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Digital Banking Acceptance in Gen X Citizens of Urban India

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Abstract: Globally, the banking industry has been embracing digital technology. However, acceptance of new technology is complicated for Gen X citizens. This paper focuses on Gen X citizens' banking experiences in urban India, where digital transactions are increasing. This study aims to understand their challenges in adapting to this digital development. With the help of a survey of 17 Gen X citizens of urban India, the findings demonstrate that Gen X citizens routinely perform financial activities. Despite long waiting durations in conventional banking methods, only some people use digital platforms for banking activities. A couple of their key concerns are security and usability. However, the survey reveals that most are still optimistic about digital banking platforms such as applications and virtual banks. The findings from this study are used to discuss the design potential for increasing the accessibility of banking for Gen X citizens of urban India.

Keywords: Elderly, Seniors, Gen X, Digital Banking, Electronic Payments, Banking Experience, Accessibility, Challenges

1. Introduction

A new generation of digital India is developing as technology advances quickly in the digital payment sector. This rapid growth of digitalization poses challenges for Gen X citizens of India. This study aims to investigate how this senior generation of digital India uses technology in the banking industry and their perspectives and concerns about this technological adoption. There are several difficulties that Gen X citizens confront while accepting technology. There are several technologies they have never seen before, and if they do not adequately understand them, they will be unable to use them and will be dependent on aid from someone else. This study seeks to identify the factors affecting GenX's perspective of digital banking. This research aims to assist them in adopting these methods. The demonetisation (2016) and the COVID-19 pandemic have intensified this tendency internationally (Peter et al., 2020), prompting several banks to close their branches (Jyoti Choudrie et al., 2018). As conventional bank interactions are progressively supplanted by digital user interfaces on websites and mobile applications, it is vital that all banking systems are useful and accessible to individuals of all backgrounds.

Gen X people are more likely to have problems while utilising new technology due to variables such as generation/cohort effects, age-related decreases, and less favourable views toward technologies (Jyoti Choudrie et al., 2018). Indeed, studies (Chrysoula et al., 2017) have indicated that older persons are more hesitant to accept new technology and utilise them less often. As a result, older

persons may encounter more difficulties in embracing digital banking. This paper aims to analyse Gen X citizens' behaviour and issues with both physical and digital banking platforms in order to present a comprehensive picture of their banking experiences.

2. Research Questions

We are specifically looking for answers to the following research questions:

1. How do Gen X citizens bank using physical and digital platforms?
2. What issues do Gen X citizens face while using both physical and digital banking platforms?
3. How to reduce barriers and make it easy for Gen X citizens to adapt to new digital banking platforms?

3. Banking platforms in India

The advancement of information and communication technology (ICT) has led to the rapid growth of digital banking in the last decade. As a result, fewer individuals visit physical banks and use hotlines and digital services (Mckinsey, 2015). In comparison to other nations, India has the world's largest and fastest-expanding e-commerce and fintech market. Meanwhile, India has experienced rapid development in digital banking and has risen to the forefront of digital banking with the implementation of UPI (Unified Payment Interface). Several studies (Guangying Hua, 2008) evaluated people's acceptance of online banking and discovered that security is the most significant factor affecting people's adoption. Laforet et al. investigated people's attitudes toward online and mobile banking and discovered that the main barriers to online banking adoption were risk perception, computer and technological skills, and India conventional cash-carry banking culture, whereas the main barriers to mobile banking adoption were a lack of awareness and understanding of the benefits provided by mobile banking.

3.1 Acceptance of Offline Banks

Previous research (Maya Abood et al., 2015) indicates that older persons prefer physical banking to alternative types of banking. For example, among lower-income older persons, in-person customer support is one of the most sought services from financial institutions (Maya Abood et al., 2015). When compared to younger customers, elderly people valued physical banking above alternative banking systems (Michael Harris et al., 2016). A study (Omotayo et al., 2020) was performed on 239 older persons and discovered that 80.3% did not utilise Internet banking and preferred conventional banking. However, elderly persons mentioned the challenge of long waiting duration by visiting bank branches.

3.2 Acceptance of Online Banking

Previous research (Mckinsey, 2015) looked at the use of digital banking among Gen X citizens. According to a 2020 survey (Omotayo et al., 2020), most Gen X citizens did not utilise online banking because they preferred to use the traditional banking system. Even if they utilised digital banking, they found banking websites difficult to use (Chrysoula Gatsou et al., 2017). According to an analysis (Mckinsey, 2015), digital banking usage in Asia's emerging countries is lower among older persons than among young adults. A study discovered that older persons used the telephone more frequently, whereas younger adults utilised the Internet and ATMs more frequently (Olsen et al., 2011). Rather than comparing the behaviours of older and younger individuals, this research focuses on Gen X citizens' experiences with various digital banking technologies (e.g., apps, virtual banks) as well as comparisons with physical banking.

Furthermore, as new banking platforms such as digital payment (e.g., Google Pay, PhonePe, Paytm, UPI, Paypal) and virtual banks (e.g., Niyo Bank, OpenBank, Fi Bank, Kotak 811) have become more

popular, it is critical to understand how Gen X citizens use these new digital banking platforms in comparison to other platforms (Google Pay, 2021).

4. Method

This research adopts interviews as a first step to understand Gen X citizens' holistic banking experiences with both physical and digital platforms. The interviews provide a qualitative viewpoint and a resonant understanding of all the issues and typical banking practices from a wide number of individuals. The participants included Gen X citizens from the age group 55 years to 65 years.

4.1 Survey Design

The poll contained a variety of question styles, including multiple choice and short answer questions. Based on the participants' banking experiences, the survey was divided into three major categories. The first component included questions for participants who tried digital banking and then abandoned it or stopped using it to determine why they didn't pursue it. The second segment asked identical questions; however, it targeted persons with no prior banking knowledge. The third area is for persons who conduct everyday digital banking transactions. It also asked questions to determine their desire to use the new banking methods (e.g., electronic payment). Furthermore, contingent questions were used frequently in the survey to avoid participant confusion by concealing irrelevant questions based on their replies, as well as to save time and maintain data quality.

4.2 Participants

This study is based on quantitative, qualitative and mixed methods to collect data from people who are around 55-65 years old in order to analyse their views on digital payments. These methods are selected to aid the understanding of Gen X citizens' perspectives and challenges in terms of adapting to digital payments.

Demographic and technology background questionnaires were distributed to select respondents who own an android smartphone or a feature phone. The survey was conducted with sequential structured questions. The intention of the interview was to learn more about the role of technology in their life, aspiration and expectation from modern technology and technology-enabled services. The number of participants was 17, and the language varied between English and Hindi.

Table 1. Participants' Demographic Information

Age	Number of participants
55-60 years old	10 (58.8%)
60-65 years old	7 (41.2%)
Gender	
Male	10 (58.8%)
Female	7 (41.2%)
City	
Tier-1	4 (23.5%)
Tier-2	2 (11.8%)
Tier-3	11(64.7%)

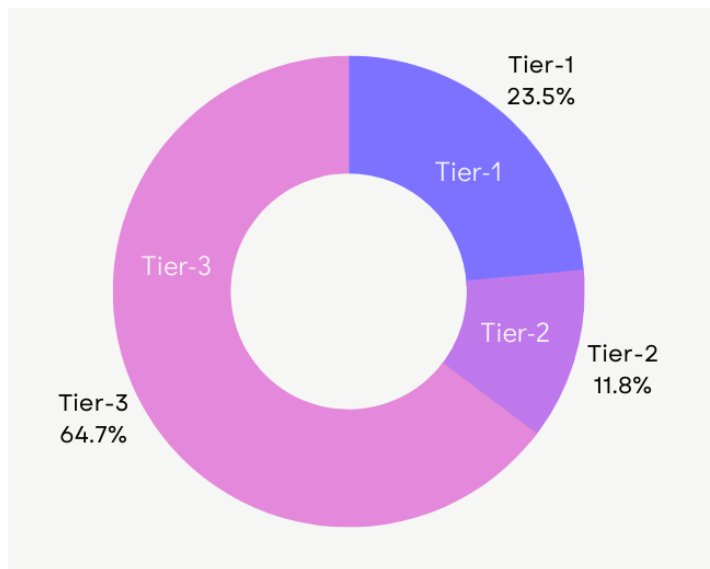


Figure 1: Participants' Geographical Distribution

The participants were (Gen X citizens) from various categories such as working professionals, retired, housewives etc.

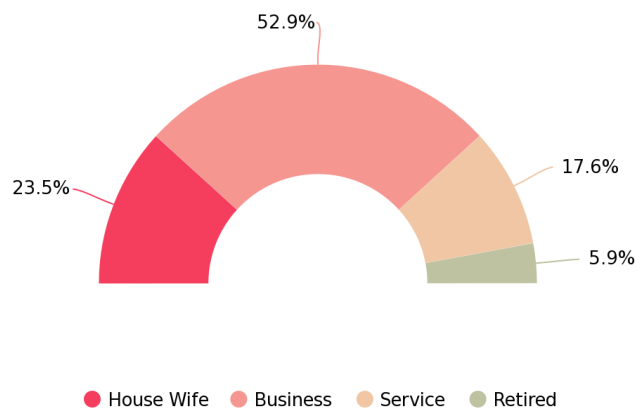


Figure 2: Participants Types

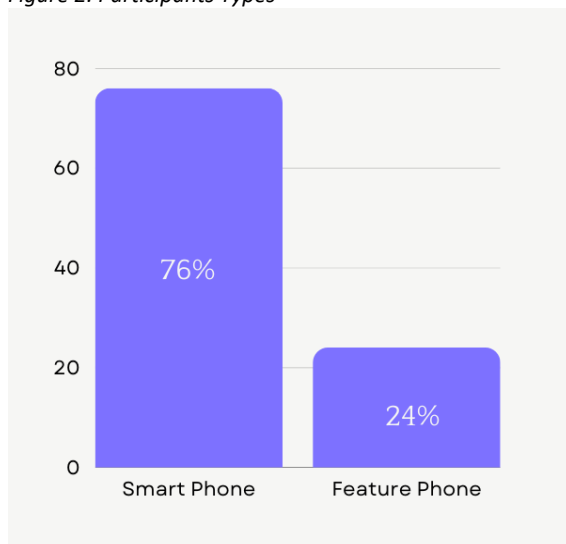


Figure 3: Mobile Devices Used

5. Research Findings

Approximately 94% (N = 16) of the participants had banking experience, with just 6% (N = 1) having no financial experience.

Participants with banking experience stated their frequency of banking. The outcomes are depicted in Figure 4. The majority (72.9%) of them banked on a monthly basis. 45% of these people who banked every month (or 33% of all participants who banked) banked twice or three times every month. This implies that the assumption that Gen X citizens do not bank is false; instead, they banked regularly.

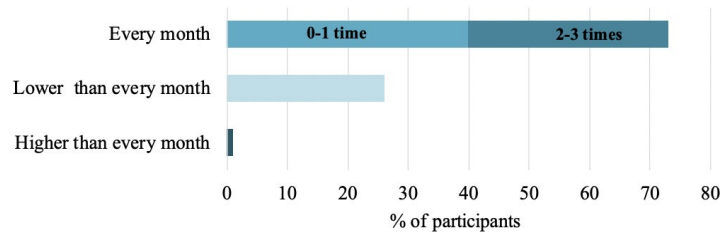


Figure 4: Banking Frequency

Banking transactions reported by the 15 participants who banked largely on their own: Deposit and withdrawal (84.1%), see details/balance (28.3%), transfer money (18.1%), manage wealth (15.9%), change the password (8.0%), pay bills (7.2%), manage investments (4.3%), manage credit cards (2.9%), and manage loans (1.4%).

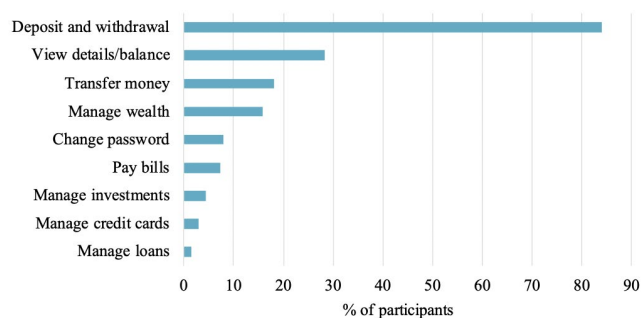


Figure 5: Types of Banking Transactions

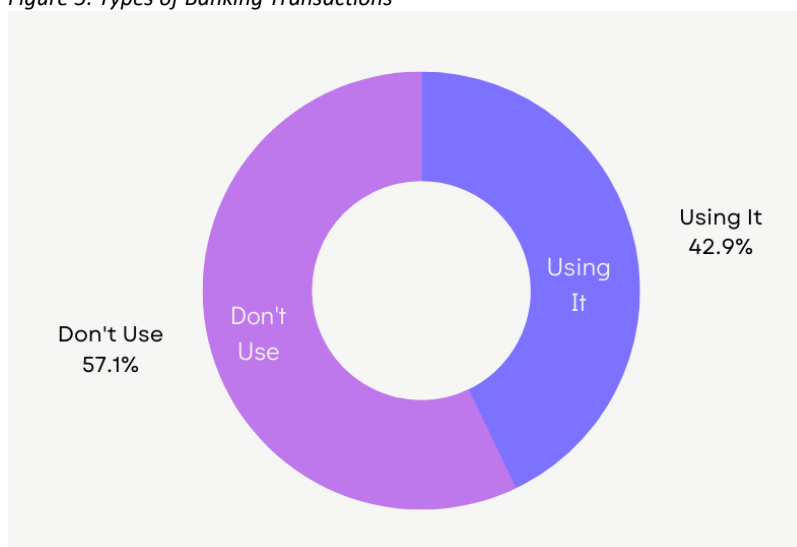


Figure 6: Digital Payments Acceptance Ratio

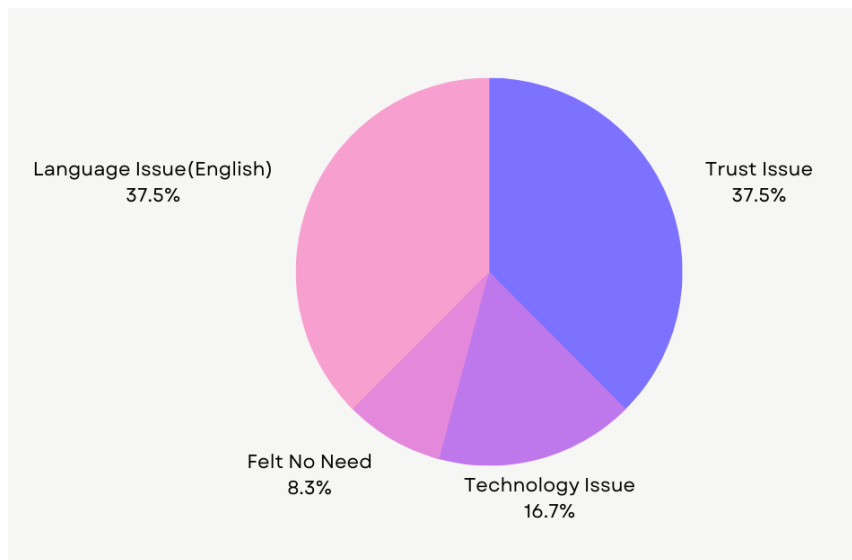


Figure 7: Problems faced while using/trying to accept digital payments

4.1 Key reasons for not accepting digital banking

1. Distrust of banks/apps
2. Lack of knowledge about digital banking
3. Preferring to retain money in hand
4. Language barrier

Almost three-quarters (70.7%) of those polled thought it was risky to use ATMs or applications. They were used to manual processing at physical banks, according to 63.6% of them. These top two causes may strengthen one another. Participants would continue to lack experience with ATMs and applications since they were used to physical banking and were hesitant to try them. They were more prone to believe such platforms were risky due to their lack of expertise. The remaining arguments concerned the design of ATMs and applications. Participants said that reading the text on ATMs and apps was problematic due to bad vision (57.6%) and that ATMs and apps were too difficult to use (40.4%). A participant said that "I don't know how to perform online banking," "I'm too old and don't know how to use it". 38.4% of participants said that some transactions could not be performed via ATMs or applications. Participants perceived challenges with ATMs and applications, such as trust, legibility, and usability, are highlighted in these reasons.

Digital banks are the most recent banking platform, yet few participants have used them. Instead of asking participants about their experiences, they were asked to indicate the statement that most closely reflects their attitudes toward this banking platform: A participant mentioned, "I will try various ways to use it myself, If someone recommends it, I am willing to try, I could care less about a virtual bank, and I resist using a virtual bank." 46.4% of participants had a fairly unfavourable opinion regarding virtual banking, with 18.7% saying they would avoid it and 27.8% saying that it did not matter. This highlights an opportunity to understand the perceived constraints that cause Gen X citizens to abandon the digital banking platform.

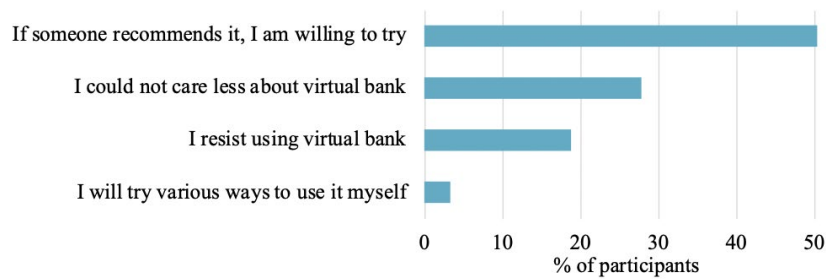


Figure 8: Attitude toward Digital Banking

On the other hand, more than half of the participants (53.6%) thought it was a good idea. Among these persons, 3.2% were prepared to experiment with different methods to use on their own, and more than half (50.3%) would try it if advised by someone. This shows that, while Gen X citizens are less inclined to check out virtual banks on their own actions, they are eager to try these services if someone offers them help to onboard.

Male participants banked more than once per month at a greater rate than female participants (83.8% vs 63.9%). Female participants utilised the "transfer money" transaction at a higher rate than male participants (9.5% vs 4.9%). Male participants utilised "electronic payment" at a larger rate than female participants (48.2% vs 31.3%). However, when it came to ATM/app usage, female participants were more likely than male participants to be unsure how to get started (45.5% vs 5.8%). Similarly, female participants were more likely than males not to know what their next action should be (40.9% vs 5.9%).

According to the research findings, Gen X citizens in urban India bank regularly, with the majority (94.9%) going to physical banks, fewer than a quarter (23.2%) using ATMs, 10.9% using banking applications, and just 5.8% going to virtual (i.e., online-only) banks. Long wait times have long been an issue with traditional banks. In practice, older persons who are more tolerant of lengthier wait times tend to wait longer. Nonetheless, due to perceived security and usability concerns with alternative digital banking systems, Gen X citizens continue to utilise physical banks. Nonetheless, they have a positive opinion regarding digital banking and are eager to try it if others promote it to them. Additionally, both age and gender influence banking habits, such as frequency of use, acceptable wait time, platform adoption, and attitude toward virtual banks.

This conclusion emphasises the need to adjust the banking experience design for different age groups and genders among older individuals, as well as the need for more research to understand the causes behind such disparities.

6. Research Findings

The next step of this study is to identify remedies to encourage digital banking among Gen X citizens. To that end, "confidence in digital products/digital security" seems to be the problem to be addressed first.

So, in order to further define the challenge, the question needed to be structured precisely: "How to make elderly people trust digital payments?"

During the research, one thing came out clearly that Gen X citizens prefer to interact with a person who can solve their banking queries and make it easy for them to understand the process. So, another question came into the picture, which is:

"How do make elderly people trust a virtual person to assist them with all their digital banking needs?"

The possibility of integrating the voice assistant within a banking app would be an intriguing method to accomplish so, but what would that assistant be capable of?

A financial app is expected to solve the same problems that a physical bank would (and ideally better and more efficiently). In this case, the study shifted from the functionalities we wanted to include in the design solution to the "feeling".

Gen X citizens should have and experience faith in the solution while using it. As a result, the solution should not be limited to virtual assistants or financial apps. The aim was to find things that make Gen X people feel at ease and comfortable, allowing them to perform banking without the hassle and making their lives simpler.

The concept incorporated a voice-powered assistant to provide consumers with a more immersive experience. However, the concept was not limited to a virtual assistant contained within an app. The assistant would be in charge of installing the apps. This meant that users would be able to choose which applications would be linked and managed by the assistant. Users might then consolidate all of their digital interactions from their daily lives in a single app. However, for the simplicity of this study, limitations were placed, and the solution was focused on digital banking only.

6.1 The Wireframe prototype

The use of visual image, language, and, most importantly, tone was kept in mind when developing the solution. Because the selected design prioritised personalization, it was able to approach the user in a variety of ways, from the most formal to the most casual, allowing for connections with various sorts of audiences. Even while dealing with delicate subjects like money transfers or bill payments, we maintained believing that a closer, warmer approach would deserve the confirmation of this notion in a more effective manner than a serious image and formal language.

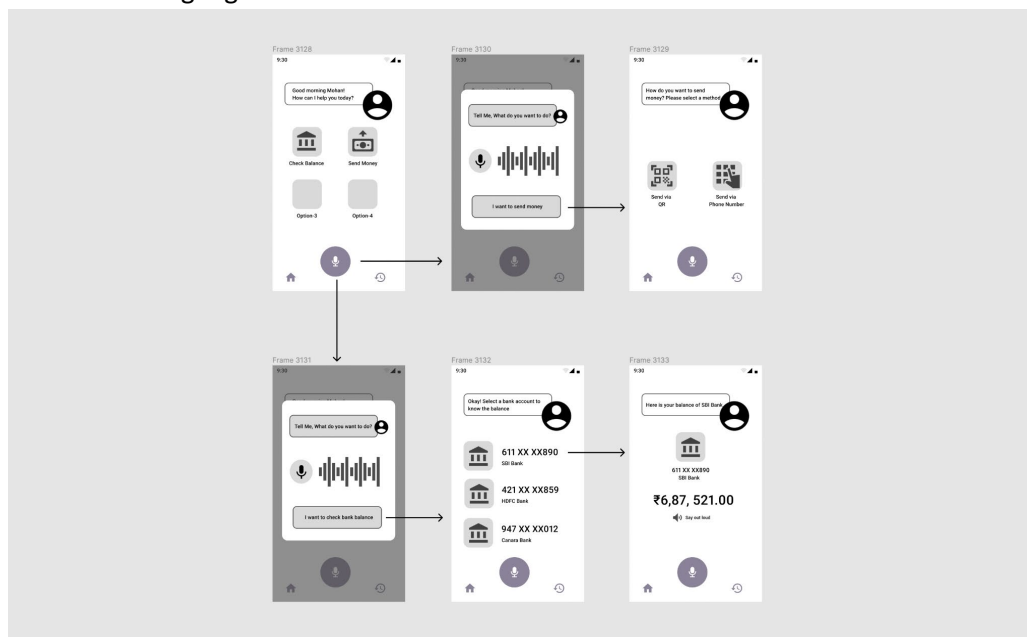


Figure 9: Wireframe Prototype (Voice Enabled Virtual Assistant)

6.2 Feedback

The same set of people were asked to test the prototype, and feedback was collected. Despite these variances, distinct patterns emerged in how participants experienced and evaluated the prototype.

1. Even at first sight, most consumers recognised that the main notion behind the product was the concept of a virtual assistant.
2. The product's features were appreciated by all users.
3. One of the objectives established was for the information to be seen as clear.

4. Half of the respondents expressed reluctance to trust a product with these features.
5. The product's double-checking security methods were deemed to be time demanding by half of the consumers. But it seemed useful.
6. There were varied feelings about the assistant being voice-driven. While respondents aged 55-60 firmly stated that voice functions would bring substantial value to the product, those aged 60-65 had mixed feelings.
7. There should be a well-known firm or a celebrity person (e.g. Mr Amitabh Bachchan or Mr Narendra Modi) or some kind of word-of-mouth required to make people feel comfortable utilising this product and build trust. Otherwise, the product's success is exceedingly improbable.

7. Discussion

The findings are described in relation to the literature, problem-solving, and its ramifications. Almost three-quarters (74%) of participants completed financial transactions more frequently than once per month, with 44.8% utilising it 2-3 times each month. Previous research indicated that 82.3% and 94% (Silvio Camilleri and Gail Grech, 2017) of older persons utilised banks at least once a month. This demonstrates that Gen X citizens execute financial transactions on a regular basis. Most of them own smartphones and utilise digital platforms such as Facebook and YouTube at least 2-3 times a week. This demonstrates a positive feedback loop in technology use, where more frequent use familiarises individuals with technical procedures, and greater familiarity makes them more ready to utilise it.

Current deposits and withdrawals (84.1%), check details or balances (28.3%), and transfers (18.1%) were the most common banking activity. These findings support the findings of a previous study (Omotayo et al., 2020) which revealed that transfers and balance checking were the two most prevalent transactions. One probable explanation is that these two studies concentrated on internet banking, where "paying bills" was a prominent activity, but ours covered a broader range of transactions across all banking platforms. Another intriguing conclusion was that only 8% of participants reported needing to change passwords for their bank accounts. This contradicts the widely held belief that elderly folks frequently forget their passwords and must update them. One possible explanation is that older persons are more aware of their memory failures and take proactive measures to manage their passwords, such as writing them down (Hirak Ray et al., 2021). Surprisingly, it was discovered that individuals who were more tolerant of longer wait times also tended to wait longer. The majority (78.8%) of participants who had never utilised electronic payment were prepared to wait however long it took. This implies that individuals who did not use digital banks or digital payments had no or few other venues to choose from fulfil their banking requirements. As a result, people were obliged to wait in line, no matter how long it took, to obtain in-person care. The conclusion is that assisting older persons in learning to utilise virtual banks or electronic payment may be a practical strategy for minimising the need for waiting in physical banks.

Many interviewees also explained why they did not use ATMs or applications. One factor has to do with safety and security. Using an ATM or a bank app was regarded as risky. This finding is consistent with previous research, which found that older adults were concerned about the security of on-street ATMs (e.g., their PIN being seen, being mugged, fearing that an ATM has been tampered with, and not knowing what to do if they cannot get their card out of the machine) (AARP Age UK, 2016), as well as online safety and security (Zheng Li and Yonghong, 2005). Another cause was difficulties with user experience (UX). They thought that the design of ATMs and applications did not take their requirements into account and frequently had readability concerns (e.g., texts are too small to read). Because Gen X citizens frequently have

deteriorating physical and perceptual abilities, such as decreased dexterity and poor eyesight, they typically struggle to access material on digital screens (e.g., ATMs and applications) (Maya Abood et al., 2015). Indeed, 21.1% of our subjects reported weak vision.

Furthermore, participants thought that the interaction flows of digital financial services did not appropriately advise them to initiate and complete a transaction. Another reason was that participants did not know how to bank online or felt they were unable to do certain banking transactions online, as expressed in some written feedback: "I don't know how to bank online." and "I feel that maybe I am too old to use digital banking."

Although only a minority of participants utilised virtual banks, more than half (53.6%) of all participants had a favourable view of virtual banks and would try one if someone recommended it. This conclusion is consistent with the findings of Omotayo et al., 2020 and research (Asmi et al., 2012), which revealed that 59.9% and 55% of non-users, respectively, were eager to attempt some type of digital/virtual banking. It is worth mentioning that while many Gen Xers intend to attempt virtual banking, they will most likely require external motivators (e.g., suggestions from others) to do so. As a result, future research should look for ways to provide external motivators to older persons, such as extra training and support from family and friends.

8. Future Design Opportunities

Based on the outcomes of the prototype testing, design alternatives and recommendations for increasing the banking experiences of Gen X citizens are requested. For starters, physical banking remains the major banking platform for Gen Xers, and excessive wait times remain a persistent concern. Although some Gen Xers appear to be okay with extended wait times, this is most likely a result of their unfamiliarity with alternative banking systems. Future studies should look at the elements that contribute to high wait times and optimise interaction flows in physical banks in order to minimise wait times. Physical banks, for example, may build better-queuing mechanisms to cut the wait time. Meanwhile, explore how to effectively use the wait time to entice Gen X citizens to adopt digital banking systems.

Gamification is one such way (Ganit Richter et al., 2015). A recent DIS community study identified aspects to consider when implementing gamification for older individuals (Maximilian Altmeyer et al., 2018). Older folks, for example, play to socialise, shun competitiveness, and favour teamwork and caretaking (Maximilian Altmeyer et al., 2018). Second, ATMs, apps, and virtual banks are still in their early stages of penetration. Many older folks are unfamiliar with these platforms and are sceptical of their reliability. Fortunately, Gen X citizens generally have good opinions regarding these digital banking services and are eager to test those that are suggested. A future study might look at assisting Gen X people in forming social learning groups in which they can learn new banking technology from their peers and obtain recommendations from trusted friends or family members.

Furthermore, the poor adoption rate is linked to user experience (UX) concerns. One type of UX problem is created by Gen Xers' deteriorating visual and touch acuity. Text shown on ATM or app screens, for example, is illegible. With the support of this study, it is recommended that designers should explore offering multimodal feedback for mobile and virtual banking apps in addition to enhanced lighting and non-glare glass (Wendy A. Rogers et al., 1997). Lee et al., 2009 discovered that multimodal feedback with audio cues might aid Gen X citizens when doing mobile phone activities. Alternatively, rather than depending entirely on touch contact, it is recommended that designers examine alternate interaction modes. Voice user interfaces

(VUIs), for example, have lately been claimed to be a potential technique for older persons (Brodrick Stigall et al., 2019).

Surprisingly, while debuting around the same time, the adoption rate of electronic payment among Gen X people is over eight times greater than that of virtual banks. Electronic payment is a successful example of new technology being readily accepted by Gen Xers. Thus, it is worthwhile to investigate why electronic payments have surpassed virtual banks in such a short period of time in order to give insights for future technology design. It is important to note that this research merely scraped the surface of the UX difficulties related to different digital banking systems. More study is needed to find and comprehend additional UX difficulties that older persons have while using digital banking systems.

9. Limitations

The small sample size (17 People) may limit the generalizability of the findings. Increasing the sample size would improve the statistical power of the study and provide more robust results. With only 17 participants in the survey mentioned in the paper, the findings may not be generalizable to a larger population or may be subject to sampling bias.

10. Conclusion

Results of the survey conducted with 17 Gen X citizens from 10 Indian regions were discussed to understand their banking patterns and issues with both conventional and digital banking systems. According to the findings, the majority of older persons (72.9%) engage in financial activities on a regular basis (e.g., once or more per month). However, not all financial platforms are equally utilised. The great majority of participants (94.9%) use physical banks, a quarter (24.6%) use ATMs, 10% use mobile banking apps, and even fewer (5.8%) use virtual banks. Long wait times are a serious problem in physical banking. The fewer digital banking choices Gen Xers are aware of, the more patient they are with extended wait times. Some are even willing to wait indefinitely to get their financial requirements handled. Security and usability (e.g., user interaction, readability) are major concerns concerning digital banking systems among older persons, in addition to a lack of familiarity. These findings underscore the need to reduce physical banking wait times, increase Gen X citizens' familiarity with digital banking through offline and online training programmes, and improve the security and usability of digital banking systems.

There were mixed reactions to the assistant being voice-driven. While those aged 55-60 were certain that voice features would add significant value to the product, those aged 60-65 were divided. There should be a well-known company or a celebrity person (e.g., Mr Amitabh Bachchan or Mr Narendra Modi) or some word-of-mouth method to make consumers feel at ease using this product. Otherwise, the product's success is quite unlikely. These findings highlight the need to adapt the banking experience to different age groups and highlight the need for more studies to identify variables that may create gender-based inequalities among Gen X citizens.

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