



STUDY ON ROLE OF MOBILE BANKING IN EVOLVING FINANCIAL INCLUSION IN INDIA

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Abstract The convenience of mobile banking services is well recognized. The expansion of this platform onto mobile networks in India and the rising number of users have made it a viable option for the financially excluded. While the high costs of establishing an online marketplace have kept most people out, the widespread availability of mobile phones has made it possible for everyone to participate in the global marketplace. mobile payments, mobile microfinance, and mobile banking will be the three distinct subsets of mobile financial services (payment of bills or account information like account balances or notifications). Business needs and preferences, mobile technological infrastructure, the development of economic services, and the regulatory environment in each given market all have a role in shaping the kind and scope of available services.

Keywords: mobile, technology, transactions, services, finance, etc.

Introduction As technology progresses, we may start to witness the impact of mobile banking options. The software in a mobile device is crucial to the creation of apps that provide quick access to a wide range of services. A bank or other financial institution may provide customers remote access to their accounts through mobile devices like smartphones and tablets via a service known as mobile banking. The app or software provided by the financial institution is frequently used for this purpose. Most mobile banking services are available around the clock. Mobile banking is a convenient way to bank on the go, however some financial institutions impose transaction limits that customers may check at any time. Payment of bills and transfers across accounts are only a few examples of the mobile banking features available to customers. Some financial institutions demand a fee for printed statements, but there are alternative apps that allow you to download and print information for your clients. Banks may save money on transaction processing thanks to mobile banking since customers no longer need to visit a branch to make cashless withdrawals and deposits. If you need to make a cash deposit or withdrawal, you'll need to go to an ATM or branch instead of using your mobile banking app. The camera on the mobile device may be used to digitally transfer paper checks to the bank, making international deposits possible with an increasing number of apps. Smartphones, personal digital assistants, wireless tablets, and anything else that can access and make payments via a cellular network are all considered mobile gadgets. The full realisation of mobile payments will be made possible through hitherto unanticipated channels of convenience. Unthinkable advances in technology are not out of the question. If mobile payments become commonplace and convenient, a broad variety of uses, such as those involving music, on-demand video, mobile portable services, travel brokerage, lodging, and entertainment, might



emerge. Mobile payments may be supplemented with cash, checks, credit cards, or debit cards. Electronic funds transfer, online banking payments, direct debit, and electronic billing are all examples of account-based payment instruments that may be used to pay bills (especially utilities and insurance premiums). The rural poor in India may see huge changes as a result of the travel revolution, which has already begun there. In India's rural areas, even those with mobile phones can't get a bank account. The gap is widening. India's mobile market has grown faster than any other in the globe during the last decade, thanks to intense competition and new technologies in the telecommunications sector. As mobile phone use increases, so does the potential for mobile banking to expand.

Mobile Banking Services

For the purposes of this article, mobile banking will be understood to include the delivery of financial and banking services through mobile telephones. Banking and stock market transactions, account management, and access to personal information may all be part of the services on offer.

Advantages of Mobile Banking

Educating more customers is one potential solution to the problem of poor customer service. Mastercard fraud is one example. When a customer spends a particular amount using their card via mobile device, the issuing bank may contact them. The cardholder will always be aware of when and for how much his card has been used. In a similar vein, the bank may contact customers to remind them of upcoming loan refunds, payment deadlines, or simply that a bill has been received and is due. After that, the client may use the phone to check their account balance and authorize the necessary payments. Customers may also ask for further materials. "They will be able to view all deposits, withdrawals, and payments made or checks written ahead of schedule. Check halting and check book issuance are two further examples of services that customers may request through cell phone.

Mobile Banking in India:

The use of mobile banking applications has increased in popularity throughout the world. As mobile network use and coverage grow in India, this platform is becoming a crucial channel for reaching the country's unbanked population. While the convenience and low cost of online transactions have kept most people from taking advantage of them, mobile commerce can reach everyone with a phone. You may classify mobile financial services as either mobile banking, mobile microfinance (loan disbursement and payments), or mobile payments (P2P, P2M, or M2M) (paying bills or account information, like account balances or notifications). Services come in a wide variety of shapes and sizes depending on the demographics of a market's customers, the state of mobile network infrastructure, the development of the financial services industry, and the prevalence of government oversight. Along with automated teller machines, online banking, and other tech-enabled services, mobile banking is one way that banks are trying to grow their businesses and attract new types of clients. Reasons for the widespread use of mobile banking include the technical viability of the service, the rapid expansion of the telecommunications industry (which has reached even remote areas), and the convenience of the convenience. Several Indian financial institutions, including State Bank of India (SBI), Union Bank of India (UBI), Punjab National Bank (PNB), HDFC, ICICI, Axis Bank, etc., now provide mobile banking services to its clientele.

Mobile Banking Adoption Issues

Users and companies that have adopted mobile banking may benefit from the industry's promising future. However, scholars have looked at a number of potential causes, and the trend is not picking up pace. The most often reported variables that affect the penetration of mobile banking services are compatibility, perceived usefulness, risk, perception of cost, low perceived relative benefit, and



complexity. There are a number of other factors that affect mobile banking, including the price of Internet access, the difficulty of the user interface, the lack of customer awareness, the restricted capabilities of mobile devices, accessibility problems, security worries, organisational shifts, a lack of options (only a select few banks offer mobile banking), and an excess of technology. The aspects that are most important in the context of Malaysia are reemphasised, including the usefulness, the convenience of use, the credibility, the amount of information on mobile credit cards, and the usage goals. They spoke about how mobile services will help them in the long run in the Netherlands. Their view is that the decision to utilise a technology is made after weighing the benefits against the drawbacks, with time consciousness acting as a moderator. The drawbacks include things like danger and cognitive labour.

The convenience and low switching costs of mobile banking have made it widely adopted. Trust, which can exist on a personal level, at the organisational level, or in the form of a third party label like VeriSign, influences the degree to which it is adopted. The quality of the information, the quality of the system, the structural assurance, and the trust propensity all contribute to the establishment of initial trust, which enables perceived utility and eventually leads to use intention. Many factors may impact initial trust, but structural assurance and information quality are particularly important. Knowledge-based trust was also examined, as were traits like competence, compassion, and integrity, all of which are related to how knowledgeable, helpful, and trustworthy a person is seen to be. Both of these are speculated to have a role in how widespread the use of mobile banking becomes. Attitude toward mobile banking use ultimately leads to the establishment of mobile banking usage behaviour intentions.

More and more people all around the world are using their mobile devices to make financial transactions. Due to the rapidly rising number of users and the expanding penetration of mobile phone networks in India, this platform has been seen as an increasingly important medium to reach individuals who do not have access to financial services. However, due of the high expenses involved with creating such channels, the vast bulk of the population does not have access to e-commerce. This is where mobile commerce comes in. This is because cell phone use has skyrocketed in recent years. Mobile Financial Services may be categorised as either mobile banking, mobile microfinance (including loan disbursement and payments), or mobile payments (P2P, P2M, or M2M) (bill pay or account information, e.g. balances or alerts). The kind and range of services offered are influenced by a number of factors, including the client base and their needs, the availability of mobile technology, the development stage of financial services, and the legal environment in a given region.

The Amazing M-Success Story Banks in other countries began exploring the possibilities of mobile banking and deploying it after seeing the success of PESAs in Kenya and a few other countries. Thanks to mobile banking, even those who reside in more remote places have easier access to banking services. This is the main advantage of using a mobile banking app. Now that mobile devices can be purchased for as little as a few hundred dollars, this is a realistic possibility even in remote areas. Increasing mobile phone usage in India may be responsible for the rapid development of the country's communication infrastructure. The proliferation of mobile networks (2G, 3G, and 4G) has created new consumer markets eager to adopt cutting-edge innovations in communication and transportation.

The impact of several mobile banking options is now observable thanks to technological progress. Applications (apps) that simplify access to various services are developed with a number of factors in mind, one of which is the operating system of the mobile device. With the use of a service known as mobile banking, customers of a bank or other financial institution may conduct financial transactions remotely using a mobile device, such as a cell phone or tablet. The bank itself or another financial



institution could provide this service. The financial institution makes use of the app-like software it provides for this purpose. Banking via mobile device is usually available 24/7.

Mobile Banking in India: A catalyst for Financial Inclusion

More and more people all around the world are using their mobile devices to make financial transactions. Due to the rapidly rising number of users and the expanding penetration of mobile phone networks in India, this platform has been seen as an increasingly important medium to reach individuals who do not have access to financial services. However, due of the high expenses involved with creating such channels, the vast bulk of the population does not have access to e-commerce. This is where mobile commerce comes in. This is because cell phone use has skyrocketed in recent years. Mobile Financial Services may be categorised as either mobile banking, mobile microfinance (including loan disbursement and payments), or mobile payments (P2P, P2M, or M2M) (bill pay or account information, e.g. balances or alerts). The kind and range of services offered are influenced by a number of factors, including the client base and their needs, the availability of mobile technology, the development stage of financial services, and the legal environment in a given region.

In order to expand their customer bases and increase profits, banks are eager adopters of new technology. In addition to ATMs, online banking, and other technologically advanced banking services, several banks now offer their customers the convenience of mobile banking. Motivating factors for the broad usage of mobile banking services include the extraordinary growth of the telecommunications sector, the widespread use of telecommunications even in rural regions, and the technological feasibility of such services. There are a growing number of Indian banks that now provide mobile banking services, including State Bank of India (SBI), Union Bank of India (UBI), Punjab National Bank (PNB), HDFC, ICICI, and Axis Bank.

Mobile banking and payments

The focus of this initiative will be mostly on mobile banking and payment, which laid the groundwork for current advancements in mobile technology. These instruments are some of the most useful innovations in the history of the financial sector. The fast development and global expansion of mobile phone technology have resulted in a remarkable drop in the price of communication, making it possible for its widespread usage in economies with low and moderate levels of income throughout the developing globe. Retail and microfinance banks in both developed and developing countries believe that mobile banking and payments will have probable major influence on the market, despite the fact that ATMs and online banking offer excellent distribution channels for conventional banking goods. The consensus of these organisations supports this.

This is due to the fact that a wide variety of people benefited from the circumstance. Use of mobile banking, for instance, will increase the flow of money, which will encourage entrepreneurship and ultimately increase GDP at the macro level. However, on a smaller scale, it will help the business and its clients by removing certain barriers. Customers often lack knowledge about the products that are available to them, as well as those that really satisfy their needs and the workings of the financial system. This is particularly true for how the economy works. Even if they are aware, the higher transaction costs—including the information cost, the trip cost, and the opportunity cost—make getting in contact with them more difficult and costly. Furthermore, most of them are working in positions where a consistent income is not ensured, making the current monetary system unsuitable for meeting their needs and worries. Anxiety over the banking system, a lack of confidence, and other comparable concerns also impede the development of an inclusive financial environment. Because of the higher



information cost and the higher accessing cost imposed by geographical constraints, serving these consumers is often more costly than service other customers.

Methodology: Quantitative research approach was adopted to check and fulfill the desired objective. A questionnaire was designed to get the specified results.

Subjects: 100 respondents of both genders were randomly selected for the study.

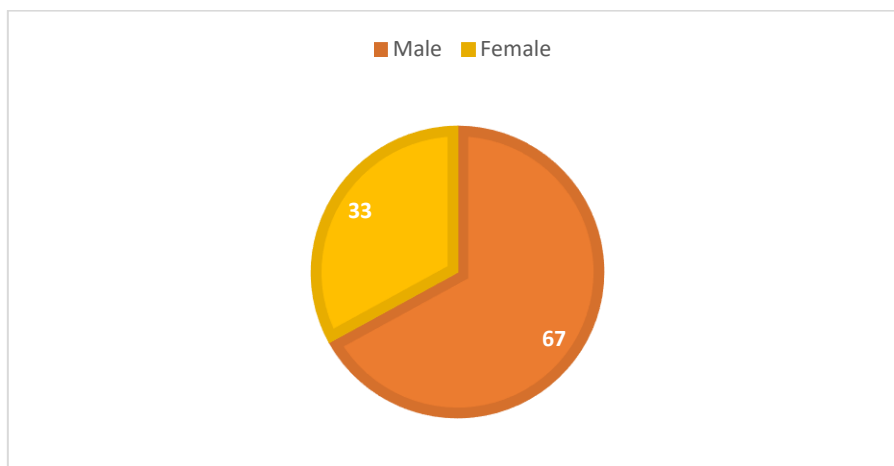
Research Area: As we've got focused our research on geographic region, got selected geographical region of District Jind in Haryana. The district is found within the north of Haryana between 29.03' and 29.51' north latitude and 75.53' and 76.47' east longitude and includes a population of about 13 lakh and 306 villages. For the study, got selected five villages namely Narwana, Uchana, Safidon, Pillukhera and Julana in Haryana State.

Demographic Profile

Only 33 percent of the final 100 responders were female, while 67 percent were classified as male. The percentage of males and females present during data collection for factor extraction and factor confirmation in order to answer research questions is shown in the table below.

Table 1 - Gender

GENDER	Frequency	Percent
Male	67	67
Female	33	33
Total	100	100



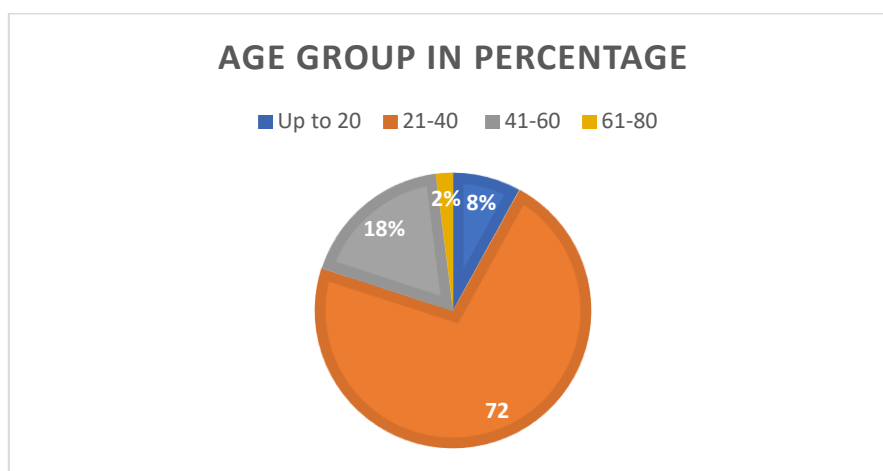
Graph 1 – Gender (in Percentage)

A gap of 20 years between recording respondents' ages has been mandated. Ages have been categorised as follows: 0-20, 21-40, 41-60, and 61-80. You can see the breakdown of responders by age range in the table below. According to the data in the table, 72% of the respondents were between the ages of 21 and 40.



Table 2 – Age Group

AGE	Percent	Frequency
Up to 20	8	8
21-40	72	72
41-60	18	18
61-80	2	2
Total	100	100

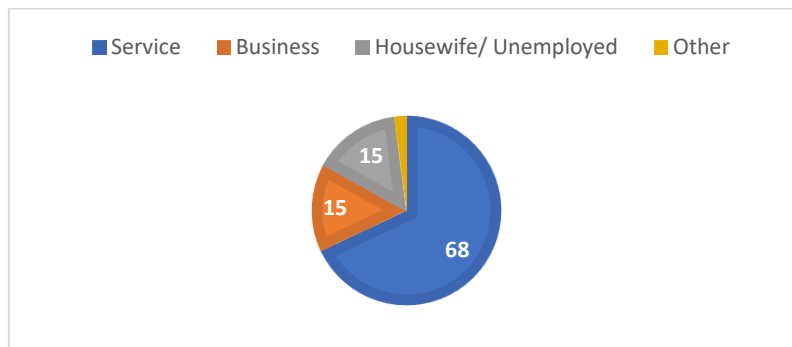


Graph 2 – Age Group (in percentage)

If a respondent does not confirm to be covered under any category, they have the option of selecting other and specifying their occupation in the space provided”. The service occupation in the table below includes any service or job (public or private), while the business occupation includes any business, profession, or self-employment. However, relatively few people claimed to be unemployed or business owners, according to the data we gathered. The vast majority of those who answered the survey both times were employed in some capacity, either by the government or the commercial sector. 68%.

Table 3 – Occupation Factor

OCCUPATION	Percent	Frequency
Service	68	68
Business	15	15
Housewife/ Unemployed	15	15
Other	2	2
Total	100	100

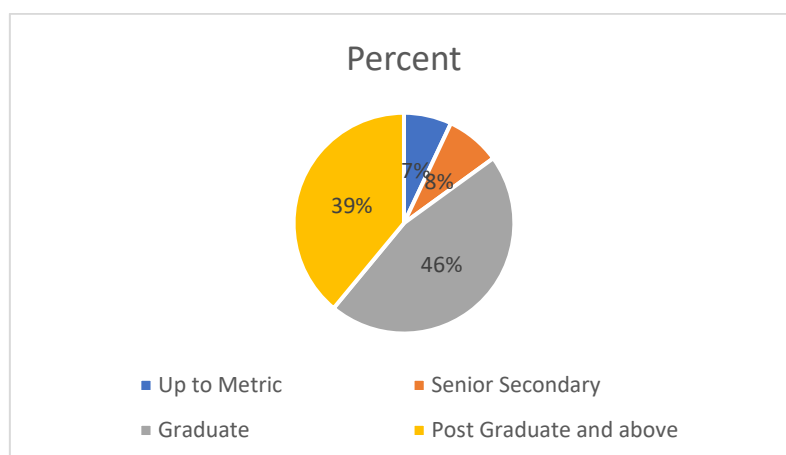


Graph 3 – Occupation Factor (in Percentage)

During the final phase of data collection, the vast majority of respondents (46%) were college graduates and 39% were post-graduates, according to their self-reported levels of education (up to metric, senior secondary, graduate, master & above).

Table 4 – Education Level

EDUCATION	Percent	Frequency
Up to Metric	7	7
Senior Secondary	8	8
Graduate	46	46
Post Graduate and above	39	39
Total	100	100



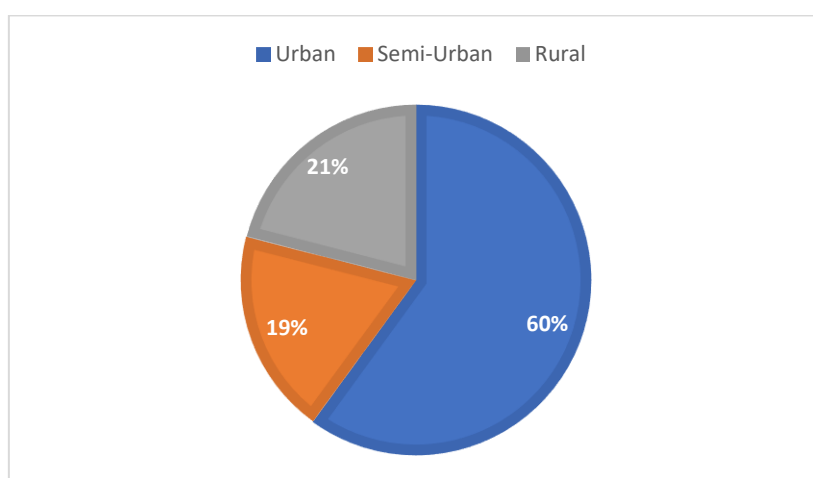
Graph 4 – Education Level (in Percentage)

Responses were divided into three zones based on their location: urban, suburban, and rural. Table 1 reveals that 60% of respondents were from metropolitan areas, 19% from semi-urban areas, and 21% from rural areas, all of whom contributed to the final data collection.



Table 5 – Classification of Area

AREA	Percent	Frequency
Urban	60	60
Semi-Urban	19	19
Rural	21	21
Total	100	100



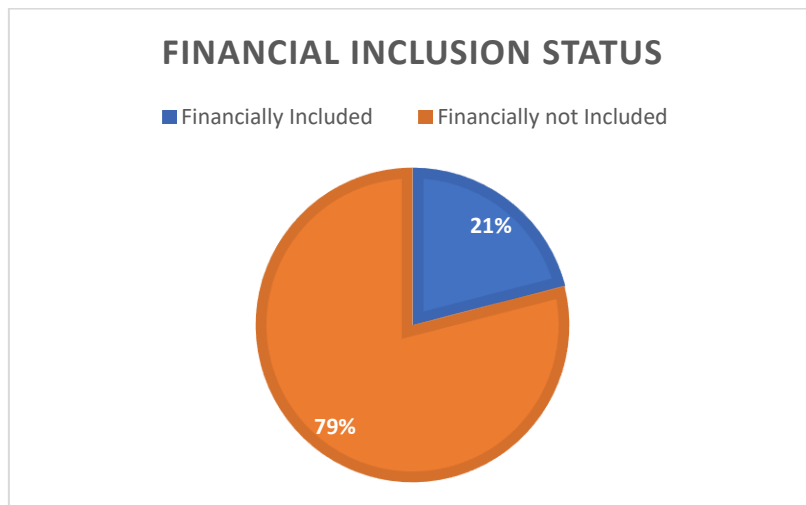
Graph 5 – Classification of Area (in percentage)

Banking and mobile banking Profile

A respondent is considered to be financially involved if they use all three of the following: a bank account for savings or deposits; a credit or loan facility from a bank; and a life insurance policy. The term financially excluded refers to everyone who does not have a relationship with a bank, while partially financially included describes everyone else who participated in the survey. From the data shown in the table below, it is clear that the vast majority (79%) of respondents do not feel financially included.

Table 6 – Financial Inclusion Status

Financial Inclusion Status		
	Percent	Frequency
Financially Included	21	21
Financially not Included	79	79
Total	100	100

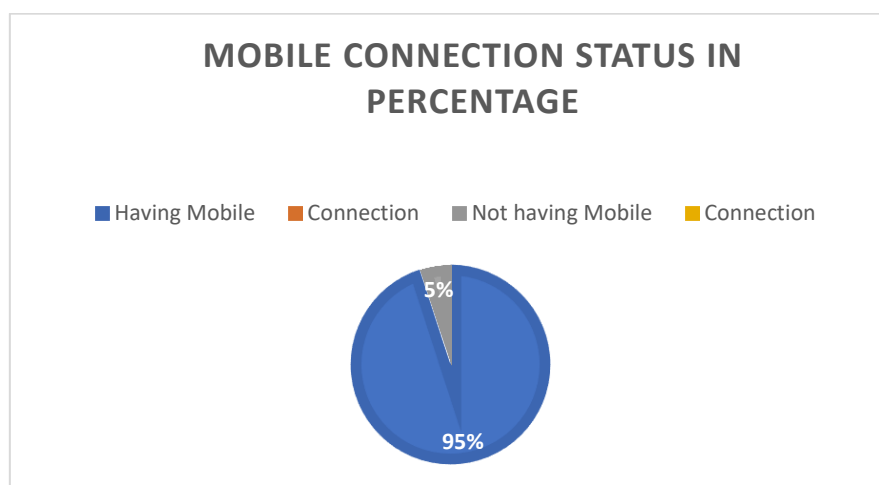


Graph 6 – Financial Inclusion Status (in percentage)

The table evident that approximately all the respondents hold and use mobile phones viz. 95%.

Table 7 - Mobile Connection Status

	Percent	Frequency
Having Mobile Connection	95	95
Not having Mobile Connection	5	5
Total	100	100



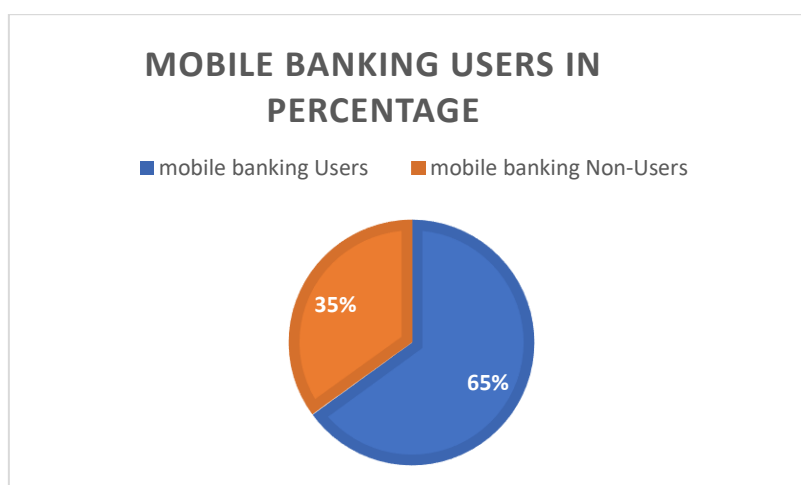
Graph 7 – Mobile Connection Status (in Percentage)



After verifying the respondent's financial inclusion status, the next question should be whether or not they have used mobile banking, since this research intended to encourage financial inclusion in India via its usage. As before, the results have been tabulated for your convenience. Since there are a total of 100 people in the sample, the proportion of people who utilise mobile banking went from 35% to 65%.

Table 8 – Mobile Banking Users Status

	Percent	Frequency
Mobile banking Users	65	65
Mobile banking Non-Users	35	35
Total	100	100



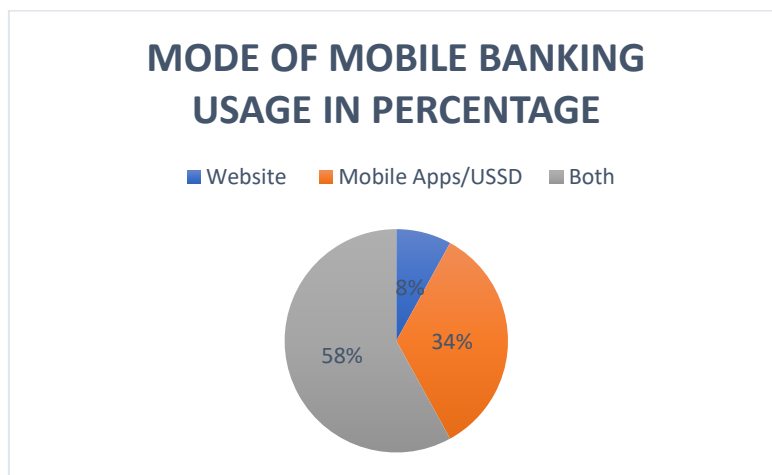
Graph 8 – Mobile Banking Users (in percentage)

Mode of Mobile Banking Usage

Determine how the respondent often uses mobile banking to better explain the distinction between mobile banking and online banking. Those who use their bank's website from their mobile device are not engaging in mobile banking but internet banking, and just 8% have used the website, 34% have used the mobile app, and 58% have used both.

Table 9 – Mode of Mobile Banking Usage

	Percent	Frequency
Website	8	8
Mobile Apps/USSD	34	34
Both	58	58
Total	100	100

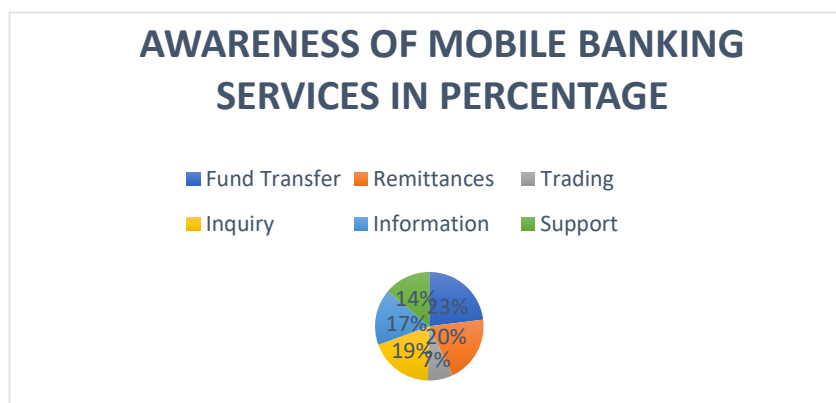


Graph 9 – Mode of Mobile Banking Usage (in percentage)

With the use of a table, we provide the results of a survey in which we asked respondents to indicate which mobile banking services they were familiar with. Eighty percent of respondents are aware of fund transfer facilities, sixty-nine percent are aware of inquiry related services, sixty-nine percent are aware of remittances services, fifty-eight percent are aware of information related services, forty-eight percent are aware of various support services, and only twenty-six percent are aware of trading related services, according to the survey's final data collection.

Table 10 – Awareness of Mobile Banking Services

Awareness about various Mobile Banking Services		
	Percent	Frequency
Fund Transfer	23	80
Remittances	20	69
Trading	7	26
Inquiry	19	66
Information	17	58
Support	14	48
Total	100	347



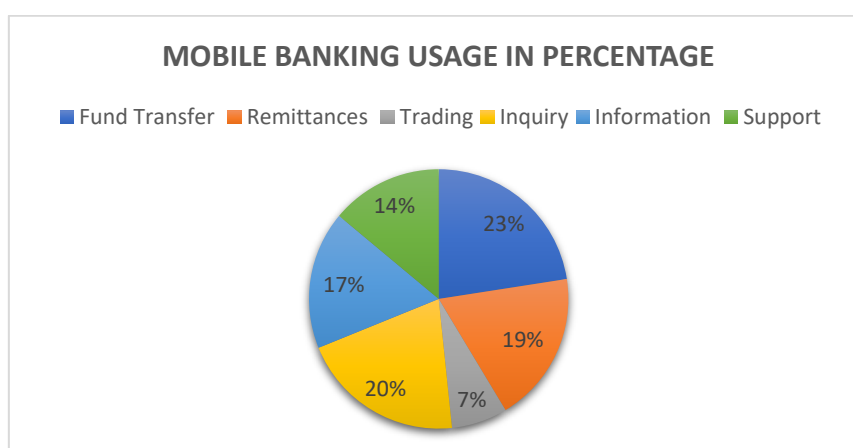
Graph 10 – Awareness of Mobile Banking Services (in percentage)



The tables below show what proportion of mobile banking customers used specific services during the study. Over half (55%) of mobile banking customers surveyed said they use the service at least once a month to send or receive money. It's also noteworthy that over half of all customers make weekly use of the remittances service. According to the data table below, 55% of those who utilise this service on a daily basis really do so.

Table 11 – Mobile Banking Usage

USAGE of different MOBILE BANKING SERVICES		
	Percent	Frequency
Fund Transfer	23	55
Remittances	19	46
Trading	7	17
Inquiry	20	50
Information	17	42
Support	14	34
Total	100	244



Graph 11 – Mobile Banking Usage (in percentage)

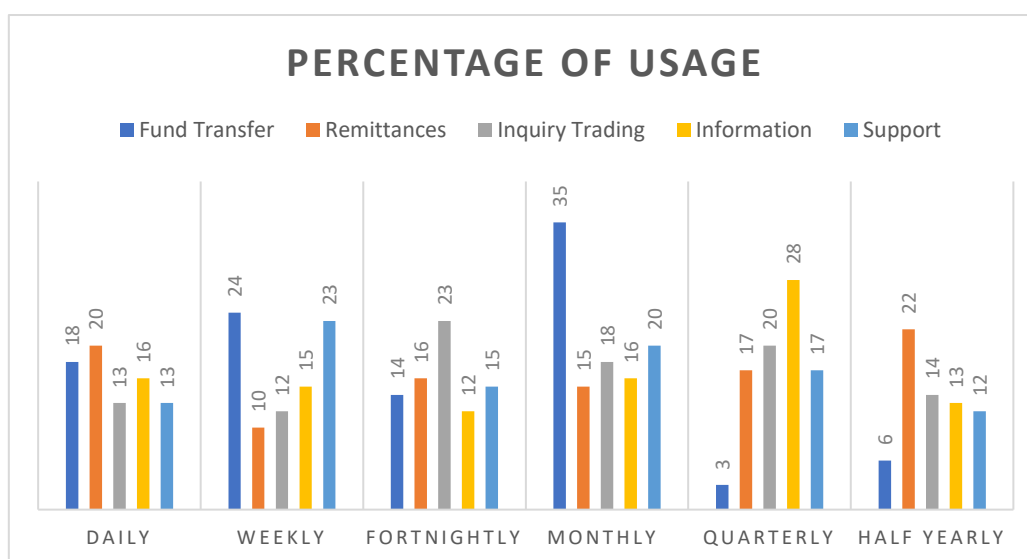
According to the data in the table above, 10% of mobile banking customers use remittance services on a weekly basis, while 16% use it monthly and 15% use it fortnightly. 18% of mobile banking customers use the trading service at least once a week, 13% of customers use it at least twice a month, and 13% of customers use it at least once a fortnight. Fifteen percent of weekly mobile banking users check their account balance and see a short statement of their most recent five to ten transactions. One-third of its customers use it every day, while 16% do so every month. Seventeen percent of mobile banking users use alert messages on a weekly basis, twenty percent receive such messages on a monthly or quarterly basis, and sixteen percent use the same on a daily basis to keep track of their accounts and the transactions made within them, such as ATM transactions, deposits, withdrawals, cheque book application status, cheque in clearing status, and other related services. Twelve percent of mobile banking customers use the service monthly, while 22 percent use it weekly to apply for a cheque book, online banking, ATM card, or to start a recurring deposit account or fixed deposit account. Last but not



least, the table below displays the frequency or percentage of mobile banking users that selected the never used option for various mobile banking services under the frequency part of mobile banking use.

Table 12 – %age of Usage of frequency of Mobile Banking Services

Percentage Of Usage Frequency Of Different Mobile Banking Services					
Usage Frequency	Fund Transfer	Remittances	Inquiry Trading	Information	Support
Daily	18	20	13	16	13
Weekly	24	10	12	15	23
Fortnightly	14	16	23	12	15
Monthly	35	15	18	16	20
Quarterly	3	17	20	28	17
Half yearly	6	22	14	13	12
	100	100	100	100	100



Graph 12 - %age of Usage of frequency of Mobile Banking Services

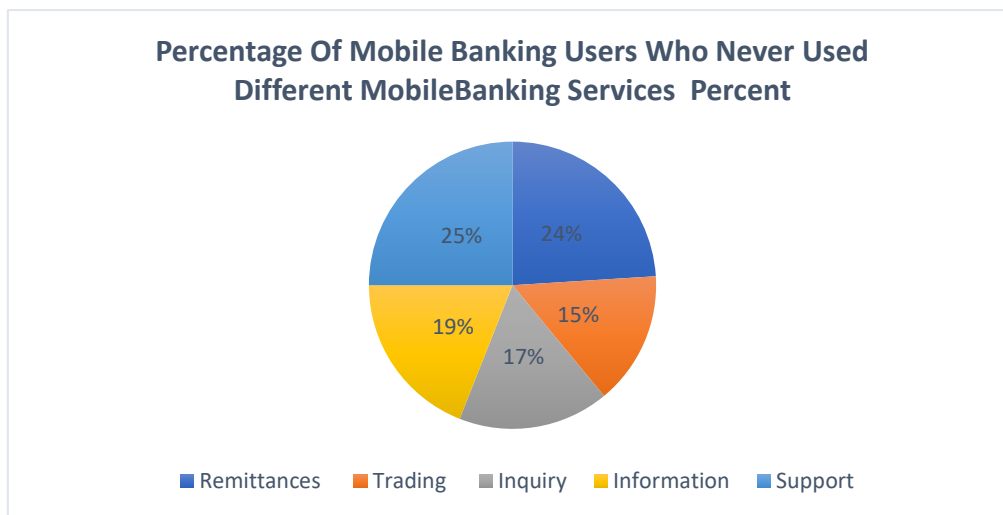
Percentages of Mobile Banking Users that have never used each Mobile Banking Service are shown in the tables below. Remittances (24%), Trading (15%), Inquiries (17%), and Information (19%) all accounted for throughout the survey's administration.

Table 13 - %age of Non-Users of Mobile Banking Services

Percentage Of Mobile Banking Users Who Never Used Different Mobile Banking Services		
Fund Transfer	Percent	Frequency
Remittances	24	24
Trading	15	15



Inquiry	17	17
Information	19	19
Support	25	25
Total	100	100



Graph 13 - Non-Users of Mobile Banking Services (in percentage)

Conclusion:

Several large banks in India have begun implementing a financial inclusion department. It seems that M-Finance is crucial to the success of this strategy. M-Finance has been widely embraced across the world, proving its viability in both developing and established economies. M-Finance has enormous development potential in developing countries that have not yet created their banking infrastructure. However, the success of M-Finance depends on cooperation between telecommunications firms, banks, and pro-business organisations to help shift public perception and encourage widespread use. To meet the needs of customers in rural areas, mobile and financial service providers may need to work together exceptionally well and get a thorough understanding of those needs. Banks may run their existing operations more efficiently with the use of mobile phones. Technology's potential cost savings might open up financial inclusion to more people. Mobile phones and related technologies will change the dynamics of financial relationships. This has the potential to help the economy as a whole meet the needs of low-income households. For example, migrant workers might utilise emergency loans to avoid having to turn to dishonest moneylenders. Often, m-finance also gets beyond the drawbacks of conventional microfinancing, such the need for constant connectivity and payback. M-Finance can facilitate this by sending timely alerts and reminders and removing constraints posed by physical locations of branches.

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