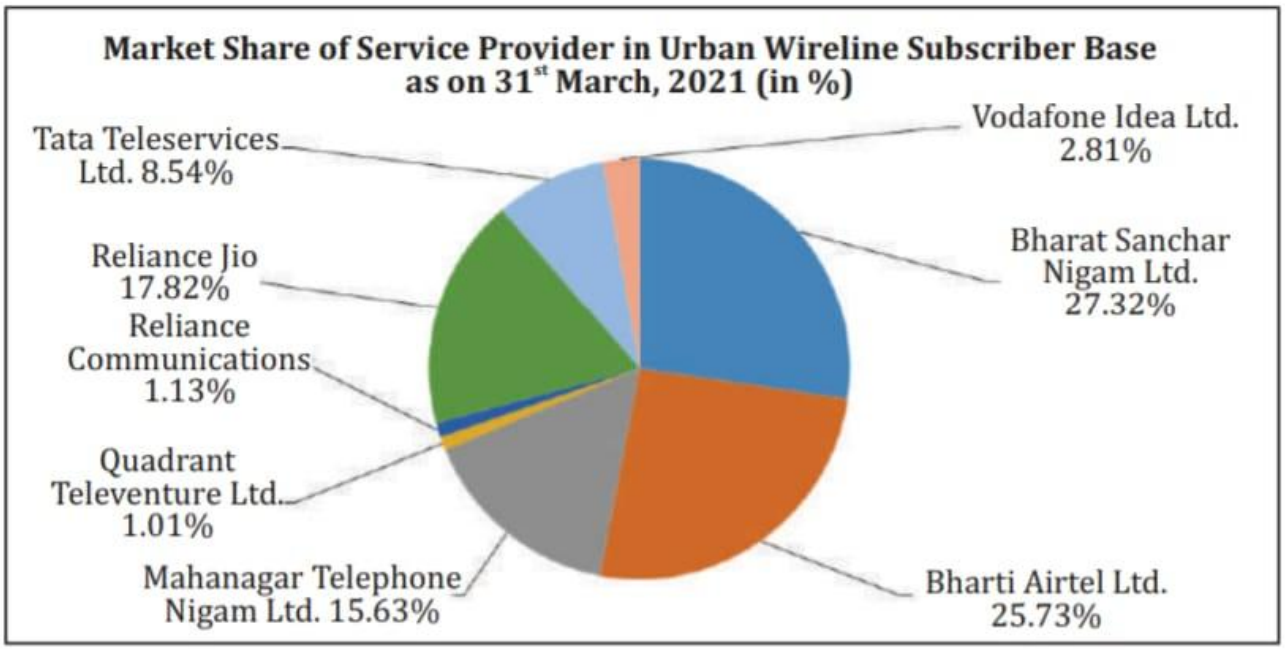
Market share of Rural Wireless Subscriber base as on 31st March, 2021(in %)



Urban Wireless Base

As on 31 March, 2021, the total urban wireline subscribers were 18.57 million, out of which about 42.96% are provided by BSNL/MTNL. The market share of different wireline service providers in urban areas is depicted in the figure 4

Composition of share of Wireless Subscriber Base in Urban areas



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Scope Of Mobile Banking In India

There is a great scope of mobile banking in India as the number of mobile users is increasing. This is because of an increase in the number of wireless internet user subscriber base in India i.e. 143.2 Million18. In the year 2008, 3G was launched by MTNL (Mahanagar Telephone Nigam Ltd.) and IMPS (Immediate Payment Service) was also launched in 2010. After these initiatives and developments by RBI, mobile banking services have increased many folds and RBI issued the guidelines for banks to provide mobile banking services in India in the year 2008. These are:

- Only such banks which are licensed and supervised in India and have a physical presence in India will be permitted to offer mobile payment services to residents of India.
- The services should be restricted to only to bank accounts/ credit card accounts in India which are KYC/AML compliant.
- Only Indian Rupee based services should be provided Banks may use the services of business correspondents for extending this facility, to their customers. The guidelines with regard to use of business correspondent would be as per the RBI circulars on business correspondents issued from time to time.

• The 'Risks and Controls in Computers and Telecommunications' guidelines will equally apply to mobile payments.

• The "Know Your Customer (KYC)" and "Anti Money Laundering (AML)" as prescribed by RBI from time to time would be applicable to customers opting for mobile based banking service.

Challenges in Adopting Mobile Banking

Now a day's electronic banking is a norm rather than an exception for the banks. But in spite of it offers numerous assistances for the customer to make banking easy and convenient but there are many challenges which customers are facing in the adoption of electronic banking. Some of the challenges are as stated below:

1. Customers refuse to adopt electronic banking service because of Security threat electronic banking frauds like spyware, Phishing, internet theft Spamming etc. are still very much widespread.
2. Customers are having a threat of loss of private information due to technical faults.
3. Insufficient knowledge of using electronic banking and lack of preparedness by customers and banks in technological adoption.
4. Insufficient infrastructure for the setting up of electronic delivery networks
5. The bank's management, supervisor and governing authorities are facing several challenges in adoption of M-banking.
6. The risk of revealing the financial information of the customers with others hence Customers is having a fear of privacy issue.
7. Communication through an internet might not be the best base for bank and customer relations as belief might partially be lost.

TIPS FOR ONLINE BANKING

Internet banking comes with its share of flaws and it is essential to be aware of the precautions that can avoid one in landing in any undesired scenario:

 Do not use shared computers when accessingone's account

 Do not access one's bank account using vital passwords at internet cafés/parlors or any other public places to avert the potential duplication of one's personal/bank data.

 Contactone's bank immediately if one doubt any changes in one's banking password.

 Modify password frequently.

 Always logoff from one's internet banking account and close the internet browser after accessing the information.

FINDINGS of the Study:

- It has been found that 90% of the bank customers are aware of M-banking concept in urban India.
- It has been noticed that 10% of the customers are such who are not aware of the various facilities which come under the umbrella of M-banking in urban India.
- It has been found that 40% of the bank customers are aware of M-banking concept in rural India.
- It has been noticed that 60% of the customers are such who are not aware of the various facilities which come under the umbrella of M-banking in rural india
- It has been observed that banks are showing a lot of interest to induce its customer to use internet banking.
- It has been found that 40% of customers are aware about e-banking concept but still somewhat feel hesitant to make full use of internet banking facilities.

- It has been observed that cooperative banks are lagging behind in providing net banking facility.

- It has also been observed that despite being educated, there is a class of bank customer who find M- banking to be "unsafe".

Conclusion

Mobile- banking has given a momentum for banks to provide quality service through Information technology. We are moving towards a cashless society with the help digitalization and it is going to be strengthening the bank's performance. Nowadays, banks have realized that the success of a banking system without Information technology and it has expanded the role of the banking sector in the economy. All the banking transactions can now be processed quickly and easily with the help of electronic banking. As can be observed from data given above, be it ATMs deployment, issuing of debit and credit card, transactions relating to NEFT, RTGS, Mobile banking (Values and Volumes) we can observe the growth in recent years. The young generation has accepted the changes of the banking system for more as a convenience more than a challenge.

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