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An Analytical Study of Digital Banking Adoption Among Senior Citizens in Mumbai

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Abstract

The high rate of the development of digital technologies has seriously changed the banking industry, which traditionally delivered banking services offline and through mobile platforms. Though digital banking is convenient and efficient, it is accessible to a broader audience, this is why the number of senior citizens using digital banking is relatively low, especially in such urban centres as Mumbai. This paper will examine the influences that affect the use of digital banking among individuals aged 60 years and above with a view of knowing their challenges, perceptions and the rate of acceptance. The study is founded on the primary data gathered via structured questionnaire among 100 elderly people by the random sampling technique. Among the barriers that have been highlighted in the study include a lack of digital literacy, fear of cyber fraud, physical and cognitive constraints, distrust in technology, and poor awareness of digital financial services. These are some of the challenges that lead to gap between availability of digital banking services and the effective usage of the same by the aged population. The results point to better online education, easier banking systems, and better support services to facilitate the idea of digital inclusion. The paper ends with recommendations on effective steps to make digital banking more trusted, accessible, and adopted by the elderly population, thus contributing to the inclusive financial growth.

Keywords *- Digital Banking, Senior Citizens, Digital Literacy, Financial Inclusion, Cyber Security, Technology Adoption, Digital Divide*

Introduction

Digital banking is the transformation of what was once traditional banking into a digital space which enables customers to access financial services via the internet and mobile apps. We see that customers can do things like fund transfer, bill payment, account management, apply for loans, and investment without the need to go to a physical bank branch.

Nowadays, digital banking is dominant and it is changing how the financial sector works. It is providing new conveniences, speeds, 24/7 availability, and reduced expenses. It is also cheaper. In addition, banks are adopting the use of digital interfaces to meet customer needs, which increases their competition. The banking sector is highly dynamic and competitive in the use of technology. Advancements like AI, mobile applications, and blockchain technology, accompanied by enhanced security features, are driving transformative growth in digital banking and altering how people and companies interact with banks.

Background of Digital Banking:

The banking industry has experienced significant change in the last twenty years because of the digital technologies, changing the manual system into the AI-based operations. With the current digital banking, clients can do virtually all banking operations, including transferring funds, paying bills, managing their accounts, and even applying to take loans online or by using mobile phones without the need to visit the physical branches. The initiatives such as Digital India, UPI, and Jan Dhan Yojana, as well as the efforts of large banks such as SBI, HDFC Bank, and ICICI Bank to spread digital services in urban and rural regions have accelerated this change in India.

Whereas younger generations have easily embraced the idea of digital banking, older people (60 years and above) have lagged in terms of habits, lack of technical skills and insecurity. Nevertheless, the COVID-19 pandemic contributed greatly to the popularization of digital among elder adults due to the necessity of online banking during the lockdowns. Consequently, the perception, acceptance, and usage of digital banking by them is now more of a research and practical implementation issue as well.

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Digital Inclusion of Senior Citizens in Modern Banking:

The modern digitalized world is quite fast-paced and financial services have been moved to the network and are now accessible and convenient in terms of mobile applications. Nonetheless, the change has also produced a digital gap, particularly in elderly citizens. With banks narrowing down on physical branches and turning to cashless alternatives, digital inclusion is now vital not only as a convenient option but also as an equal access tool to the economic and social life.

Some of the challenges are technology knowledge ability, physical or cognitive problems, and the fear of being defrauded, which may result in money exclusion and reliance on others among the senior citizens. It is thus essential to promote digital inclusion so that they remain independent, dignified, and engage in the social life. It also contributes to more extensive financial inclusion ambitions and enhances their confidence, self-esteem, and sense of belonging in an ever-digitized world.

Challenges Faced by Senior Citizens:

Even though, digital banking is fast, convenient and 24/7, most older citizens cannot fully embrace the digital financial system because of technological, psychological, physical, and social obstacles that restrict their ability to fully embrace the digital banking platform.

- Lack of Digital Literacy: Lots of older individuals do not have fundamental abilities to operate smartphones, applications, and online banking and become confused and avoid them.
- Fear of Cybercrime and Fraud: The elderly are afraid of fraud, phishing, and identity theft; therefore, they are reluctant to embrace online banking.
- Physical and Cognitive limitations: The problem is that age-related factors, such as bad eyes, memory, and motor skills contribute to the inability to use banking apps.
- Technological Interrupted Trust: Conservativeness in banking and distrust towards online platforms decrease their readiness to change.
- Absence of Individual attention: It is difficult to provide seniors with the right guidance due to the automated systems and the lack of human assistance.
- Rapid Technological Changes: The nature of constant updates in apps and systems also complicates keeping pace and relearning by the seniors.
- Barriers in language and communication: Many seniors do not know how to read and use digital services because of limited language choices.
- Isolation and Social Dependence: Reliance on anyone diminishes independence and exposes one to the risk of making mistakes or abusing it.
- Lack of Financial Consciousness toward Online Services: Poor awareness regarding services such as UPI and online payments restrict their use of online banking.

Research Methodology

Objectives:

1. To analyse the factors influencing the adoption of digital banking by senior citizens.
2. To evaluate the role of financial literacy and technology skills in facilitating digital banking adoption among senior citizens.
3. To provide recommendations for improving digital banking adoption and user experience for senior citizens

Scope of the Study:

The research will seek to learn the issues of senior citizens (60 and above) in Mumbai who are using digital banking services. The lack of digital literacy, security concerns, the low level of their awareness, and inconvenience with technology are all the problems that it concentrates on and impede their productive use. It also looks into their attitudes, behaviours and perceptions towards digital banking, the major causes of these challenges, and proposes solutions to enhance digital inclusion. The research also aims to increase the knowledge and confidence of the seniors in order to increase the acceptance of digital banking sites.

Statement of Problem:

The ongoing blistering development of digital technologies has strongly reshaped the banking sector, with online and mobile service offers being more convenient, efficient and accessible to the financial services market. Even with all this, senior citizens are still comparatively slow to take up digital banking especially in urban areas such as Mumbai where there is a well-developed digital infrastructure. The elderly population still constitutes a significant number of traditional bankers because of the cognitive and physical limitations, fear of cyber fraud, insufficient digital literacy, and poor awareness of digital financial services.

This state of affairs leaves a loophole between the access to digital banking facilities and their successful usage by older adults, which can result in financial isolation and low levels of independence. More than that, as more banks shift to a digital-first platform and lessen the number of physical interactions, the challenges of older adults are becoming more urgent. Thus, it is necessary to systematically investigate and examine the determinants of the adoption of digital banking by senior citizens, their perceptions, and barriers and find ways to increase their uptake on the digital financial ecosystem.

Data Collection:

The information to be used in the study was gathered using primary sources with the help of a structured questionnaire. The elderly of 60 years and above were sampled to learn their perception and problems with digital banking.

Hypothesis:

Hypothesis 1

H0 - There is no statistically significant relationship between gender and the level of comfort with using digital technology for banking purposes among senior citizens.

H1 - There is a statistically significant relationship between gender and the level of comfort with using digital technology for banking purposes among senior citizens.

Hypothesis 2

H0 - There is no statistically significant relationship between digital literacy level and the adoption of digital banking services among senior citizens.

H1 - There is a statistically significant relationship between digital literacy level and the adoption of digital banking services among senior citizens.

Literature Review

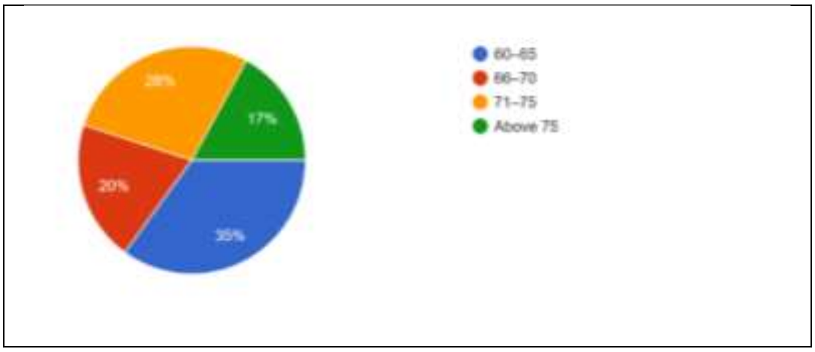
1. **Dr. Ritu Arora, Dr. Rashmi Datta (2021)**
   Arora and Datta's study delves into the adoption and usage behaviour of digital banking among senior citizens in Delhi NCR. Through a mixed-method approach, the research identifies factors influencing adoption and highlights persistent barriers, emphasizing the need for tailored interventions.
2. **Dr. Prashant Kumar, Dr. Arun Kumar (2022)**
   Kumar and Kumar's study examines the digital banking preferences and needs of senior citizens in Lucknow, Uttar Pradesh. Through surveys and focus groups, the research explores attitudes towards various digital banking channels, offering insights for tailored solutions.
3. **V Bharathi Veena (2022)**
   Veena's research examines the impact of digital banking acceptance on usage among elderly banking customers. The study addresses the gap in digital literacy among seniors, exploring how acceptance influences their engagement with digital banking services.
4. **Dr. Meenakshi Gandhi, Dr. Rakesh Kumar (2021)**
   Gandhi and Kumar investigate the challenges and opportunities of digital banking adoption among elderly customers in Jaipur, Rajasthan. The study highlights barriers such as digital literacy and security concerns, emphasizing the importance of user education and interface design.
5. **Dr. Priya Gupta, Dr. Rajesh Verma (2020)**
   Gupta and Verma's research explores the impact of demographic factors on digital banking adoption among senior citizens in Mumbai, Maharashtra. The study addition factors such as age, income, and education level, providing insights into demographic disparities in digital banking usage.
6. **Dr. Sunita A. Magar, Dr. A. A. Khedkar (2020)**
   Magar and Khedkar's research focuses on the challenges faced by senior citizens in rural Maharashtra in adopting digital banking. Through qualitative methods, the study identifies barriers such as infrastructure limitations and cultural resistance, highlighting the need for targeted interventions.
7. **Dr. K. Srinivasan, Dr. P. K. Patro (2019)**
   Srinivasan and Patro assess the perceived usefulness and ease of use of mobile banking applications among elderly users in Chennai. Using the Technology Acceptance Model (TAM), the study explores factors affecting adoption and underscores the importance of user-friendly interfaces.

Finding and Data Analysis

1. **Age**

Age	Responses	Percentage
60 – 65	35	35%
66 – 70	20	20%
71 – 75	28	28%
Above 75	17	17%
Total	100	100%

(Table 4.1)

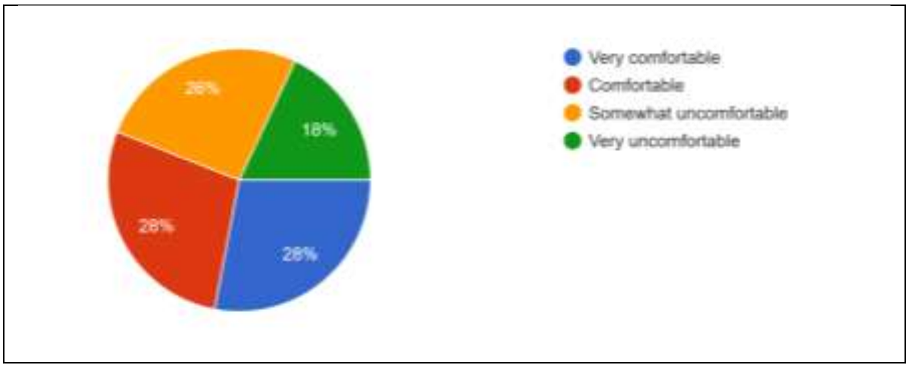


(Chart 4.1)

2. **Gender**

Gender	Responses	Percentage
Male	47	47%
Female	53	53%
Prefer not to say	0	0%
Total	100	100%

(Table 4.2)

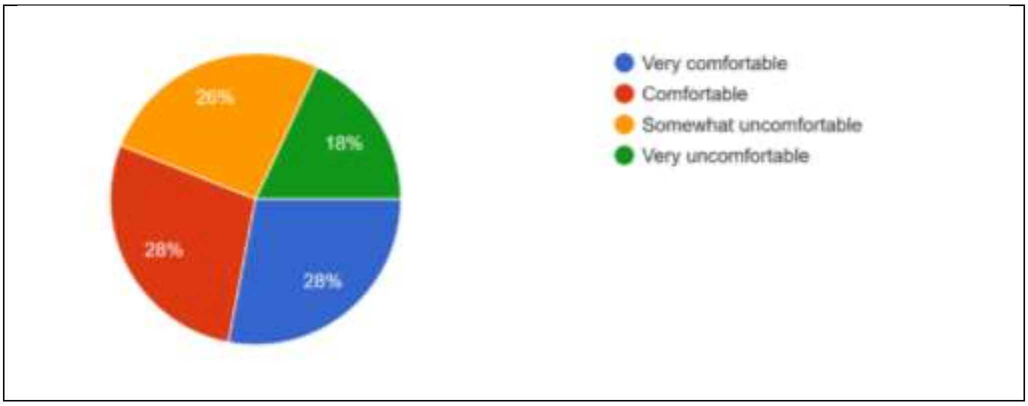


(Chart 4.2)

3. **How would you rate your comfort level with using smartphones or computers for banking?**

Options	Responses	Percentage
Very Comfortable	28	28%
Comfortable	28	28%
Somewhat Uncomfortable	26	26%
Very Uncomfortable	18	18%
Total	100	100%

(Table 4.3)

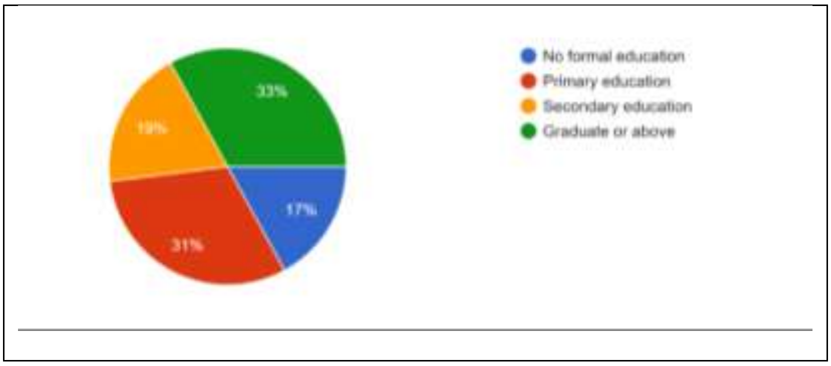


(Chart 4.3)

4. **How often do you use digital banking services (e.g., mobile banking, internet banking, UPI)?**

Education	Responses	Percentage
No Formal Education	17	17%
Primary Education	31	31%
Secondary Education	19	19%
Graduate & Above	33	33%
Total	100	100%

(Table 4.4)



(Chart 4.4)

Hypothesis Testing

Hypothesis 1

H0 - There is no statistically significant relationship between gender and the level of comfort with using digital technology for banking purposes among senior citizens.

H1 - There is a statistically significant relationship between gender and the level of comfort with using digital technology for banking purposes among senior citizens.

T- Test

	Gender	How would you rate your comfort level with using smartphones or computers for banking?
Mean	1.53	1.44
Variance	0.251616162	0.248888889
Observation	100	100
Pooled Variance	0.250252525	
Hypothesized Mean Difference	0	
Df	198	
t Stat	1.272149868	
P(T<=t) one-tail	0.10240595	
t Critical one-tail	1.652585784	
P(T<=t) two-tail	0.2048119	
t Critical two-tail	1.972017478	

ANOVA Test

Summary

Group	Count	Sum	Average	Variance
Gender	100	153	1.53	0.251616162
How would you rate your comfort level with using smartphones or computers for banking?	100	144	1.44	0.248888889

ANOVA

Source of Variation	SS	df	MS	F	P- Value	F crit
Between Groups	0.405	1	0.405	1.618365288	0.2048119	3.888852933
Within Groups	49.55	198	0.250252525			
TOTAL	49.955	199				

Interpretation: Since p value = 0.2048119 > 0.05, the result is statistically significant, and therefore the null hypothesis is accepted. This means that alternative hypothesis is rejected.

Hypothesis 2

H0 - There is no statistically significant relationship between digital literacy level and the adoption of digital banking services among senior citizens.

H1 - There is a statistically significant relationship between digital literacy level and the adoption of digital banking services among senior citizens.

T- Test

	Educational Qualification	How would you rate your comfort level with using smartphones or computers for banking?
Mean	2.68	2.34
Variance	1.22989899	1.155959596
Observation	100	100
Pooled Variance	1.192929293	
Hypothesized Mean Difference	0	
Df	198	
t Stat	2.201185117	
P(T<=t) one-tail	0.014439314	
t Critical one-tail	1.652585784	
P(T<=t) two-tail	0.028878629	
t Critical two-tail	1.972017478	

ANOVA Test

Summary

Group	Count	Sum	Average	Variance
Educational Qualification	100	268	2.68	1.22989899
How would you rate your comfort level with using smartphones or computers for banking?	100	234	2.34	1.155959596

ANOVA

Source of Variation	SS	df	MS	F	P- Value	F crit
Between Groups	5.78	1	5.78	4.845215919	0.028878629	3.888852933
Within Groups	236.2	198	1.192929293			
TOTAL	241.98	199				

Interpretation: Since p value = 0.028878629 < 0.05, the result is statistically significant, and therefore the null hypothesis is rejected. This means that alternative hypothesis is accepted.

Conclusion

This paper will discuss the implementation of digital banking among the elderly population in Mumbai and will show that the introduction of digital financial services has been embraced by few people. Reduced digital literacy, fear of cyber fraud, distrust of technology, physical or cognitive barriers are some of the major obstacles in the research. These problems indicate that the lack of digital infrastructure is not the problem, but the competence and willingness of older users to make good use of such services.

The ANOVA and T-test statistical analysis is very valuable. It demonstrates that educational qualification (digital literacy) significantly affects the adoption and comfort level with digital banking but gender does not play a significant role. This shows that the digital divide between the elderly citizens is more knowledge based than it is demographic, and thus education and awareness play a significant role in attaining adoption.

To sum up, to increase the adoption of digital banking by the elderly population, a more inclusive and user-friendly strategy is necessary. Trust and confidence can be established by simplified interfaces, digital literacy, improved customer support, and enhancing awareness on cybersecurity. The efforts to respond to these aspects will not only improve the level of financial inclusion but will also make sure that elderly citizens are engaged in the changing digital environment.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper

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