JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

IMPACT ON COVID-19 ON CONSUMER PERCEPTION AND TECHNOLOGY DEVELOPMENT ON INDIAN BANKING SYSTEM

Name of 1st Author - Ishika Jalan

Designation - M.Com, 2ND Year, Accounting and Finance

Name of the Department - J.D Birla Institute

City - Kolkata

State - West Bengal

Name of 2nd Author - Ms. Riddhi Jain

Designation - Assistant Professor

Name of the Department - J.D Birla Institute

City - Kolkata

State - West Bengal

ABSTRACT

The banking sector is investing heavily in digital initiatives to maintain a competitive edge and to offer maximum services to their customers. By adopting digitalization, the banking sector provides sophisticated services to their customers anywhere and at any time. In the scenario of Covid-19, most banks in affected countries have reduced the branches working hours and they recommend their customers use digital banking services. The prospect of digital banking depends on customers therefore, understanding customer's requirements and meeting their demand and expectation is becoming a challenge. By taking this as background this research examines the customer's perception of using digital banking and preference on digital banking channels during the Covid-19 lockdown period. Information was gathered through secondary and primary sources. Data was collected from respondents using a convenient sampling method. The study reveals that there is a significant relationship between digital banking services and overall customer satisfaction during Covid-19 lockdown period and Customers were highly satisfied with Mobile banking services and moderately satisfied with ATM services during the Covid-19 lockdown period. The Covid-19 pandemic could pose one of the biggest challenges for the financial services industry in nearly a century. The Covid – 19 impacts on banking will be a severe fall in demand, lower incomes, and production shutdowns and will adversely affect the business of banks. As firms scramble to cope with Covid-19's impact on financial services, staff shortages, inadequate digital maturity, and pressure on existing infrastructure exacerbate the current situation. Considering the novel coronavirus outbreak Covid-

19, banks certainly have their hands full. Globally, the virus has caused job losses, slowed sales, and declining profits for businesses and individuals. Many customers of banks are likely to seek financial assistance. A pandemic's enormous economic costs are one obvious way in which it can impact financial systems. A plan to protect employees and customers from the spread of the Coronavirus is necessary to manage the direct economic impact of the Coronavirus. Many banks are already starting to encourage the remote working of some employees. In this paper, we are aimed to demonstrate the impact of pandemic covid-19 on the banking and financial sector. According to India's central bank, the coronavirus outbreak will require years of cleaning up its financial system. Banks are at the core of the economy and provide funding to companies and individuals. Their stability is essential to the system's function.

Index Terms: **banking sector, coronavirus, digital maturity, financial system.**

CHAPTER – 1

1.1 INTRODUCTION

India's banking sector has played a major and crucial role in socio-economic progress since independence. The banking sector is the heart and soul of an economy for any country. It is the most vital pillar for any financial sector and plays a major role in the economic development of the country. Our report seeks to analyse and compare the banking sector in India pre and post Covid-19. The project also focuses on the impact of Covid-19 on the population.

In every aspect of human life, information technology has ushered in a revolution. The Indian banking system has spread to every part of the world. The Indian banking system is no longer limited to the metropolises but has expanded to include even the most remote parts of the country. The new technological climate has made it easier to provide a variety of cutting-edge services to the public. Every area of human life has been transformed by information technology. The Indian banking system has spread throughout the world. The Indian banking system is no longer limited to the cities but has expanded to include even the most remote parts of the country. The new technological climate has made it easier to provide a variety of cutting-edge services to the general public. Customers' expectations have risen as a result of the influence of globalization, advancements in digital technology, and increased global literacy levels.

The banking service sector in India has undergone significant changes as a result of globalization, liberalization, and privatization. Banks have also been forced to rethink their market practices due to competitive pressures. Traditional over-the-counter banking is steadily losing its prominence as a result of self-service tactics and competitive pressures from banks. Computers, telecommunications, and the internet have revolutionized financial systems by offering alternative services and switching to online banking. Customers can now access banking services through their mobile phones and computers in several ways. Because of the introduction of information technology in the banking industry, banks now store, assimilate, and process data electronically. To thrive and expand in a changing business setting, banks have adopted cutting- edge technology. As a result, banks can provide the required provisions to customers and provide the best solution from their product or service. This technological development in the banking sector has led to developments in payment and settlement systems, such as online banking, mobile banking, telebanking, ATM/Debit card, and credit card. Banks in India were among the first to implement technology, automating systems, and streamlining processes. With the introduction of technological advances, banks have been able to maintain a high degree of protection, prevent fraud, violence, or pilferage, and reduce the risk and cost of handling cash. Non-cash payment modules such as RTGS, NEFT, NECS, UPI, and digital wallets have also been introduced.

The applied technologies have reached the pinnacle of cutting edge in the present global financial scenario. While on one hand a large amount of money is required to transfer from one place to another and sometimes on the demand of customers from one account to another account. In the bygone era, it is possible to fulfill financial needs without the help of technology. Owing to the huge competition among every unit of banking enterprise, it becomes difficult for banks to render a variety of services to the clients, business holders, small, medium, and large- scale enterprises, other financial units. To overcome this situation online banking provides great assistance in banking and other financial operations.

1.2 CORONAVIRUS CHALLENGE TO TRADITIONAL BANKING HABBITS

As the community spread of the coronavirus (COVID-19) proliferates, alternatives to in-person banking and physical exchanges are looking more and more attractive. The World Health Organization (WHO), for example, has urged people to use contactless payment as much as possible and to stop handling banknotes. This is because the coronavirus will survive for days on banknotes, speeding up the spread of the disease. Because of the novel coronavirus outbreak, banks have their hands full (COVID-19).

Borrowers and companies are facing job cuts and slowed economic growth. Customers are likely to request financial assistance from banks, and federal bank regulators in the United States are urging banks to assist them. Banks must have a strategy in place to protect staff and customers from the coronavirus, in addition to handling the virus's direct economic effects. Many banks are also encouraging some workers to operate from home. Customers who are wary of spending time in crowded public spaces will need a way to perform banking transactions without having to engage physically. Banks will ensure that both routine and outstanding procedures are carried out with minimal disruption by integrating fully digitized and remote customer transactions. Due to the spread of the Coronavirus (COVID-19), in-person banking and physical transactions are becoming less appealing as a result. The World Health Organization (WHO), for example, has urged people to use contactless payment as much as possible and to stop handling banknotes. This is because the coronavirus will survive for days on banknotes, speeding up the spread of the disease.

Bills from local banks have been quarantined by the Bank of Korea, which will keep them isolated for up to two weeks. Similarly, the Chinese government has asked lenders to disinfect and quarantine physical notes. The Federal Reserve of the United States has started isolating banknotes from Asia for seven to ten days. Of course, paper money isn't the only thing that's being viewed and handled as a possible coronavirus carrier. Banks, consumers, and governments weigh the risks of in -person banking and opt for digital channels instead when given the choice. Individuals should keep six feet away from obviously ill people, according to current official guidelines from the Centers for Disease Control and Prevention. At physical branches, where long lines and close connections with bankers are anticipated, this could be nearly impossible. It just takes one sick person sneezing or coughing to put everyone else in the area at risk. It just takes one sick person sneezing or coughing to put everyone else in the area at risk.

Furthermore, certain individuals may be able to transmit the disease even before they develop symptoms, rendering disease prevention almost impossible. Consumers over the age of 65 and those with pre-existing conditions will likely be the first to avoid physical branches because the coronavirus presents a direct threat to their health. Consumers who are subjected to quarantine would have no choice but to forego the branch visits.

1.3 CORONAVIRUS IS FUELING THE MOVEMENT TOWARDS DIGITAL BANKING

The Federal Financial Institutions Examination Council asked U.S. banks to assess the ability of their online systems to handle a surge in digital banking requests last week. In addition to remote working, the organization recommended "increased emphasis on online banking, mobile banking, and call centre facilities." Traders at Goldman Sachs are said to have done exactly that, as they try out new ideas. After an employee contracted the virus, HSBC introduced split-site working arrangements in their Asia offices.

The DBS bank in Singapore might serve as a model for how branchless banking could look in our post-coronavirus world. DBS hunkered down to provide consumers with a comprehensive digital banking experience after being forced to evacuate its employees after an employee was diagnosed with the virus.

It has digitized 11 funding processes to eliminate the need for face-to-face transactions, and it now offers business accounts instant interbank fund transfers. Also, the bank is hosting webinars to teach its employees how to use digital resources. SMEs may also apply for a short-term loan of up to S$50,000 online to help cushion the blow of lower revenue and cash flow. Although the coronavirus has increased the demand for digital banking services, consumers' increasing preference for digitization is nothing new. Their dissatisfaction with the constantly broken digital journeys they face while attempting to complete an online process isn't any better. According to a new Lightico poll, 56% of banking customers claim they've been diverted from online banking. When banking online, 48% claim they've been asked to print, sign, or email documents. Consumers have come to expect fulfilling and full online experiences with all aspects of their lives, including banking, as a result of the emergence of digital behemoths like Amazon and Netflix.

1.4 IMPACT OF COVID-19 ON BANKING SECTOR

Global economics and financial markets are in danger due to the continual spread of COVID-19. India, like many other countries across the globe, is taking several measures to contain the coronavirus outbreak, including: nationwide lockdown; limiting movement of the entire population; shutting down public places and transport; and urging the public to stay indoors, maintain social distance, and work from home; limiting cross-border movement of supplies, persons, and vehicles; and electronically monitoring the health of the population.

Certainly, the economic disruption resulting from this lockdown is huge and the short-term decline in activity for businesses, large and small, is significant. Despite that, digital payments have seen an uptick in some areas due to an increase in adoption during the lockdown. This includes online grocery shops, pharmacies, OTT players (telecom and media), EdTechs, gaming sites, recharge sites, and utility/bill payment services. The Government also has boosted the volume of digital payments by pledging monetary assistance to the poor through direct bank transfers.

The finance minister and CEO of the National Payments Corporation of India have also encouraged people to make payments contactless by using digital payments. Digital payments, once an optional convenience, have become indispensable in this day and age. As a majority of the sectors that contribute to digital payments are still in flux, it is still too early to determine the long-term impact of COVID-19 on digital payments.

Globally, the digital banking market generated nearly $803.8 billion in revenue in 2018 and is expected to reach $1,702.4 billion by 2026 at a CAGR of 10.0%. Despite significant growth previously, the market will witness additional growth in 2020 as a result of the unexpected Covid-19 outbreak, owing to the rising adoption of mobile payment solutions. In order to fuel this growth, changing customer behavior will become a major factor, as people become less interested in visiting bank branches and more interested in using online banking. In the wake of Covid-19 spreading worldwide, bank operations have been hampered. There have been losses for business owners and lending institutions, sluggish growth in sales, and a decline in profits. On the other hand this pandemic has also been used by some as a catalyst for launching digital offerings. As a result, banks have utilized the digital tool effectively and provided attractive alternatives to in-person banking and physical exchanges. Economic growth has been a vital function of banks since their evolution. A bank is an institution that lends money to the public, accepts deposits from customers, and provides credit to those customers.

Today, banks and businesses are closely intertwined. The increase in technology innovation, along with the development of new solutions, has led to traditional banks becoming e-banks. With the increasing usage of smart phones and the penetration of internet across the world, an increasing number of banks are moving towards digital platforms as a way to provide their services online. As a result, the rise in adoption of online and mobile banking platforms is driving the adoption of digital payments in global banking. In India, banks have maintained critical staff in branches and temporarily redeployed staff to handle online or telephone enquiries from customers. They've also implemented mobile ATMs and doorstep banking for senior citizens and other customers in need of special attention. With video collaboration tools, new chat and messaging software and other fintech innovations, financial firms will continue to interact with customers who have been dealing with social distancing norms, with some already utilizing common consumer apps to that end.

The past few years have seen several banks invest in technology and digital transformation. However, a lot of them are still heavily reliant on face-to-face interaction and paper processes. So, we expect to see renewed vigor in the Indian financial services industry as banks make a concerted effort to become more digitally savvy. The COVID-19 is likely to have a long-lasting impact on banking, which affects every aspect of our economy. As a result, most banks have addressed the immediate challenges of COVID-19, including protecting staff and providing much-needed services to customers.

There are four key areas they can focus on to help navigate the current situation:

- Customer acquisition model in light of changing consumer behavior post COVID-19, as well as examine digitally native journeys and rethink underwriting norms for better risk discovery.
- **Revenue Compression** - As a result of a steep drop in underlying consumption and transactions, retail and commercial banking revenues are falling sharply. In addition to slashing interest rates throughout the world, banks are also reducing yields to generate business, thus reducing net interest margins substantially. A general decline in economic activity has a negative effect on payment and other fee-based services.

With measures such as moratorium periods provided on loans, banks' cash flow has also been hit. We expect an overall drop of up to 10% in banks' payments revenues, Globally, the industry will lose USD 150 billion in top-line revenue as demand in sectors such as retail and entertainment drops sharply and shifts to online channels, while tourism and travel find little to no activity.

The banks can do little to stop the overall revenue decline, but they can focus on making payments safer by increasing limits on contactless payment channels and educating consumers about digital wallets. In addition to cashback, banks can offer loyalty rewards to encourage spending in sectors that need it most.

• **Operating Model Adjustments, Cost Elasticity and Innovation**: Due to the economic impact of COVID-19, the banking sector will face misalignment between short-term costs and revenues over the next few quarters. Banks need to review their current projects and prioritize them in order to ensure they allocate resources to the most urgent needs. The banks should also invest in areas that will outlive the current pandemic, such as paperless utilities, end-to-end digital lending capabilities, and increased fraud and cyber security analysis and detection capabilities.

The new digital tools will allow banks to become more efficient and adaptable in the future. Banks that haven't focused on remote working and virtual collaboration in the past should consider establishing elastic operations. This will protect banks from such unprecedented lockdowns and manage cost overheads better. COVID-19 will have a lasting impact on many industries, including the banking sector. The post-crisis digital maturity and COVID-19 resiliency of banks will determine their strategy.

These are: banks that are already future-ready with digital banking capabilities and cost elasticity, banks that are digital laggards, banks that need to evolve and renew due to sub-par COVID-19 resiliency, and banks that will struggle to survive because they are digital laggards with sub-par financial and operational resiliency.

Customers, citizens, and employees in India and around the world will change as a result of COVID-19. As more people are concerned with their health, businesses will also need to understand how they can become part of a new health ecosystem that is likely to dominate customer thinking in the future. In many corners of financial services, "every business is a health business" has already emerged, and that is perhaps one of the few positive outcomes of COVID-19.

1. 5 WORLDWIDE BANKING SYSTEM AND INFLUENCE OF COVID-19

The COVID-19 pandemic has impacted nearly every aspect of life globally. Corporate financials have already begun to suffer due to decreased productivity and lockdowns. A hefty public fund & stimulus is needed to continue operations normally during supply chain disruptions, manufacturing obstacles, and crippled health systems. Tourism and the entertainment industries have already contributed to crippling the economy. This pandemic has already caused humongous losses on the financial markets of up to Rs 59.87 trillion. It is becoming apparent how difficult it will be for banks all over the world to maintain good assets and good earnings at an all-time low.

Many repayments of loans may cease due to the shutdowns and slowdown, especially in Europe and the United States, leaving the banks dry. Assets that were once theirs would be at risk. The United States and Europe can already be seen as the emerging epicenter after China started to recover from this economic shock. Even after complete border closures and lockdowns, the situation has continued to worsen. According to Fitch Ratings, the Italian banking system is already coping with COVID-related problems. As a result, countries that were already sliding into recession like Greece, increased investor concern.

As financial markets around the world crash, people have put large portfolios in the United States or Europe and are now in a fix because of the pandemic that empty's their pockets. The shares of banks are declining sharply, showing the erosion of confidence in the global financial system. A hefty public fund and stimulus is needed to maintain supply chains, manufacturing, and health care systems. The tourism and entertainment industries have already crippled the economy. All these factors are putting pressure on the global economy, which might also have repercussions in the coming year. Indian companies and banks are in a bind as the pandemic-related lockdown brings business to a halt. Experts believe that consumers and corporations will face delayed repayments and possibly even defaults in an economy rife with layoffs and pay-cuts. Meanwhile, central banks around the world have already taken proactive measures to calm markets and show commitment to using every available measure. Since the recession in 2008, the US Federal Reserve has recently cut the federal funds rate by 50 basis points. In addition, the Fed has actively intervened in the repo market to inject more liquidity.

During the same period, the Bank of Japan issued a statement indicating that it would increase asset purchases in order to inject liquidity into the market. To counter the virus, the People's Bank of China (PBOC) has injected more than 240 billion dollars of liquidity into the financial system. A number of plans have also been announced by the Bank of England and the European Central Bank (ECB) to counter COVID-19 in the coming days. Meanwhile, banks and capital markets firms around the world are mobilizing and taking steps to minimize the impact of COVID19 on their day-to-day operations. COVID-19 is not known to have long-term implications for financial markets and banks and capital markets firms. COVID-19 may accelerate the migration to digital channels and connectivity.

CHAPTER – 2

REVIEW OF LITETRATURE:

1.Singh Jitender and Bodla B. S. (2020) suggested that to overcome the COVID-19 pandemic, the Indian Government reported total lockdown in the nation beginning on March 24, 2020, and the equivalent was stretched out to third May, 2020 in the subsequent stage. Although the lockdown was vital and unavoidable to forestall the quicker spread of Novel Coronavirus (Covid-19) and to spare existences of individuals of the nation, it influenced the different divisions of our economy harshly. The Banking and Non-banking money organizations (NBFCs) which are the spine of India's economy are no particular case to the above mentioned.

This article is an endeavor to evaluate the effect of this pandemic on Banks and NBFCs because of lockdown which has come about into conclusion of every business association, instructive foundations, public and private workplaces, suspension of methods for transportation, and so on.

2.Doshi Sanjay.(2020) As the COVID-19 pandemic exacts a bitter toll on the economy, it is accelerating digital transformation across business models, channels, and touch points. Within the changing world order, there is a need for greater organizational agility as well as a closer relationship with customers.

The process of digital transformation is, however, complex and long-drawn out for both consumers and businesses. Payments and banking, two critical pillars of the economy, have seen an uptick in digital offerings and adoptions. Even though going digital is not new to the industry, the pandemic has significantly accelerated the adoption of digital technologies, with far-reaching implications for not only the banking sector, but also the wider financial ecosystem.

A key player in the emergence of the digital payment ecosystem in India is National Payments Corporation of India (NPCI), which has launched innovative and successful initiatives such as UPI, IMPS, Bharat Bill Pay, and ETC (electronic toll collection) through FASTags. In addition, Indian FinTech's and digital payments companies have made significant progress, and now offer a wide range of integrated and user-friendly solutions that leverage advanced technologies and deploy innovative business models.

Growing internet and mobile penetration, low-cost data plans and the shift from offline to online shopping channels are also contributing to the adoption of digital technologies. In order to enhance the digital banking and payment products/services ecosystem, banks will need to develop and adopt cutting-edge technologies such as Artificial Intelligence (AI), Machine Learning (ML), Cloud, Internet of Things (IOT), Human Computer Interface (HCI), and Blockchain. As the mid-office and back office rely on technology to serve customers and perform day-to-day operations, the disruption has highlighted the importance of digital

.

3. Saraogi Vikas.(2020**).** As the number of Coronavirus cases in India has surged, citizens have unanimously expressed concern about social distancing and avoiding touching other people and surfaces. In these unfortunate times, currency notes that are circulated regularly and come into contact with hands are also alarming. Banks have begun to send out awareness messages encouraging people to avoid visiting public places and using currency notes. According to a Punjab National Bank (PNB) broadcast message, cash transactions should be replaced with net banking or UPI. In addition to cashless options, the RBI encourages the use of online payments from the comfort of one's home. The current state of affairs could provide consumers who are more conscious of what they touch with a new option to pay, as well as being beneficial since the cards don't change hands during transactions.

4. Bodla Amit.(202**0)** Assistant Professor of Finance at GMN College, Ambala Cantt., expressed a concern for Private sector banks in an interview conducted by the author on telephonically. She said that the private banks HDFC Bank Ltd, Kotak Mahindra Bank Ltd., and ICICI Bank Ltd. have performed as the best banks of the country in the past. They have successfully kept NPAs significantly lower than their counterparts at state-owned banks for many years. But many of their retail and corporate customers are expected to be greatly impacted by the effects of India's lockdown of its economy.

5. ThyagaRaju, N. (2016) states that Banking environment has become highly competitive today. In the field of information technology, computer technology and telecommunication systems are used to acquire, process, store, and disseminate all types of information. Information technology architecture is a system for obtaining and developing IT in order to meet strategic objectives. Information is input, stored, processed, and communicated using these technologies.

Technology includes ancillary equipment, software, firmware, and similar procedures, services, etc. The high throughput technologies of today are providing a wealth of sequence, expression, and functional data about genes and proteins.

Recent developments in the banking sector in India include the Internet, Society for Worldwide Inter- bank Financial Telecommunication (SWIFT), Automated Teller Machines (ATM), Cash dispensers, Electronic clearing services, Bank Net, Chip cards, Phone banking, Tele-banking, Internet banking, Mobile banking, Anywhere banking, Voice mail, E-banking, etc. E-banking is changing customer expectations as traditional banking shifts to e-banking. A country like India, which is one of the most promising emerging markets, cannot be isolated like this. In areas such as IT, where India has an advantage over its competitors, remaining away from world trends is untenable. In general, the financial sector and the banking industry are the largest spenders and beneficiaries of IT. This article attempts to relate international trends in the banking industry to the Indian one.

6. Limbore Nilesh.(2014) Finance and banking, according to (2014), are the lifeblood of trade, finance, and industry. The banking industry now serves as the backbone of modern business. The banking system is crucial to any country's growth. A bank is a type of financial institution that handles deposits, advances, and other financial services. It collects money in the form of deposits and loans from people who want to save and it lends money to those who need it. The banking system is vital and indispensable to society. The current faster lifestyle may prevent people from doing proper transitions without a bank network In India nationalized banks dominate the banking system. Perhaps more than any other sector, the performance of the banking sector is closely tied to the economy.

7. Mishra A. K. (2008) described that the Internet banking is a cost-effective delivery channel for financial institutions. Additionally, the author describes the advantages of internet banking, the state of internet banking in India, and the protection of customer data. The advantages of internet banking are

- To improve customer access
- To facilitate more services
- To increase customer loyalty
- To attract new customers
- To provide services offered by competitors

Throughout the country, the Internet Banking is in the emerging stage of development. These Internet sites offer only the most basic services More than half of these sites offer little more than company information and basic marketing materials. Only 8% offer 'advanced transactions' such as online funds transfer, transactions & cash management services. As far as the number of sites & level of development goes, foreign & private banks are far ahead.

8. Jadhav Anil.(200**4)** describes various ways to conduct electronic banking, such as ATM services, telephone banking, mobile banking, and internet banking. While performing banking transactions over the internet, emphasis is also placed on e-banking opportunities, challenges, and security aspects. There is also a comparison of public, private, foreign, and co-operative banks and barriers to the growth of e-banking in India. Additionally, the paper provides an overview of private sector banks such as ICICI, HDFC, IDBI, UTI & GTB that offer e-banking services.

In the author's opinion: Many Indian banks have yet to make a satisfactory progress in implementing technology and gearing up to meet the challenges posed by the rapid changes sweeping the banking sector globally. Private and Foreign banks 72 have been fast in adopting and adapting to the Internet technology. Only a few public sector banks offer Internet banking, whereas none of the cooperative banks offer this service.

ATMs are becoming a more popular channel for common banking services. To extend their reach to rural populations in remote areas, banks will have to automate the delivery channels in the local language, which could reduce the number of branches. Due to the advent of e-banking, the security of the banking industry has been put at risk. Banks that offer e-banking services should take the following precautions/responsibilities:

a. The Banks should hire the services of anti-Cybercrime professional to avoid cyber crime

b. To take the responsibility of customer’s transactions

c. Create awareness of e-banking services among customers and motivate/encourage them to use them.

9. Singh Balwinder & Malhotra, Pooja.(2004) The gigantic advances in innovation and the forceful mixture of data innovation had gotten a change in perspective in banking activities. Web banking that has altered the financial business worldwide has ended up being the core issue of different examinations everywhere on over the world. Anyway, there has continually been a writing hole on the issue in India. The motivation behind this paper is to help fill huge holes in information about the Internet banking scene in India.

The paper presents information, drawn from a study of business banks sites, on the quantity of business banks that offer Internet banking and on the items and administrations they offer. It researches the profile of business banks that offer Internet banking, utilizing univariate measurable investigation, comparative with other business keeps money concerning benefit, cost proficiency, and different attributes.

Before the finish of the first quarter, 2004, contrasts among Internet and non-Internet banks had started to rise in subsidizing, in wellsprings of pay and uses and in proportions of execution. It was additionally discovered that the benefit and offering of Internet banking doesn't have any huge relationship.

10. Jain Abhay and Hundal B. S. presented the rapid changes in the financial services environment— increased competition by new players, 74 product innovation, globalization and technological advancement—have led to a market situation where battle for customers has become intense. In order to rise up to the challenges, service providers are even more interested to enhance their understanding of consumer behavior patterns. This paper examines the forces that can act as barriers to the adoption of mobile banking services.

CHAPTER – 3

3.1 AIMS AND OBJECTIVE

This research was undertaken to find out how the banking sector has been affected by Covid-19. It presents, in brief, an overview of how the banking sector was performing and the banking practices were but how it has changed due to the whole scenario. The following are the primary objective of the research paper:

1. To understand the financial impact of Covid-19 on the banking sector.
2. To understand a study the difference in consumer behavior towards the banking sector and their comparison (pre and post Covid19).
3. To assess various aspects of IT services provided by Indian banks.
4. To know the implementation of IT in the Indian Banking industry.

3.2 SCOPE OF STUDY

1. To analyse digital awareness amongst people, post-pandemic.
2. To analyse the impact of technology and internet banking on the Indian Banking Sector

CHAPTER – 4

4.1 RESEARCH GAP

The knowledge of my research Gap lies in the following few points -

The Covid-19 period is still stirring upon the world and it's not completely over, however the study is based upon the pre- and post-Covid-19 analysis about the banking sector and hence the true post- Covid-19 impact on banking sector will not be ascertained and hence will be act as a gap.

4.2 RESEARCH METHODOLOGY

Population of the Study

The population of the study is friends and family who are availing banking facility

Sample of the Study

There is huge number of people who avails traditional and digital banking facility but it’s not easy to collect data from everyone. Thus, for the study, 114 questionnaire samples have been collected by retailers widespread in different regions of Bokaro Steel City, all of whom avails banking facility.

Sampling Technique

The Sample is collected randomly out of friends and relatives of Bokaro Steel City and hence the sampling technique used is Simple Random Sampling.

Source of Collected Data

The study is based on Primary Data and secondary data that have been collected from publications like journals, newspapers, magazines and various other websites.

Period of Study

The study aims at analyzing the effect of Pandemic on the Banking Sector due to technology and the change in Consumer Behavior because of the same.

4.3 Statistical Tools

In order to find the effect of the Pandemic on the sales of the retail industry, hypothesis testing tool known as **Chi-Square Test** is used.

4.4 Limitation of Study

The study undertaken has the following limitations:

- The sample size is only 114 in over millions of consumer in India.
- The consumer behavior changes constantly and is dynamic.
- The COVID-19 situation in India is changing rapidly.

CHAPTER – 5

RESULTS AND DISCUSSION

CRONBACH ALPHA

Cronbach's alpha is a metric for determining a collection of scale or test items' reliability (or internal consistency). In other words, a measurement's reliability refers to how accurate it is in evaluating a term, and Cronbach's alpha is one way to assess that consistency.

The resulting αα coefficient of reliability ranges from 0 to 1 in providing this overall assessment of a measure’s reliability. If all of the scale items are entirely independent from one another (i.e., are not correlated or share no covariance), then αα = 0; and, if all of the items have high covariances, then αα will approach 1 as the number of items in the scale approaches infinity. In other words, the higher the αα coefficient, the more the items have shared covariance and probably measure the same underlying concept.

Although the standards for what makes a “good” αα coefficient are entirely arbitrary and depend on your theoretical knowledge of the scale in question, many methodologists recommend a minimum αα coefficient between 0.65 and 0.8 (or higher in many cases); αα coefficients that are less than 0.5 are usually unacceptable, especially for scales purporting to be unidimensional (but see Section III for more on dimensionality).

Source: Calculated on SPSS

Case Processing Summary

		N	%
Cases	Valid	114	100.0
	Excluded[a]	0	.0
	Total	114	100.0

a. Listwise deletion based on all variables in the procedure.

S

Reliability Statistics

Cronbach's Alpha	N of Items
.709	11

Interpretation: The Cronbach Alpha is a reliability test used to measure internal consistency of questionnaire so distributed amongst respondents. Here the score of my questionnaire between 0.7 and 0.8 which implies it is acceptable and good.

It is reliable. Then we considered the table item total statistic and found that no factor is getting eliminated since its Cronbach alpha does not improve if any value is deleted that is, it is not more than .709.

Objective - To understand the financial impact of Covid – 19 on the banking sector

1. To find out how much scale pandemic has affected the banking use and experience.

Test to be used: Chi-Square Test

A chi-square statistic is a test that evaluates how well a model matches real data. Given the size of the sample and the number of variables in the relationship, the chi-square statistic compares the size of any inconsistencies between the predicted and actual performance.

A larger Chi-square value is generated by greater differences between expected and actual results. The higher the Chi-square value, the more likely it is that a substantial difference exists.

If the Chi-square value is greater than or equal to the critical value.

There's a big gap between the two classes we're looking at. That is, the gap between real and expected data (assuming the groups aren't different) is almost certainly too large to be due to chance. As a result, we draw the conclusion that our data supports the hypothesis of a difference.

If the Chi-square value is less than the critical value

There is no significant difference. The amount of difference between expected and actual data is likely just due to chance. Thus, we conclude that our sample does not support the hypothesis of a difference.

H0- Covid-19 has no impact on banking use and experience pre- and post-pandemic.

H1-Covid19 has impacted banking use and experience pre- and post-pandemic.

Source: Calculated on SPSS

		By how much scale Covid-19 impacted your banking use and experience?					Total
		Strongly Disaffected	Disaffected	Neutral	Affected	Strongly Affected	
What is your age group?	Up to 20	0	3	20	13	13	49
	20-35	1	3	17	3	1	25
	35-45	0	1	11	6	3	21
	50& Above	0	3	5	2	9	19
Total		1	10	53	24	26	114

Source: Calculated on SPSS

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	23.453[a]	12	.024
Likelihood Ratio	24.048	12	.020
Linear-by-Linear Association	.084	1	.772
N of Valid Cases	114		

a. 12 cells 60% have count less than 5 .The minimum expected count is .17

Interpretation: The Pearson chi-square value is 24.453,larger the value the more likely will be able to reject the null hypothesis P-value is 0.024 at 5 percent level of significance, so hereby we reject the null hypothesis.

COVID-19 has proved that it has positively impacted the banking use of customers post-pandemic as Banks, even the most territorial and branch-centric ones, are forced to encourage the use of channels that have never been their strategic priority. And thus, the newer variants older methods of running banks have been transformed for the better future.

2: To See Physical Visits to Bank Are More Feasible and Security-Friendly

Tests to Be Used: **Chi-Square Test**

Ho: Physical Bank visit is more feasible and security-friendly during Covid-19

H1: Physical Bank visit are not feasible and security-friendly during COVID-19

Source: Calculated on SPSS

What is your age group? * Do you still feel Physical visits to Banks are more feasible and security friendly? Crosstabulation				
Count				
		Do you still feel Physical visits to Banks are more feasible and security friendly?		Total
		Yes	No	
What is your age group?	18-30	22	27	49
	30-45	5	20	25
	45-60	7	14	21
	60&Above	2	17	19
Total		36	78	114

Source: Calculated on SPSS

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.502[a]	3	.023
Likelihood Ratio	10.235	3	.017
Linear-by-Linear Association	6.336	1	.012
N of Valid Cases	114		
a. 0 cells (.0%) have an expected count less than 5. The minimum expected count is 6.00.			

Interpretation: The Pearson chi-square value is 9.502 larger the value the more likely will be able to reject the null hypothesis P-value is 0.023 at a 5 percent level of significance so hereby we reject the null hypothesis. After COVID-19, banking will be much different than it was pre- pandemic.

The change in the way people bank, increasingly clear that the entire banking ecosystem and the way consumers interact with financial organizations have been shaken to the core as a result of COVID-19. Thus, digital-ready banking systems have evolved causing physical bank visits, health as well as difficult issues.

3: Corona likely to impact your decision to switch towards banks offering better digital services

Tests to Be Used: **Chi-Square Test**

Ho: Corona has not impacted decision regarding switch towards better digital services.

H1: Corona has impacted decision regarding switch towards better digital services.

Source: Calculated on SPSS

What is your age group? * Is Corona likely to impact your decision to switch towards banks offering better digital services?

Count

		Is Corona likely to impact your decision to switch towards banks offering better digital services?					Total
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
What is your age group?	18-30	0	1	1	19	28	49
	30-45	0	0	0	11	14	25
	45-60	1	0	0	2	18	21
	60&Above	0	1	0	2	16	19
Total		1	2	1	34	76	114

Source: Calculated on SPSS

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.307[a]	12	.081
Likelihood Ratio	20.377	12	.060
Linear-by-Linear Association	2.111	1	.146
N of Valid Cases	114		

a.12 cells (60.0%) have expected count less than 5. The minimum expected count is .17.

Interpretation: The Pearson chi-square value is 19.307,larger the value the more likely will be able to reject the null hypothesis P-value is 0.081 at 10 percent level of significance ,so hereby we reject the null hypothesis.

The shift in customer behavior has put increased pressure on banks to not only accelerate digitization, but to ensure that traditional customers are fully supported - from the physical in-branch experience as well as digitally.

It is crucial that the future of banking accommodates those who can't, or may not want to, use digital services - as well those who do and this test above helps us to prove how the largest health crisis has helped us to develop a forward-looking approach and how severely in a good manner it has Impacted Indian lives towards a better digital banking economy.

More than 55% of my respondents agreed that covid19 was definitely one of the most influential factors in their lives to impact them towards higher and better use of technology and digital banking experience.

Objective 2: To understand a study the difference in consumer behavior towards the banking sector and their comparison (pre and post Covid19).

Analysis of variance (ANOVA) is a statistical technique that is used to check if the means of two or more groups are significantly different from each other. ANOVA checks the impact of one or more factors by comparing the means of different samples.

An **ANOVA** test is a way to find out if survey or experiment results are significant. In other words, they help you to figure out if you need to reject the null hypothesis or accept the alternate hypothesis.

A one way ANOVA is used to compare two means from two independent (unrelated) groups using the F-distribution. The null hypothesis for the test is that the two means are equal. Therefore, a significant result means that the two means are unequal. A one way ANOVA will tell you that at least two groups were different from each other. But **it won't tell you which groups were different.**

If your test returns a significant f-statistic, you may need to run and (like the Least Significant Difference test) to tell you exactly which groups had a difference in means.

A one way ANOVA will allow you to distinguish that at least two groups were different from each other. Once you begin to understand the difference between the independent variables you will then be able to see how each behaves with your dependent variable.

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Pre Covid	114	512	4.491228	0.393728
Post Covid	114	203	1.780702	0.172722

ANOVA

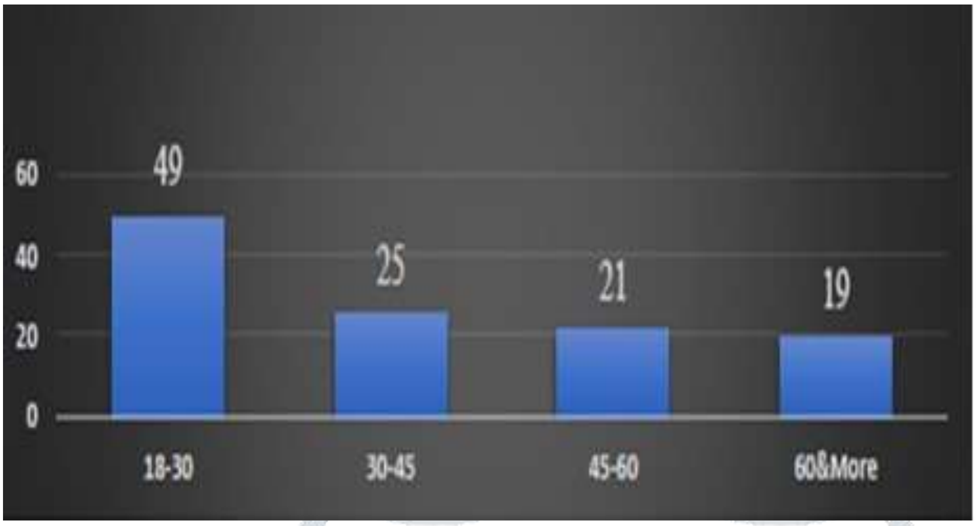
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	418.7763	1	418.7763	2.2654	0.812314	2.132541
Within Groups	64.00877	226	0.283225			
Total	482.7851	227				

Interpretation: Anything less than 0.05 is significant which means H0 is rejected. Anything more than 0.05 is not significant which means HO is accepted. Here p Value is 0.183 which is less than 0.05 therefore H0 is rejected.

The smaller the P value the stronger it supports H1.

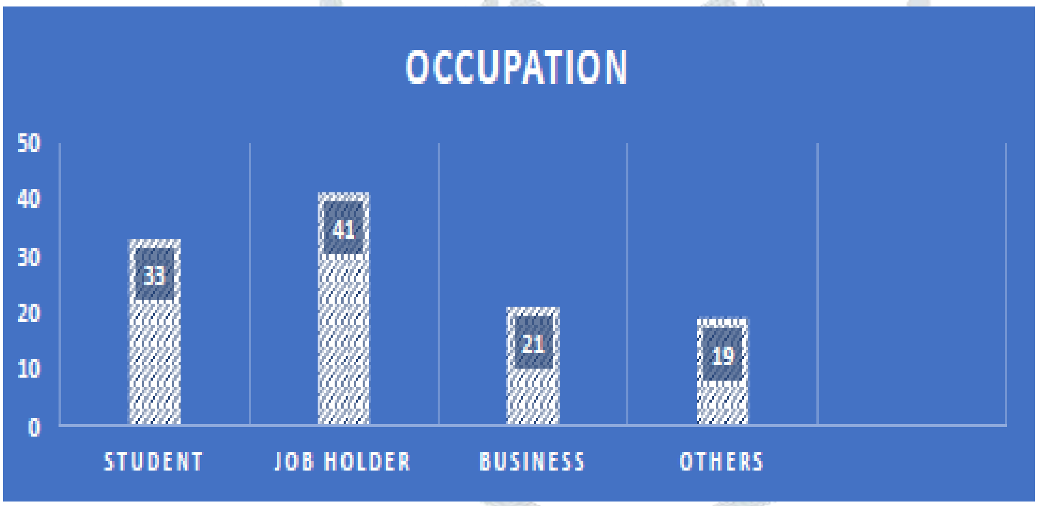
Age Gender & Occupation:

Graph 1: Age Breakdown of Respondents



Source: Calculated on Excel

Graph 2: Occupation of Respondents

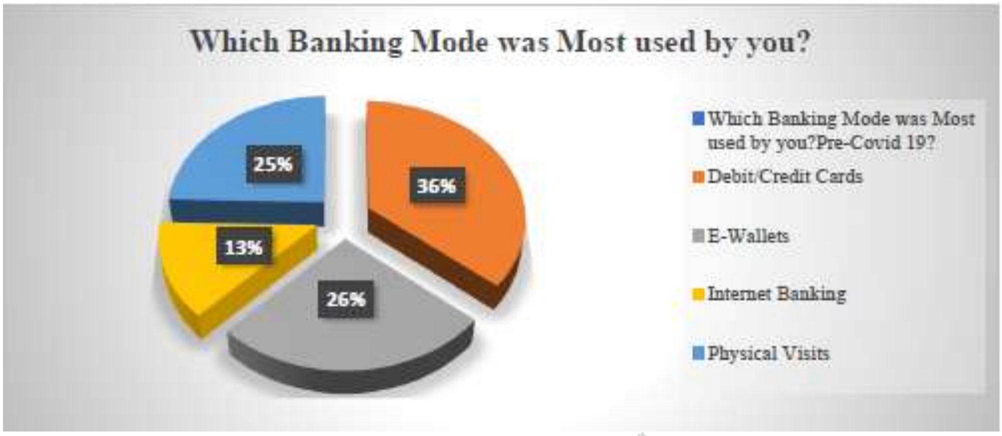


Source: Calculated on Excel

Interpretation: In this above graph Age Range & Occupation is represented through bar graph.
This is age group taken for analysis of consumer perception on change in digitalization of Banking sector Pre & Post Covid-19.

Q. Which Banking Mode was most used by you?

Graph 3: Banking Modes

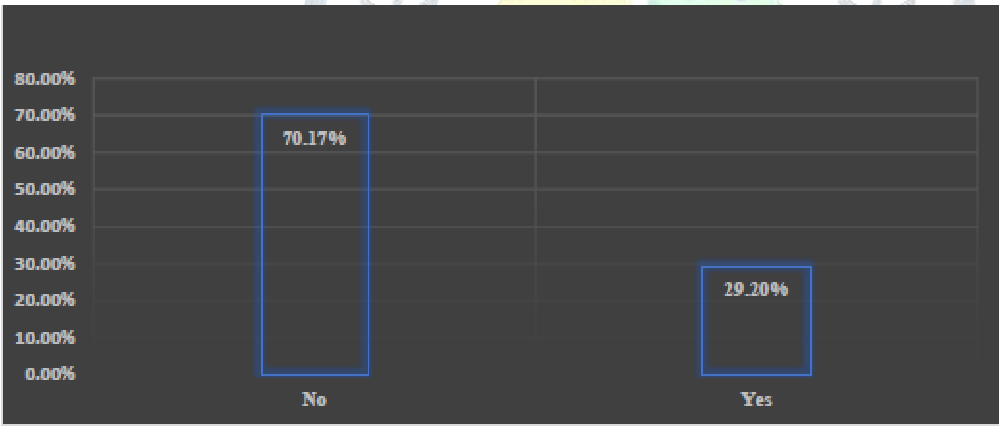


Source: Calculated on SPSS

Interpretation: From the pie chart we conclude that Debit/Credit cards were used by 36% of respondents, 26% respondents prefer E-Wallets as more of respondents are from age group 18-30.
The advantages of prepaid debit cards include being safer than carrying cash, worldwide functionality due to Visa and MasterCard merchant acceptance, the opportunity for anyone over the age of 18.

Q. Do you still feel Physical visits to Banks are more feasible and security friendly?

Graph 4: Physical Visit

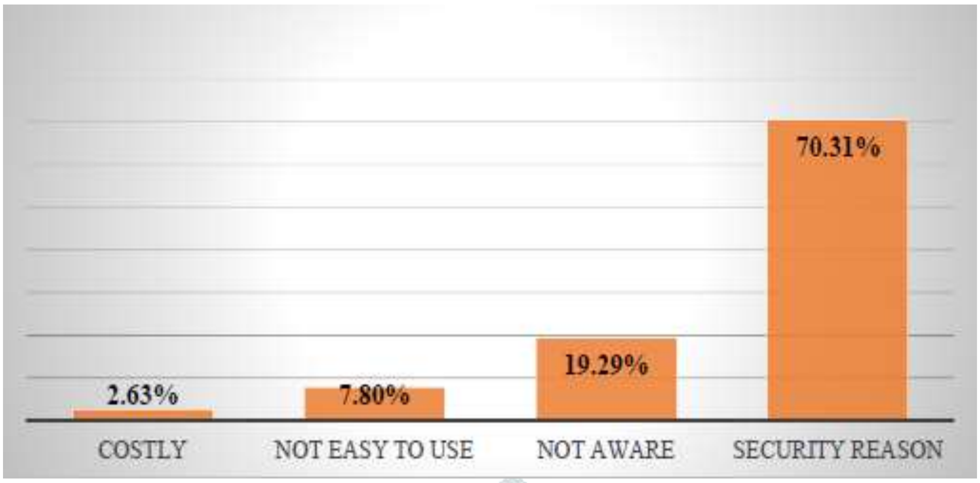


Source: Calculated on Excel

Interpretation: From the graph, 70% do not feel physical visits to banks are feasible and security friendl**y.** After COVID-19, banking will be much different than it was pre-pandemic.
The change in the way people bank, increasingly clear that the entire banking ecosystem and the way consumers interact with financial organizations have been shaken to the core as a result of COVID-19.
Thus, digital ready banking systems have evolved causing physical bank visits a health as well as difficulty issues.

Q. What was the hesitant reason you don't opt mobile banking?

Graph 5: Reason for not opting mobile banking



Source: Calculated on SPSS

Interpretation: From the Bar Graph we conclude that, as we've already seen the above data that despite flexibility and extended support.

We had a large part of respondents as victims or encountered bank frauds due to which security reasons be the top most factors for around 70.31%of my respondents to be hesitant and not comfortable to use and ease of adoption towards digital banking.

CHAPTER – 6

CONCLUSION

The banks in India with the use of efficient planning and provisions might be able to reduce their overall damage and are trying to recover well from the hit. Customers banking practices is also change a lot, their trust in the online banking services is increasing and will start using that more than going to the bank personally to getting things done.

The online banking infrastructure is improving a lot and the interface may become more user friendly during this pandemic. In the modern age, digital banking is gaining popularity, and customers' knowledge of the banking services is increasing every day, even after demonetization. Despite this, the banking industry should keep in mind that the majority of the public is still unwilling to accept and utilize these services for many reasons, including lack of interest and illiteracy.

The main reason is ignorance caused by lack of education, and according to this report, Digital Banking is the most preferred service for account holders who are educated because it's easy to use and saves them time. On the other hand, illiterates do not have access to services because they are ignorant and lack the financial means to acquire internet facilities and smart phones. In general, digital banking services could be improved by educating poor people on the services and explaining to them the benefits they offer.

It is probable that India will become a plastic-oriented economy in the near future, and paper money may become obsolete in the future. Therefore, digital banking is going to be mandatory to a great extent in the near future. In the days to come, a society may even face more Demonetization as the government is dedicated to eradicating black money from society However, none of these things can be accomplished in one day. In future, someday or the other each and every one will understand the importance of digital banking and will start using it.

Today, even illiterates and people living below the poverty line have access to mobile phones, so one day digital banking will be available to everyone. As a result, it is important for all members of our society to know about digital banking services and make use of them so that it is both good for the nation's economy and its citizens. The only way all these things can be achieved is through education and young and technical people. Retail banking competition will likely intensify in the near future, requiring banks to increase their agility.

Due to the fact that the digital capabilities required to solve the COVID-19 crisis are well aligned with the digital transformation trends that banks must capitalize on in the long run, the digital banking landscape after COVID-19 is unlikely to be radically different from that before. In lieu of a fundamental change, the pandemic will accelerate key digital trends. Banks which are able to transform themselves into true digital organizations and capitalize on evolving and accelerating digital trends will not only survive but also thrive in the future digital landscape.

In conclusion, the COVID-19 crisis is likely to accelerate the shift to digital and fundamentally transform the overall business landscape. Customer behavior and preferred interactions are changing rapidly, and while they will likely keep evolving, the digital transformation we are witnessing will continue apace. Besides digitizing, this shift requires revisiting the entire value chain, which includes not only the customer journey, but also other participants, especially merchants. Collaboration among stakeholders committed to digital transformation is set to open up access to banking and payment products for the masses.

CHAPTER – 7

SUGGESTIONS AND RECOMMENDATIONS

1. **Keep your Digital Channels open**

   An unreachable bank is the last thing a customer needs. Especially during times of crisis, banks should keep all of their digital channels open and provide timely updates to their customers before they feel compelled to contact them.

   Especially during times of crisis, banks should keep all of their digital channels open and provide timely updates to their customers before they feel compelled to contact them.

2. **Develop an Omni-channel safety-first outreach plan**

   Banking institutions must inform their customers about safety-related precautions, such as:

- Hygiene steps taken to sanitize the branches, ATMs, currency notes, special trainings to banking correspondents, etc
- Employee-hygiene measures like daily temperature check, usage of sanitizers and protective equipment
- Steps to be taken for customers who have no other choice but to visit a branch - appointments, maintaining distances in queues, etc.
- Preference is given to old and vulnerable sections
- Potential phishing emails and unauthorized KYC requests related to COVID

Branches should proactively inform their customers about these steps via digital channels. An emphasis should be placed on driving more traffic to digital channels than to branches and ATMs.

a) **Send Customer Surveys for Early Feedback**

The majority of queries banks receive can be anticipated in advance. In order to identify potential issues proactively, it is always better to reach out to customers via surveys.

Analyze and prioritize feedback and make sure their needs are met before it becomes an issue. If resources are limited, allocate them to the top priorities. Moreover, this may improve your brand equity among your customers in the long run.

b) **Design Relevant and Helpful Customer Journeys**

Banks need to be ready to meet these potential customers wherever they are - even using messaging apps. According to PwC, the "new normal" for financial services institutions is to be customer-centered, and this means providing seamless omnichannel experiences.

In these times of multiple brands bombarding users, banks should leverage customer journey mapping to engage with customers beyond traditional channels.

3. **Leverage Overlays for Improved Engagement**

   Users can easily be caught by dynamic overlays on your website-especially during COVID.

4. Text Banners for Promotions and Location-Based Announcements

You can use small-sized dynamic banners and include messaging to draw attention to social distancing measures, re-opening specific branches in the area or the local emergency number.

This can also be used to announce that 24/7 customer care is available, as well as priority banking, etc.

5. Give Tailored Advice for the Vulnerable

There can be variations in the impact of the crisis on different customers - some more vulnerable than others.

Banks can utilize customer data platforms to gather 360-degree information about their customers and identify vulnerable ones such as self-employed, high-debt, old-age customers, etc. You can reach out to your customers with tailored products and helpful advice by syncing your CDP with your CRM system.

6. Educate Users about Online Banking

Increase mobile app downloads with smart banners.

Nowadays, most banks offer mobile apps that enable them to do pretty much anything a branch can.

Your web pages can feature a smart banner that allows users to click and download your mobile app directly.

7. Disincentivize Branch Visits

You should encourage your customers to use online banking to keep everyone safe. To drive potential branch visitors to online channels, use your branch locator pages, ATM listings in Google, and more.

8. Deliver Digital Banking Education

If you already have a knowledge base to educate your users about digital banking capabilities - this may be the right time to make these pages more accessible.

Using existing digital channels can be done via a mobile banking or digital banking guide. Retarget customers who haven't made any purchases even after learning about digital channels.

9. Create COVID-Sensitive Products & Services

Banks are diversifying to address different customer needs unlike in the past.

During times of crisis, here are some actions you should take right away:

- Increase the limits for online transactions
- Offering payment holidays, moratoriums on loans, relaxation of EMIs, waiving minimum balance charges, relaxing additional authentication for family members, easier password reset steps, etc.
- Provide emergency credit, an emergency savings account, and discount rates for loans & insurance.

While these initiatives can be of great assistance to customers, banks must ensure they reach the right people. The use of interest clusters and predictive audiences based on artificial intelligence are some of the proven methods banks can employ.

10. Bring Back Customers with Tailored Product Recommendations

Taking advantage of the crisis to try to sell something should be avoided at all costs. It doesn't mean banks should overlook the ways in which banking and insurance products can help customers during this crisis.

For example, suggest suitable insurance products to those customers without appropriate coverage.

11. Lead Community Initiatives via Banking Communities

China has already demonstrated how banks can engage and lead community outreach. According to a McKinsey checklist, banking leaders should perform additional tasks during the COVID-19 crisis.

Education on digital banking, lockdown awareness, responding to government measures and assisting individuals with their credit are all part of this.

CHAPTER – 8

8.1 BIBLIOGRAPHY

WEBSITES

- *https://www.ey.com/en_gl/financial-services-emeia/how-covid-19-has-sped-up-digitization- for-the-banking-sector*
- *https://www.glhttps://www.globaltrademag.com/how-are-digital-banking-facilities-helping- during-covid-19-pandemic/obaltrademag.com/how-are-digital-banking-facilities-helping- during-covid-19-pandemic/*
- *https://www.finextra.com/blogposting/19860/banking-on-lockdowns-the-digital-opportunity- in-covid-19*
- *https://newsroom.accenture.com/news/rapid-shift-to-digital-banking-during-covid-19- accelerating-eroion-in-consumer-trust-accenture-report-finds.htm*
- *https://cio.economictimes.indiatimes.com/news/strategy-and-management/digital-banking-in- the-times-of-a-covid-19-epidemic/75007525*
- *https://www.hsbc.com/insight/topics/how-banking-will-change-after-covid-19*
- *https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Financial-Services/gx-fsi- realizing-the-digital-promise-covid-19-catalyzes-and-accelerates-transformation.pdf*
- *https://www.globaltrademag.com/how-are-digital-banking-facilities-helping-during-covid-19- pandemic/*
- www.financial express.com; April 27,2020; website visited and retrieved on April 28, 2020

BOOKS AND JOURNAL

- Jitender Singh & B. S. Bodla (2020). COVID-19 Pandemic: A Global Challenge (pp.21-32).Retrieved from https://www.researchgate.net/publication/341909544\
- Nilesh Limbore (2014) Study Of Banking Sector In India And Overview Of Performance Of Indian Banks .Retrieved from https://www.researchgate.net/publication/26086934/
- N ThyagaRaju (2016). Impact of information technology (it) on the banking sector. Retrieved from https://www.journalijcar.org/issu es/impact-information-technology-it-banking-sector

ANNEXURE

1. Demographic Profile of Respondents.

- Age
- Occupation

2. By how much on scale of 1-5 COVID-19 impacted your banking use and experience?

- 5
- 4
- 3
- 2
- 1

3. With Lockdown in the picture was it easy to transform your banking experience digitally?

- Yes
- No

4. Did your bank visit change Pre and Post COVID-19?

- Very Significantly
- Significantly
- Neutral
- Not affected

5. Did your withdrawal and ATM transaction significantly go down?

- Yes
- No
- Not Much

6. Which Banking mode was most used by you?

- E-Wallets
- Debit/Credit Cards
- NEFT/RTGS
- Physical Visits

7. Usage of E-Payments and another online banking sector (Pre COVID-19)?

- Never
- Slightly
- Neutral
- Mostly
- Always

8. Usage of E-Payments and another online banking sector (Post Covid-19)?

- Never
- Slightly

- Neutral
- Mostly
- Always

9. What was your average locker visit yearly (Pre-Covid-19)?

- 0-1
- 1-3
- 4-6
- More than 6

10. What was your average locker visit yearly (Post-Covid-19)?

- 0-1
- 1-3
- 4-6
- More than 6

11. Have you availed any new Locker facility post the lockdown happened?

- Yes
- No

12. What was your average number of fixed deposit & recurring deposits in a Pre-Corona yearly?

- 0-1
- 1-3
- 4-6
- More than 6

13. What was your average number of fixed deposit & recurring deposits in a Post-Corona yearly?

- 0-1
- 1-3
- 4-6 More than 6

14. Do you still feel Physical visits to Banks are more feasible and security friendly?

- Yes
- No

15. How People will see the future of Indian Banking system?

- Will go back to as usual
- UPI Payments
- E-Wallets
- Internet Banking

16. Did the Covid-19 impact on banking sector and your use required to digital transformation?

- Yes
- No

17. During the COVID-19 period due to digitalize transformation have you been victim of bank fraud?

- Yes
- No

18. What was the hesitant reason you don't opt mobile banking? (Pre-Covid-19)

- Costly
- Not Easy to Use
- Not Aware
- Security Reason

19. As a consumer what kind of help you'd expect from banks in these unprecedented times?

- extended support
- flexibility
- extended value of transactions
- Others

20. Is Corona likely to impact your decision to switch towards banks offering better digital services?

- Strongly agree
- Agree
- Disagree
- Strongly disagree