

Dissertation

Analysing the dynamics of digital transformation in relation to Bank and their organisational changes

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Abstract

Aim: This research aims to understand how important Bank digitalization practises are in influencing the banking sector and how it improved its services to its customers.

Introduction: This research explores the digital revolution in the banking industry, focusing on the impact of digital transformation on organizational changes. The study aims to understand the importance of bank digitalization practices in enhancing customer satisfaction, loyalty, trust, and preferences. The research questions include the degree of digitization and integration of contemporary technology, the outcomes of digital transformation programs, limitations, and recommendations for overcoming challenges.

Literature review: The banking industry is undergoing a significant transformation due to the integration of modern technology, including AI-driven customer care and blockchain technology. However, traditional banks still operate in paper format and face challenges in building a sustainable digital environment. To overcome these challenges, banks must integrate data analytics, biometrics, and modern technology authentication. However, cybersecurity and data safety issues remain shortcomings. The transition from manual work to data-driven problem-solving will lead to a more client-focused future, but it also poses challenges.

Methodology: This research employed a positivism philosophy, utilising a deductive approach with a quantitative research method. and descriptive research design. It aimed to investigate the dynamics of digital transformation in relation to essential organisational modifications. The research utilised 29 responses to survey questions to accumulate quantitative information, specialising in understanding how virtual transformation affects organisational structures and operations.

Findings and Conclusion: The examine performed a survey of 29 individuals who are clients of varied banking industries. It concluded that 65.5% of respondents are aged 25-34, with 69% being specialists and 24.1% college students. Mobile banking applications are famous, and far-flung bills have become essential. 79.3% of clients use digital banking channels daily, with banks demonstrating their capacity to digitise operations through biometric authentication and facts analytics. Instant fund transfers are desired, and 93.1% are happy with the efficiency of virtual banking offerings. Balancing risk avoidance, compliance, and green power use is

important for virtual transformation. Additionally, tips encompass dispensed ledger era (DLT), synthetic intelligence (AI), device gaining knowledge of, blockchain, robotic process automation (RPA), Buy Now Pay Later (BNPL), and regulatory era (Regtech). These technologies can help set up economic institutions by presenting obvious and secure decentralised ledger structures. Banks need to also integrate defence with techniques and create holistic conversation schemes to promote the new banking tradition. However, demanding situations together with cybersecurity concerns and resistance to trade avoid the adoption of digital transformation technology. Banks should integrate ESCAPE into their activities amid the transformation to virtual systems to ensure consumer pleasure and accept it as true.

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1.0 Introduction

1.1 Chapter Overview

The research introduction on the context of the digital revolution of the banking industry will be offered in this introductory chapter. The aim, goals, and research questions will be presented together with theoretical and practical justification, highlighting the importance of examining organisational modifications in this ever-converting environment.

1.2 Background

Electronic transformation is a vital factor which may cause the most intensive management change inside a banking enterprise that will implement the organisation towards the full reform of its management pattern and organisation and structure. Nevertheless, as illustrated by Smidt and Jokonya (2022), banking conduct might be influenced by more digital elements that come up as digital technology integration adds on. The work centres on probing into the intertwined elements of the virtual facelift and core organisation activities owing to the findings about their multifaceted connections of the predecessor.

The French 58% of the population, the Germans 35% and the Italians 26% were the leading groups of the virtual interactive platform in 2017 (Sherif, 2023). According to the data obtained since the survey started in 2017, more than 30% of respondents indicated that their companies are going to be specifically refused by the organisation for the digitisation plan. Indeed, the functions of data must not be underrated in this regard. The food thing here is to direct the scene for the weavers and make them be an individual in the company and witness the extraordinary and their outcome. Additionally, Dubey *et al.* (2020), mentioned a connection between correlating organisation and dynamics and technology acceptance. Providing the main topics on the challenges and highlighting the need for solutions and integration continually, the research goes further into strategic planning and implementation by giving management strategies in a flexible setup.

1.3 Research Aim

This research aims to understand how important Bank digitalization practices are in influencing the banking sector and how it improved its services to its customers.

1.4 Research Objectives

- To identify the customer satisfaction towards the banking sector after banking digitization takes place.
- To examine the customer's loyalty, trust, and preferences towards banking.
- To evaluate the user experience and how the relationship with banking has improved in today's banking environment.

1.5 Research Questions

- What degree of digitization and integration of contemporary technology has the banking area adopted?
- What outcomes have digital transformation programmes had on banks in terms of organisational modifications, method enhancements, and cultural shifts?
- What limitations, along with reluctance to change and cybersecurity fears, stand inside the manner of the banking areas' adoption of digital transformation?
- What processes and recommendations are there to deal with the problems raised, allowing banking institutions to combine virtual transformation extra smoothly and successfully?

1.6 Rationale of the Study

Theoretical Rationale:

The present study has focused on the concept of the dynamics of digital transformation in the context of organisational changes specifically in the banking sector. Multiple research papers or articles have been published within the last decade concerning digital transformation in several industries and the changes it brings to the organisation. However, very limited research work has been done related to the organisational changes and digital transformation in the banking sector. Based on the perspective Do *et al.* (2022), digital transformation in the banking sector enriches financial inclusion, specifically in the growing economies. This research can help stakeholders like customers, banks, regulators, fintech partners, and so on by delivering insights into the competitive edge and functional efficiency that can be acquired by digital initiatives (Filotto, Caratelli, and Fornezza, 2021). This research delivers a foundation of knowledge and understanding of the conventional business model of bank enterprises and analyses the way digital transformation or adaptation reshapes the business model which

directs the banking sector to an advanced form of financial or monetary intermediation. On the other hand, the current study is considering the consequences of the digital transformation or changeover on broader society and regulatory compliance.

Practical Rationale:

The present research on digital transformation in the context of organisational shifts in the banking sector is highly embedded in real-world implications and substantial advantages. Based on the viewpoint of Kitsios, Giatsidis, and Kamariotou (2021), with the quick speed of technological advancement, it is crucial for the banking sector to devise and sustain an enduring business model that can have the prospect to leverage and acclimate to digital innovation. This research delivers the overall conception and edges and drawbacks of the adaptation of digital transformation to the banking industry.

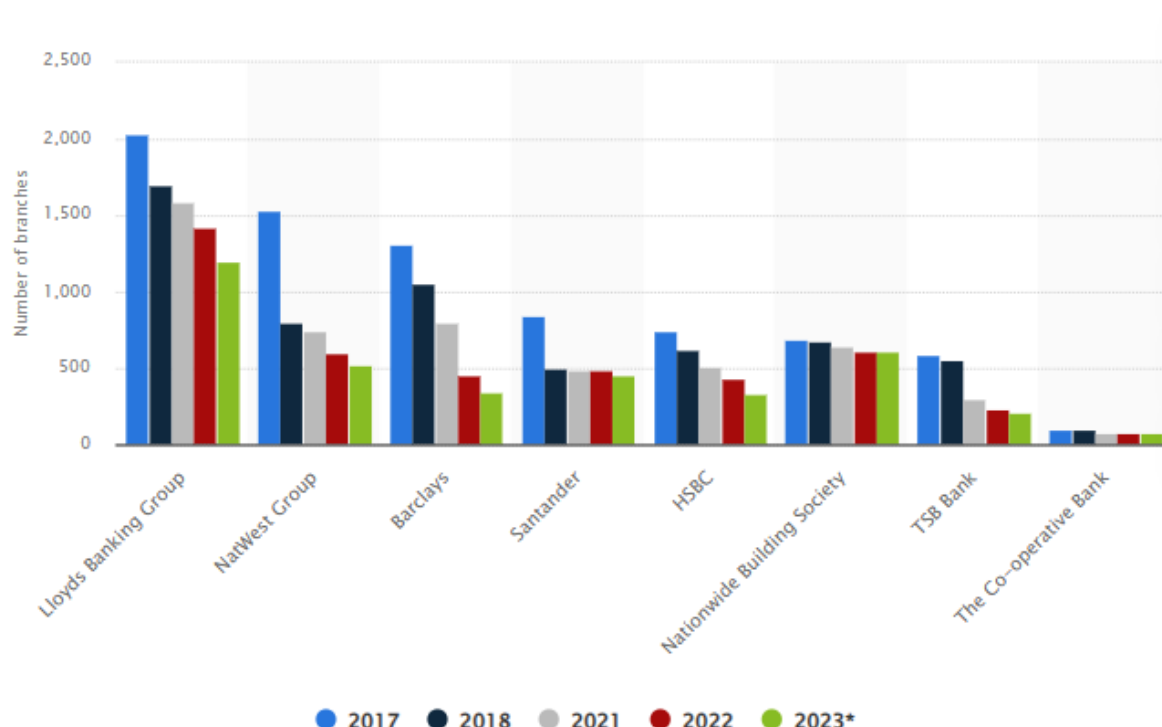


Figure 1: The number of branches of the leading banks in the UK

Source: (Statista, 2023)

Based on the information in the above figure, the leading banks in the UK include the Lloyds Banking Group, NatWest Group, Barclays, Santander, HSBC, and so on. The number of branches of Lloyds Banking Group in 2023 is 1195, NatWest Group is 523, Barclays is 347, and HSBC is 330 in the UK (Statista, 2023). The motive of the examination is to comprehend

how primary organisational changes at UK banks which includes Lloyds Bank are impacted by virtual transformation. It looks for styles, tendencies, and correlations in statistical records to deliver useful insights into how digitalization influences organisational dynamics and strategy, which advantages stakeholders and directs future efforts. This research can be practical for the stakeholders as it has emphasised the spots for fintech enterprises for affiliation and collaboration with the banks. On the other hand, the wider society can leverage economic development and monetary inclusion contrived by digitisation or digital transformation of the banking sector.

1.7 Significance of the Study

The primary significance of this research is that it furnishes a comprehensive acquaintance and understanding of the dynamics of digital conversion in the banking businesses which is pivotal for the prospective readiness and the development of the industry. According to the opinion of Diener and Špaček (2021), digital transformation or conversion symbolises a crucial shift in the form that the bank enterprises deliver and manage value to the clients. The present study is contributing to determining the obstacles or matters to digital adoption like the opposition to digital change, cyber security menaces, and so on. In the business market, which has been disrupted by fintech, this research can furnish a competitive edge to conventional or traditional banks by embracing digitization to abide competitive and pertinent (Tsindeliani *et al.*, 2022).

This research is essential for future experimenters and authors as it represents the prevailing consequences of digital conversion on the banking establishment's structure along with its culture and functions. Moreover, this research contributes to future research by presenting strategic recommendations for addressing the matters that can aid organisations in steering the intricacies of digital conversion.

1.8 Chapter Summary

As this introductory chapter comes to an end, the study has created a historical past backdrop, truly stated desires and objectives, advanced pertinent research questions and supplied a sturdy theoretical and practical justification. Acknowledging the importance of this research paves the way for a radical examination of ways organisational changes within the banking industry are impacted with the aid of virtual transformation.

2.0 Literature Review

2.1 Chapter Overview

The study's literature evaluation chapter will investigate the degree of digitization inside the banking quarter, evaluate the modifications delivered approximately with the aid of virtual transformation initiatives, look at roadblocks to digital transformation, and pinpoint empirical gaps for a conceptual framework. The research was performed on analysing the dynamics of digital transformation about fundamental organisational modifications.

2.2 Themes

2.2.1 Assessing the extent of digitization that the banking industry is currently experiencing, with an emphasis on the combination and deployment of modern-day technology

The financial sector faces its biggest transformation which is almost complete with the involvement and application of every modern technology. Cooke (2021), observed that the growth of online and mobile banking implies a change in the traditional service orientation involving face-to-face approaches and digital-first models. AI-driven, machine-learning robotized customer care with chatbots and personalised guidelines have augmented a completely new form of customer service. Furthermore, there has been a quake of security and transparency in transactions finance throughout the blockchain age.



Figure 2: Digitalization Policy

Source: (Trașcă *et al.*, 2019)

However, as per Iwashita (2022), traditional banks still operate in the paper format and through direct conversation with clients which makes it very hard to build a sustainable digital environment infrastructure. Impediments arising from old institutions call for big spending in the form of infrastructural changes. The best multinational corporations (MNCs) invest in research and development (R&D) to ensure continuous technological innovation and establish or acquire satellite offices to automate processes, focusing on process improvement and end-to-end automation. Beyond these limitations, banks are showing the world their ability to digitalise their operations using authentication via biometrics and data analytics for risk control (ESCAP, 2022). Summing up, however, it is worth noting that despite the large scope of positive change digitalization has already made, the banking enterprise is still at the early stage of becoming fully digital.

The conduct of inner-bank digitalization is currently being highly privileged specifically about relationships and usage of modern technologies. Academics and scholars like those who were acknowledged by Botta *et al.* (2020), pointed out how digital and cellular banking has enabled institutions to revamp their way of doing business from the traditional in-person models to

more digital-first strategies. An AI-based technology which involves chatbots and personalised learning has been developed, for the sake of customer support. Moreover, the introduction of a blockchain into the system had a very favourable impact on transaction safety. It has changed the ecosystem by bringing the paradigm of digitalization, noticeably.

Nevertheless, humanised to the digital transformation of the banking sector, the traditional ones preserve the power in their branches thanks to the non-digitized branches of their services and the usage of paper-based simultaneous documents. Hence, the country's capacity to construct a solid ICT structure that is anchored on the modernity of technologies is hampered by high proportional reliance. Al-Hanahi *et al.* (2021), stated that the efficient way to eliminate the constraints which are huge costs of infrastructure upgrades, is to have a vigorous investment assent. MNCs are the flag bearers of what can undoubtedly be called technology-induced change, where R&D ranks high on their agenda to innovate their technologies. Along with that, they stopped investing in automation stop-to-give-up and system optimization to seize the workability of their bank sector which they boost by finalising or installing satellite TV for PC offices.

It also follows that banks tend to help credit crunching through schemes of data analytics and biometrics, and modern technology authentication in a bid to reduce risk. These programmes have the ESCAPE as a focal area as an essential measure that the financial industry must integrate into their activities amid transformation to digital platforms. Those advantages cannot overshadow the fact that the banking industry has a lot of ground to cover before achieving full digital maturity (Kljajić Borštnar and Pucihar, 2021). Constant needs to manage cultural boundaries and the old systems pressure the organisation to keep investing in technology and to evaluate its strategy. For an organisation to overcome these challenges; a complete method which combines process improvements and culture transformation, as well as personnel upgrading is required.

To confidently check the obstacles to the terrific change, in collaboration with bankers, technology providers, regulators, and private sector players, a way forward must be set. Specifically, digitization has come a long way, however, the banking field keeps its eyes on the ball and remains vigilant and active about the challenging issues and setbacks that include adaptation. The development of digitalization means the banks need to establish a platform that is aligned to the future of client-centric, secure, and efficient; being the platform of innovation, infrastructure investment, and innovation-fuelled working culture is the means to do so.

2.2.2 Inspecting the fundamental adjustments that digital transformation projects inside banks have delivered approximately in phrases of organisational structures, approaches, and way of life

Organisational systems, strategies, and culture have been going through a paradigm shift in the wake of initiatives launched by banks on digital transformation efforts. In this context, Rodríguez *et al.* (2019), highlighted that it has been reported that the only one of the most critical tendencies is the proliferation of agile approaches which are timesaving and build a flexible response to market fluctuations. Compared with the traditional organisational structures, where responsiveness was often undermined and creativity discouraged, this is a suitable condition for implementing more responsive and innovative organisations.

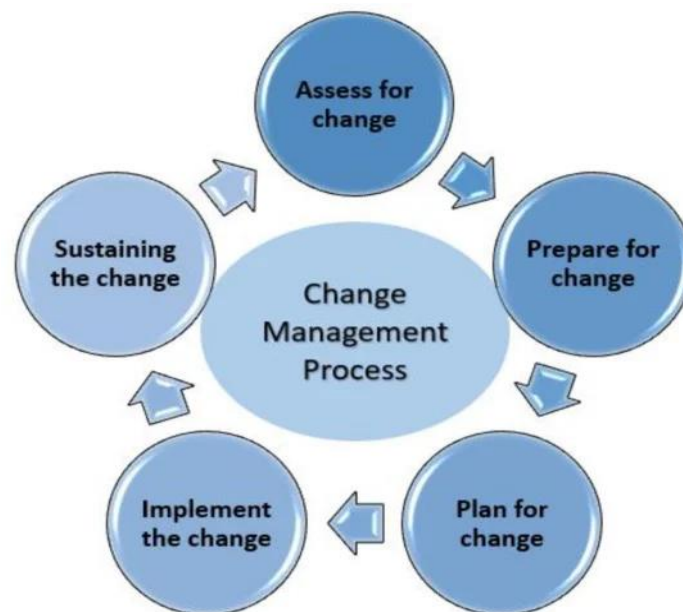


Figure 3: Change Management Process

Source: (Majdalawieh and Khan, 2022)

Besides, a cultural shift toward consideration of actual, generation and information-based decision-making is pivotal nowadays in the zigzagging internet era. Banks are turning into data-driven organisations that base their working model on analytics of customers' needs and opportunities as they vary traditional banking to a more client-centric method. However, though Lin and Saebeler (2019), insist on harsh compliance, they point out the issues of cybersecurity and data safety as the shortcomings of this approach.

Digitised and upgraded operations notwithstanding, manufacturing has been and will be optimised through several cases of digital transformation, a huge increase in productivity and a cost reduction (Butt, 2020). Gaps are bridging between the departments making them cross-departmental organisations and aim-purposed groups. Banks are responsible for striking a familiar balance between risk and innovation since the digital transformation, causing huge management changes, is associated with the utilisation of technology.

In addition, digital transformation projects have completely transformed the nature of banking services and their approaches to processing client transactions and banking titles in a way that fundamentally revised the methodologies through which establishments operated before. Agile methodology adoption appears one of the most remarkable areas of transformation in Management to Faisal Abrar *et al.* (2020), opinion. This is mainly because these processes reduce the need for cumbersome planning and allow for a quick reaction to changes in market conditions and thus, they have grown in popularity. It will evaluate traditional organisational systems which authors from Ogbeibu *et al.* (2021), say they are usually responding to change slowly and talented people's innovativeness is inhibited. Instead of this, they promote innovation and a better fit between an organisation and its environment.

Especially for bankers under Gunturu *et al.* (2024), the transition process is happening from manual work toward data-driven problem-solving; this change means the bank's future will be client-focused because of the utilisation of data and technology to understand client needs. This change will enhance because of the good provider transport and increase consumer delight. Moreover, it was noted by Qiang, Wang and Xie (2023), that the information-driven culture has been associated with cyber threats and information protection challenges like privacy leaks and breaches, which require cybersecurity measures and compliance regulations to isolate such sensitive data. It can be noted that banks also have better performance in terms of efficiency and cost saving as digitalization is being domesticated. As a result, companies dealing are more and more departmentalized, and this in turn brings higher cooperation within an organisation and creates teams with clear goals. It is also essential for banks to meet the demand for digital transformation by way of an integrated structural system. They will be equipped in this way so that they can practically engage and function in the ever-changing consumer environment.

The transformation digitalization conducted by banks is broadly demanding as it requires banks to perform a tricky balancing operation between the innovative and the risky sides. While this

balance between danger avoidance, compliance, and green power use is tactically needed, this would be analogous to the requirements of regulators (Kitchin and Dodge, 2020). Along with considerable managerial adjustments that are part of the implementing the digital transformation initiatives add more challenge to the task mandating a fully lined up strategy for organisational restructuring and exchange control in place.

Therefore, managerial models, methods, and mindsets have changed because of the sheer implementation of Internet advancements by the banks. Traditionally these improvements have been driven through agile processes, hard decision-making based on facts, and hence use of information communication technology. This statement makes the position clear that the future of banking will hugely depend on generation, which is just evidence of transformation in the branch for the manner that is now more end-user-focused. A bank should make an innovation strategy in balancing its resource exploitation with safeguarding policies in place to see the sector through this transformation.

2.2.3 Examining obstacles that obstruct the banking quarter's adoption of virtual transformation techniques, together with cybersecurity concerns and reluctance to change

The adoption of virtual transformation technologies within the banking industry suffers from being hampered on a large scale by super challenges such as cybersecurity concerns and resistance to change. As per Al-Alawi and Al-Bassam (2020), cybersecurity has become the area of challenge, since the monetary institutions are hit by cyberattacks more often than hitherto. Nowadays, according to Moran (2020), banks must work out a careful balance between the innovation needs of the modernization generation and the protection against ability threats under the pressure of digital innovations.

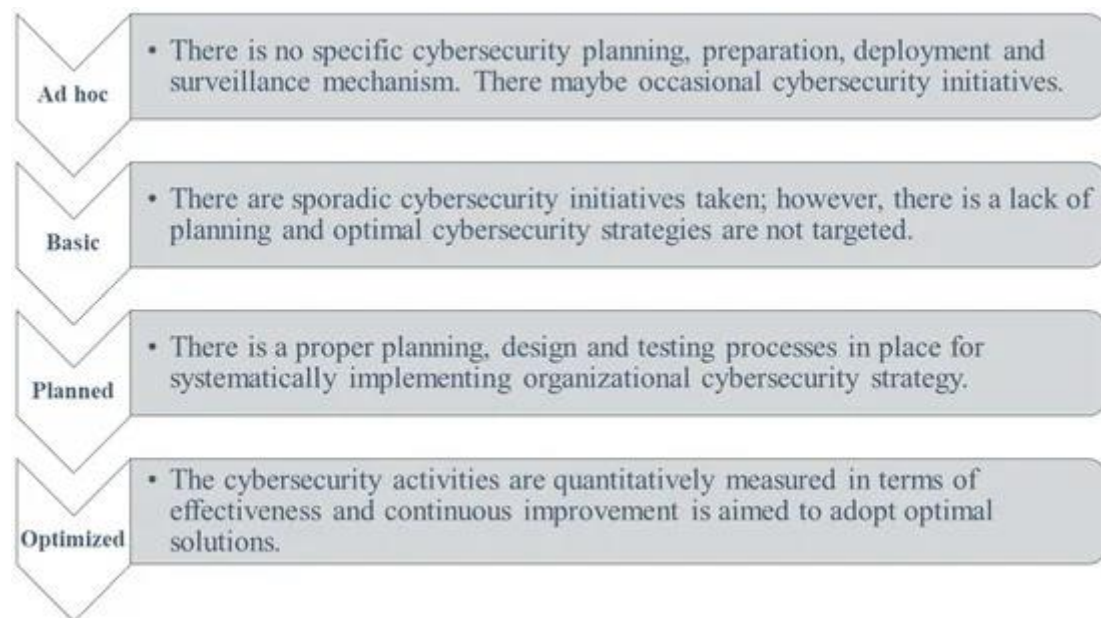


Figure 4: Framework for corporate organisations to prepare for cybersecurity threats

Source: (Saeed *et al.*, 2023)

Furthermore, Lopes de Sousa Jabbour *et al.* (2020), claim that usually, virtual transformation programmes meet difficulties mainly because of a lot of resistance among the participants. Current human-centric technologies are usually accentuated in the expenses by archaic thinking as well as methods already in place. Young employees and clients who are growing in virtue age hold a digital banking inventory and would try to have the best inventive and smooth banking studies as mentioned by Lee and Lee (2020). Nevertheless, robust techniques of digital transformation integrate defence with techniques while creating holistic communication schemes for the marketing of the new banking culture (Rossebø, 2023). Digitisation of industrial progress would be the key to keeping such a balance between safety on one hand, and revolutionary innovation on the other hand.

Differently from bank vanity-resistant multitudes are motivated by cultural and structural markers. Wardley (2020), described the structural features of conventional banking institutions as employing centralised structures that are in confrontation with rapid change. This reluctance is in part based on how fashion has always been run in the sector; these fashions have proven successful. Employees as well as management teams may be concerned about the risks of change associated with virtual transformation such as the degeneration of mediated strategies and the loss of Jones, Hutcheson and Camba (2021), who explained that the size and complexity of the banking institutions contribute to this inability. Competition exists between

large financial institutions which control vast structures of branches, a comprehensive range of services offered and huge clientele. Rolling such a virtual change in all parts of one of these huge organisations is a challenge. It requires not only the highest technical enhancements but also a crucial shift in corporate culture and buyer model interaction. This is a large barrier because there are many power resistances in an organisation it is hard enough to get all the stakeholders to gather under one virtual vision. Moreover, Jones, Hutcheson and Camba (2021), argued that whilst both concerns and refusal to share each hinder digital transformation the way they do so is different. Those forces usually originate outside the organisation and are related to an organisation's need for security and protection against threats; reluctance to change is an internal factor related to human responses and organisational change inertia. However, those setbacks are also related to each other. For instance, threats of cyberattacks can increase opposition to the adoption of the new technology because stakeholders may also see the risks that may be associated with such technology outweigh the benefits of doing so.

On the contrary, Hai, Van and Thi Tuyet (2021), said that the development of a successful digital transformation in the banking sector may soften some of those challenges. With the introduction of AI and blockchain coupled with more advanced cybersecurity tools and measures, potential cyber threats can potentially be better dealt with and some of the concerns alleviated. For example, in the manner suggested by Suddaby *et al.* (2020), encouraging the generation of tradition of innovation and development may lead to the reduction of resistance to exchange. Leadership will be crucial here; the support for virtual projects and their positives will be crucial for increasing staff morale and buy-in.

Finally, it is proper to conclude that the banking sector is full of challenges during digital transformation efforts because of cybersecurity and operational inertia. However, these challenges are perfect challenges that must be overcome; however, at times, they may be related and reinforce each other. Meeting such challenges requires careful consideration of the security and openness problems and the emphasis on the organisational readiness for change implementation. Through embracing virtual transformation, banks have an opportunity to not only overcome their challenges but also be able to utilise their full potential when it comes to innovation and growth.

2.2.4 Providing potential guidelines and procedures to cope with issues found, promoting a more seamless and green integration of virtual transformation in banking establishments

Bat removal or implementation of rules is the way to help banks address the difficulties of joining the virtual transition while also creating room for the magmatic synthesis of the environment. Vadiyala (2019), cited cybersecurity techniques together with employee training and auditing programs, with encryption processes as among the ways of minimising the risks of attempts in the digital field. Contrarily, van Klyton, Tavera-Mesías and Castaño-Muñoz (2021), brought the concept of supporting the growth of innovative and flexible adaptation for bankers into the limelight as the opposite of resistance to change.

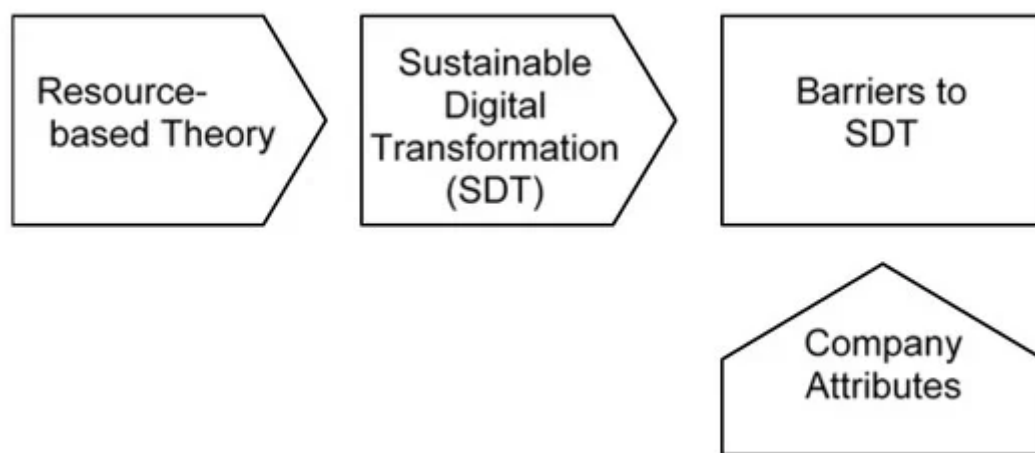


Figure 5: A framework for determining what stands in the way of MSMEs' long-term digital transformation

Source: (Rupeika-Apoga and Petrovska, 2022)

Additionally, as described by Zhang *et al.* (2022), the implementation of cloud computing systems gets higher operational efficacy related to flexibility and scalability, thus making the digital processes transition process more effective. Digital transformation can have a lower environmental impact if the entity implements sustainable processes alongside a paperless workflow, as well as energy-saving technologies that are in line with green initiatives.

On the other hand, working with the fintech companions is the main enabler of the accelerating digital transformation processes empowering them with relevant data plus domain knowledge (Siddiqui, Yadav and Farhan, 2023). Sustainably speaking, balanced budget cuts along with seamless and environmentally friendly integration of virtual transformation in banking

facilities need the implementation of a well-balanced program to offer a solid base for innovation along with protection.

As per Ajish (2024), aims of digital transformation in banks are to optimise operational efficiency through the automation of manual procedures, the digitization of documentation, and the establishment of resilient systems and platforms that provide smooth departmental workflow and integration. The goal of digital transformation is to improve client experiences by offering banking services that are accessible, individualised, and convenient. Innovative digital channels, self-service kiosks, and interactive virtual assistants are ways for banks to meet these expectations. Combining data analytics by providing pre-emptive fraud detection, customised financial advice, and personalised suggestions, artificial intelligence significantly improves user experiences.

Furthermore, as depicted by Omarini (2022), banks can adjust to the changing market conditions for digital transformation. Growing fintech companies, shifting consumer tastes, and changing laws and regulations have caused further disruptions in the financial sector. Banks must embrace digital innovation and agility by working with fintech partners, utilising open banking frameworks, and creating agile development techniques if they want to remain competitive. The banking businesses are undergoing a digital transition due to shifting client expectations, especially from younger generations that find Internet banking more convenient for daily transactions. Furthermore, because they want more influence over their work, front-line bank associates are leaving at a high rate due to the tight labour market.

However, Hari, Iyer, and Sampat (2022), claimed that it offers customers digital values and experiences through the medium of the app such as time on a digital app interface like mobile banking, e-banking, or the Chat Bot that enables customers to set their schedules with banks themselves. Offer new opportunities and take advantage of the game changers and transformers like machine learning (ML), blockchain, cloud computing, the Internet of Things ((IoT), Robotic Process Automation (RPA), and Augmented Reality or Virtual Reality (AR/VR) to enhance their finances and operations in their respective banks. It is possible to conclude that all the above-mentioned aspects of the financial services sector can easily be enhanced by using cloud computing and RPA technologies, as well as advanced analytics and chatbots.

Passwords for tape security and improved information utility using information encryption tools to avoid fraud while engaging in transactions. Strategic positioning for the transformation

amidst relevant trends towards the provision of a digital environment to support the industries for the increase in the integration of creative efforts in the production and delivery of products and services which will lead to the growth of bank industries as well.

According to Agarwal, Swami, and Malhotra (2024), this is made possible by several new technologies that continue to evolve. The emergence of wearables and artificial intelligence and their possible applications in big data analysis have presented some new opportunities for the improvement of some aspects of bank service delivery. The cyber persona is the first level of service that responds to queries from the customers and further; helps to manage simple transactions based on a text message or speech-driven ‘assistance’ via AI. Most of the information and datasets analysed and processed by the ML algorithms display trends that help predict patterns for individuals and suggest what an individual should do with specific products and services or how he/she should invest their money.

2.3 Empirical Review

Traditional banks that persist in carrying out the business among them and shoppers through direct interaction and paper-oriented forms still face obstacles that determine their Digital Architecture fail to reach the desired ranking level. It indicates thus that the economy of time when making the sound effects is now tricky. However, according to Kretschmer *et al.* (2022), downward reappraisals also motivate organisations to focus more on learning and developing a unique culture of the organisation. This illustrates the fact that change in digital structures might offer the opportunity to market as well as organisational innovation in financial institutions.

On the one hand, Moran (2020), stated about this dilemma banks confront when they want to match the pace of innovations in the digital era while maintaining robust security measures to keep cyber-attacks at bay. To solve this noxious dilemma, one needs to come up with well-thought-out plans and undertakings. In contrast with Van Klyton, Joaquín Tavera-Mesías and Miguel Castañon-Muñoz (2021), the main argument is to motivate bankers to be creative as well as adaptive by encouraging innovation throughout the organisational structure. This depicts the undeniable importance of a proactive attitude for the banks to include the transformation of their internal making into virtual setups rather than opposing alternative avenues. In all, empirical records, taken together, present a dynamic environment with a rich interaction of prospects and problems that flow in the digital space of the trading and digital

transformation within the banking industry. According to Kitsios *et al.* (2021), digital transformation in the banking sector may present them with the opportunity to stay competitive in the markets by unlocking cost and process efficiency. It should also ensure sustainable growth by improving Service delivery and customer experience. Moreover, it may also prove to be helpful for the adaptation to the changing behaviours and requirements of the customer.

Digital transformation can be beneficial to embrace operational efficiency and big data analytics which in turn will provide a scope to adopt a customer-centric model by combining the technology with the human factor. However, Tsindeliani *et al.* (2022) argue that smooth and effective adaptation to technological advancements and adjusting the strategy to meet the changing requirements of the customers can be challenging for the banking sectors. Banks are often found to operate in traditional functional or business silos which may lead to fragmented approaches to execution and conflicting priorities. Furthermore, banks often struggle to establish a prominent link between their revenue, profit growth and the specific initiatives that they have to make which is usually caused by their failure to track the impact of the digital strategies undertaken by them.

Moreover, banks tend to lack tech talents for smooth operation and enhancement of digital technologies as banks are not often the preferred destination for IT professionals. In addition to that, digital transformation is believed to be a long process and it is also not very cost-efficient hence it often exceeds the initial budget. Therefore, to overcome all these challenges, banks need to have a holistic approach across the technology landscape, business and operating models.

2.4 Literature Gap

The virtual transformation over time led to considerable modifications in cybersecurity, agile methodologies and service orientation that the banking sector has observed nowadays. In this context, according to Cook (2021), society seems to have started shifting from the former ways of providing real services and the latter of virtual-first services. However, a radical examination of the way this transformation impacts clients' well-being and happiness within the virtual age is missing in the literature. Moreover, the methodologies of agility are shown in this paper by utilising Rodriguez *et al.* (2019), to enhance responsiveness and adaptability. Nonetheless, there can be a lack of awareness in the industry regarding the concerns and fitness of using

agile approaches in bank operations. Meanwhile, Al-Alawi and Al-Bassam (2020), highlight the challenges encountered in cybersecurity by economic establishments. Nevertheless, developing an encompassing framework that will bust through cyphers to define a suitable approach to confronting increasing cyber threats is yet a gap in the literature. On the other hand, Vadiyala (2019), mentioned how cybersecurity protocols could be implemented including workers' education and audits.

However, the aftermath of accomplishing adequate cybersecurity regulations is noted and concerns how smoothly they can be introduced to corporate activities. Generally, the existing work of study brings up some issues such as insufficient understanding of customers' experience dealing with digital-only banks, ICT and security projects being difficult to take on agile methodologies. Political campaigns are constructed to highlight both the positive and negative impacts on both society and the environment.

As Butt (2020) said, increased productivity and cost reduction will be witnessed. A related concern that has been left out from discussion in this dissertation is the struggle that the banks face to find the right technological solutions. Adopting all the currently available technologies for digital transformation may not be wise for the banking sectors and they need to streamline their finding processes to adopt the best suitable technology for the enhancement of customer experience and also to drive innovation. To implement the rightly effective technological solution, banks must prioritise security, scalability and integration capabilities. Ensuring security plays a crucial role in the protection of sensitive customer data and in guarding against cyber threats.

Scalability supports the bank's growth by ensuring that the chosen solution can handle the increased volume of users as well as related transactions. Integration capabilities help to maintain seamless connectivity in association with the existing applications and systems inside the bank's infrastructure. Moreover, access to reliable and accurate information is essential for any business, especially for the banking industry. Furthermore, to stay competitive, banks need to implement technology and analytic tools for collecting, analysing and interpreting the vast amount of data to gain valuable insights about the preferences of customers and for the identification of trends. This will help the banks to develop suitable solutions to meet their customers' changing needs. As Cooke (2021) observed, the growth of online services in banking sectors will enhance the customer expectation to access a wide range of digital features

and there is no going back from that. If an interruption occurs, customers will revert from the brand and will seek better services elsewhere. Therefore, the need for the banks to find the right technological partner to provide customers with interrupted services to retain customer loyalty has not been mentioned in the literature.

2.5 Conceptual Framework

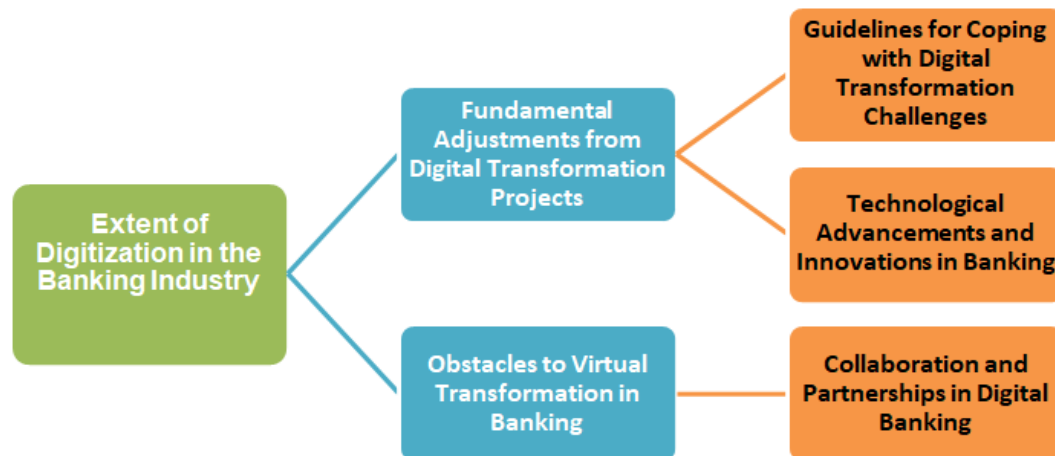


Figure 6: Conceptual Framework

Source: (Self-made)

2.6 Chapter Summary

The important insights won approximately the extent of digitization within the banking industry, organisational adjustments brought about using virtual transformation, and limitations to virtual transformation are highlighted in the concluding chapter of the literature evaluation. Additionally, gaps in empirical research and the introduction of a conceptual framework are diagnosed.

3.0 Methodology

3.1 Chapter Overview

This chapter will explain the approach used in the research in this thesis. The other section will involve the philosophy, method, and technique to be used as well as the layout and particular procedures for gathering and analysing data. Ethical issues would also be addressed during the research to establish that they do not contravene any norms and regulations that can compromise the research.

3.2 Research Philosophy

As explained by Kamal (2019), "research philosophy" means a set of assumptions, concepts, and clues that guide the conduct of research. It highlights the nature, records, and scope of knowledge as well as the collection, analysis, classification, and utilisation of records to address research questions. The researcher has selected the positivist study philosophy in this instance to concentrate on gathering and evaluating objective, empirical facts as well as the research topics. Positivism encourages the application of quantitative techniques that allow accurate measurement and analysis of organisational and virtual transformation-related elements. However, the banking industry may have difficulties when adopting new technologies because of the possibility of cyberattacks. Stakeholders might believe that these dangers outweigh the advantages. A positivist approach allowed the researcher to show hypothesis validity, determine which variable determines which causal connection, and generalise results that can be applied elsewhere using empirical evidence. This has helped much with positivism as the research philosophy since it offered an impartial and scientific outlook to the research exercise. Positivism applies methodologies that focus on data as being the means of identifying causal rules that govern events. For customer service, AI-based technology including chatbots and personalised learning has been developed, due to the positivism research philosophy. Furthermore, transaction safety was greatly improved by the addition of a blockchain to the system.

The researcher aimed at guaranteeing the external validity and reliability of the study in the light of positivism where the finding could be replicated in other similar cases. Since positivism provided a structured way of conducting methodical and systematic research and hypothesis testing, it also aligned with the aim of the study – to generate new knowledge on the processes

of digital transformations in banks. Because the research purpose is to systematically examine how digital transformation affects centre organisations by offering an adequate framework for measuring the effects and trends, this philosophy is therefore well-suited for centre organisational transformations. The scientific character of the research process and the objectivity and dependability of the outcomes are further enhanced by positivism's emphasis on empirical facts.

3.3 Research Approach

As Vears and Gillam (2022) acknowledge, turn to the importance of the research method which is a detailed plan of doing the entire research method. This part of the approach involves choosing the proper processes and techniques to be used in the collection process and analysis of statistics, as well as making rational decisions about the goal, shape, goal, location, and purpose of the research. Additionally, the research approach has a direct and indirect impact on the approach and ordinary trail of the survey, providing researchers with a well-structured and planned approach to achieve their study objectives.

The study has opted for a deductive research approach for this proposed research. The researcher has decided to use the deductive research approach methodology to test present-day hypotheses towards empirical statistics in this study. The deductive research approach was applied to test one hypothesis which was derived from such accepted ideas and previous research. In this way, the researcher was able to systematically analyse the obtained data by applying the best theories, which were chosen to define the concept of digital transformation in the banking industry. With the deductive approach, one may systematically examine how different organisational changes brought about by digital transformation affect banks by generating a theory, examining evidence to support or contradict it, and then drawing conclusions.

The technique employed in this technique is a good idea for the banking industry to embrace every technology that is currently on the market for digital transformation. Instead, they should develop ways to speed up selecting the best technology to improve customer experience and spur innovation.

3.4 Research Method

The research method is a complete process of collecting and analysing data for a research process. It is a part of the method that covers the progression from general hypotheses to specific techniques for gathering, analysing, and interpreting data. There are three types of research approaches: mixed methods, qualitative, and quantitative. These methods show various extremities on a continuum rather than being strict groups. A quantitative research method was selected for this research. In this context, quantitative research employs figures or open-ended questions, whereas qualitative research frequently uses words or closed-ended questions. The use of quantitative research methods enabled the accumulation of numerical data that are appropriate for statistical analysis. Using this research method, the researcher was able to give accurate and quantifiable data by assessing the magnitude and impact of digital transformation on organisational alterations in banks.

Due to survey questions, the researcher was able to sample enough banks which allowed the results to be generalised to the entire banking sector. The use of this method helped to find patterns and trends in the data, which made it possible for a profound analysis of the dynamics of digital transformation in banks. As per Mohajan (2020), the method of assessing objective theories by looking at the relationship between variables is called quantitative research. These included correlational design, applied behavioural analysis, genuine experiments, quasi-studies, single-subject experiments, and causal-comparative research. The method of intricate experiments will help to analyse security, scalability, and integration skills that need to be banks' top priorities when implementing the most successful technology solution. It goes without saying that maintaining security is essential to safeguarding against cyber threats and protecting sensitive consumer data. By guaranteeing that the selected solution can manage the augmented number of users and associated transactions, scalability facilitates the expansion of the bank.

3.5 Research Design

As depicted by Leavy (2022), within these methodologies, research designs are forms of inquiry that offer guidance for protocols. Over time, as computer technology has advanced and complicated models and data analysis have become more sophisticated, these designs have grown, and new protocols for doing social science research have been developed by individuals. Originating in psychology in the late 19th and early 20th centuries, quantitative

designs encompass genuine experiments, quasi-experiments, applied behavioural analysis, and single-subject studies. Additionally, as highlighted by Astrid (2024), experimental and nonexperimental designs are examples of alternative research designs. surveys, case studies, ethnographies, phenomenology, grounded theory, surveys, transformational, embedded, or multiphase designs, and repeated measure designs are some examples of research methods. Additionally, complex structural theoretical models that identify the combined strength of several variables and contain causal pathways have been included.

The descriptive research design was adopted for this research. A thorough and in-depth description of the phenomenon being studied is provided by the descriptive research design. By using this research design, the opportunity arose to define, in a strictly scientific manner without distortion or adaptation of variables, the characteristics of digital transformation in banks and the consequent organisational changes. Since the researcher's goal was to depict the existing state and Digital Transformation patterns in banks, the researcher could have collected a plethora of qualitative data via surveys. This specific research approach allowed the researcher to better understand the consequences of digitalization on activities and business arrangements in the banking sector. Furthermore, by allowing for the investigation of correlations between variables, the descriptive methodology provided insights into plausible causative factors behind the digital transformation of banks.

3.6 Data Collection

Data collection in studies is a research order that involves the acquisition of statistics from various sources for specific research questions or hypotheses (Taherdoost, 2021). It involves making measurements based on gathering techniques employing surveys, interviews, observations, or experiments to collect the necessary data for evaluation. The current statistics can be classified into two categories: Primary data collection and Secondary data collection. One of the main data collections, which is Primary data collection, was chosen in this specific study. Franzitta *et al.* (2020), refer to primary records collection as a means and way of gathering the first data directly from sources within experiments, surveys or interviews for one's research.

The research was carried out on 29 members using special questionnaires on 29 of the members to study the changing effects of virtual transformation on elements of organisational change.

Some of the survey individuals were adults such as working professionals, students and various people working in different profession fields that were staging the process of virtual transformation making sure that there was a diversity of opinions about the effects of technological changes on the organisational models and strategies.

By employing the primary information series, with responses from 29 contributors surveyed, it is important to note that the existing studies to assess the dynamics of the virtual transformation within banks and related organisational changes are further enhanced. The focus of attracting many respondents was occupied by valuable information about numerous opinions and experiences about virtual transformation projects in banking. The survey structure employed in the study enabled the systematic accumulation of quantitative facts on the extent of digital affinity, use of knowledge, issues experienced in the digitization process, and organisational adaptability in response to digital change.

Besides, the qualitative data offered interpretative insights and enriched the quantitative data with contextualization, which is crucial when observing multifaceted issues. In general, the conditions established through the surveys made it easier to accumulate diverse and numerous information that contributed to the profoundness and versatility of the research conducted on virtual transformation in the banking sector.

3.7 Data Analysis

The methodical application of logical and statistical methods to describe, illustrate, summarise, and assess data is known as data analysis. As per Cheong *et al.*, (2023), data is continuously gathered and nearly instantaneously examined in this iterative process. The quantitative method used, and the data format dictate the type of analysis. For accurate and pertinent examination of study findings, data integrity is crucial. However, traditional functional or business silos are common in banks, which can result in fragmented execution strategies and competing agendas. Moreover, banks frequently find it difficult to draw a clear connection between their income, profit growth, and the efforts they must make. This is typically due to their inability to monitor the results of the digital strategies they have implemented.

However, Cooksey and Cooksey (2020), highlighted that there are two primary categories of statistical analysis: inferential and descriptive. Descriptive statistics use data visualisation to

provide information in an easily understood style while summarising facts inside a data collection without making any assumptions about its contents. By deriving conclusions from the data and offering recommendations, inferential statistics advance the findings of descriptive statistics. Statistical analysts use their mathematical and data-literate skills to convert complex data into comprehensible graphs, charts, and summaries that are intended for a wider audience. This research has conducted a thorough data analysis by comparing the theoretical data collected from existing research with the survey results collected from the participants. This process will help to analyse a deep understanding of the dynamics of digital transformation in relation to fundamental organisational changes.

3.8 Ethical Considerations

According to Vomberg and Klarmann (2021), success in surveys depends on participation, yet survey designers frequently point to respondents' sensitivity to the information they are asked to supply as a typical cause of non-response. By taking into consideration the information that respondents offer, survey ethics can contribute to a rise in trust. This research has maintained trust with respondents which is facilitated by protecting their privacy and confidentiality. There are no completion rates, and everyone has acted morally by integrating ethics into both recruitment and design.

Protocols are guided by research designs, and statistical and logical techniques are used in data analysis. Preserving confidentiality, voluntary involvement, and trust are examples of ethical issues. According to Goldman *et al.*, (2023), the two golden standards of the Human Subjects Research guidelines, the knowledge or advantages must outweigh the risks and the risks must be adequately protected against. It was completely ensured that every survey participant had given their free and informed consent before answering any questions. It has worked to understand what data is being gathered, saved, and utilised which is part of informed consent. Participation in surveys ought to be voluntary and both the general response rate and the calibre of answers.

3.9 Chapter Summary

Ultimately, this chapter has classified the philosophy of the study as positivism, the research approach as deductive studies, and the research method as quantitative. It has spoken to the descriptive studies format and initial data series plans. Thematic facts analysis techniques were

outlined and the issue of moral concern, as well as a discussion on the procedure of ensuring the research's validity and ethicality.

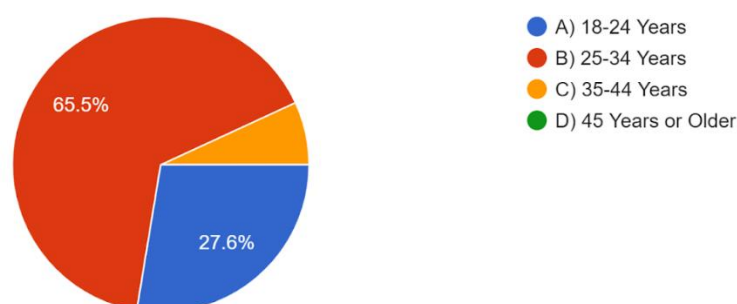
4.0 Findings and Discussion

4.1 Chapter Overview

The following chapter is a significant part of the study as in this chapter, an important discussion of the findings from the study and the literature review of this research will be given. The chapter shows a discussion to produce the appropriate and relevant outcomes of the research along with initial inquiries done by others on the same topic.

4.2 Findings

1. Age Group:
29 responses

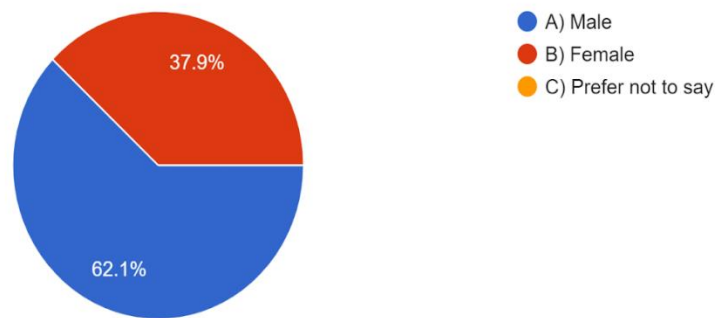


Interpretation:

A significant trend that was identified from the survey results was discussed in relation to banks, and organisational shifts, which were explored alongside the digital transformational shift. 65.5% of the respondents were 25–34 years old, making it the most populous group in the respondents' group. Additionally, 27% of the respondents who opted for digital form are aged 18 to 24 years confirming the trend of increased use of digital banking among youths. However, concerns were raised as to the non-identification of any person whose age was above the forty-five years bracket. This absence of visibility may mean that older individuals are not as informed about digital banking. Consequently, it is quite clear that targeted programs aimed at boosting the seniors' digital literacy framed by the current study are indeed required. In order to operate effectively in the changed digital landscape, banks need to recognize and respond to the differences in the partiality patterns and trends of internet usage by different age groups of customers.

2. Gender

29 responses

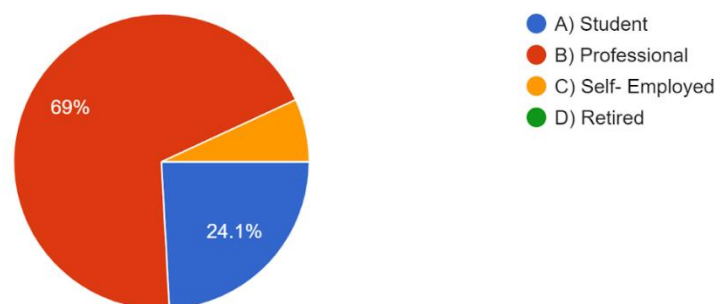


Interpretation:

The gender distribution of study participants who were analysing the complexity of digital transformation in relation to banks and their changes is illustrated by the pie chart above. According to the data presented it can be concluded that the (37. 9%, 62%) most respondents were female while 38% were male. Contrary to expectations, 1% of respondents were male. Based on the given 29 replies, it is imperative to acknowledge the fact that the sample is not always regarded as a stereotypical representation of the total population. While gender distribution talks about the participants, the results are a bit likely to be generalised because of the small sample size. This might enhance the validity and reliability of the research findings and provide an extra thorough hold close of the dynamics of the virtual transformation in the banking industry.

3. Occupations

29 responses



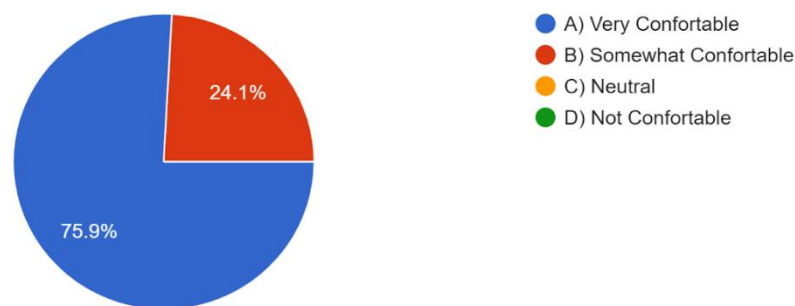
Interpretation:

The professional distribution of study participants examining the dynamics of digital transformation in connection to banks and their organisational changes is depicted in the pie

chart above. Of the 29 respondents, 69% classified as professionals, suggesting that busy people who appreciate the time-saving ease of digital banking operations are increasingly choosing digital banking. In addition, 24.1% of those surveyed were students, indicating a notable level of interest in digital banking among younger respondents. The remaining participants declared themselves to be independent contractors. The wide variety of professions among persons who are interested in digital banking services is demonstrated by this distribution. The survey sample is dominated by professionals, which suggests that working people have a significant preference for digital banking services. For banks intending to execute successful digital transformation plans, it is imperative that they comprehend the tastes and requirements of this population. Furthermore, as this group enters the workforce, the presence of students suggests a possible future development sector for digital banking services.

4. How satisfied are you utilizing your mobile banking apps

29 responses



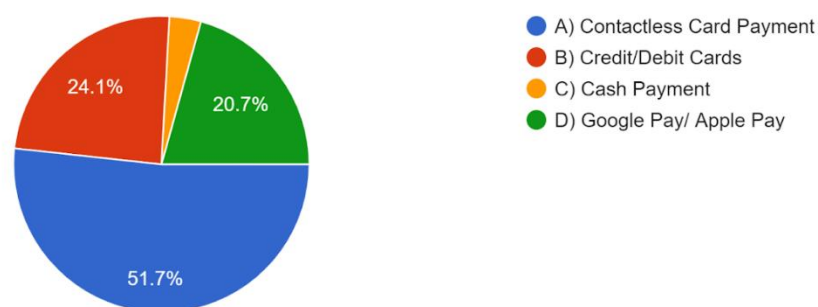
Interpretation:

Mobile banking platforms can also be considered as one of the modern technological tools applied by the banking sector. Based on the above analysis, it can be suggested that the banks have been successful in their efforts to embrace digital transformation, particularly going by the increased uptake of mobile banking among consumers. Therefore, the level of customer satisfaction with these mobile banking applications can be adopted as an arousal marker of the transformation that a particular bank undergoes, especially if improved user satisfaction correlates with increased app engagement. As depicted in the data presented above, current evidence suggests that 75.9 percent of those who participated in the study were extremely satisfied with the mobile banking apps. This high level of satisfaction may be seen because of the digital transformation efforts carried out by the bank of interest due to the fact that they might argue that overall satisfaction scores represent the extent to which consumers are happy with the mobile banking services. Additionally, 48% of respondents have a neutral attitude

toward the level of satisfaction and it indicates that users have at least some levels of comfort in using the mobile application for banking operations. Instead of being in the very high satisfaction category, it means that a considerable percentage of users are satisfied with this software. Consequently, these findings underscore the importance of mobile banking applications in the present-day banking sector change initiatives. The above-stated satisfaction rates demonstrate how the bank's Digital Products are oriented to meet customer satisfaction levels satisfactorily. It also underlines the need for further enhancement to address the concerns arising from dissatisfied customers and ensure that the mobile banking application remains beneficial and functional in consumers' lives.

5. Which digital payment mode do you prefer?

29 responses

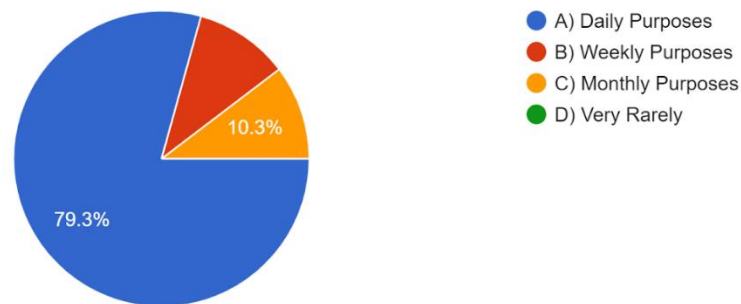


Interpretation:

The preference for remote payments indicates the shift in importance towards online type of payments. This is one of the changes that have been seen to play a positive role due to the enhanced use of digital operations in banks. Hence, the overall acceptance of the digital end-to-end payment options, as represented by the data above, could only be seen to have potentially indicated the success of a digitisation drive of a bank, to the extent that increased preference for such payment types means increased utilisation of the related payments options. Mobile Wallets (like Apple Pay, and Google Pay) were selected by 20.7% of respondents. Analysing the distribution of cards, it can be noted that 24.1 percent of the respondents who were interviewed stated their preference for credit/debit cards. However, when asked about the most preferred mode of payment, 51.7% of the respondents applauded the contactless card payments. A minority of respondents preferred traditional payment methods through cash payment.

6. How often do you utilize digital channels for your banking channels?

29 responses

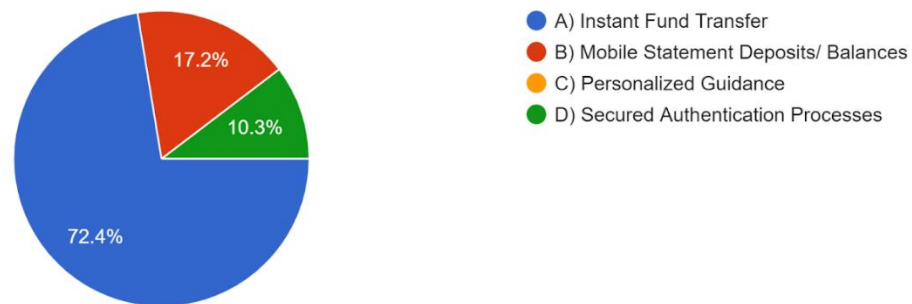


Interpretation:

Pie charts are applied in research to depict the interactive aspect of digital transformations as much as the role of banks and organisational changes. They provide useful information about the customers' behaviour, which can be used in explaining their behaviour, especially within the digital banking space. This is one of the long-term trends that it outlines, as well as the further constant growth of integrated digital banking options, which proves the effective digitalization of the banking industry. Concerning digital channels, as many as 79% of respondents opined. For this, only 3% of the participants reported that they often apply the devices for their banking operations. From this, it is evident how much people appreciate the convenience and simplicity that comes with utilising digital banking. In addition, the survey findings revealed that 10 out of all the participants were currently using an e-commerce platform. Three percent said they use the digital channels monthly, while the remaining respondents used them on a weekly basis. The above data pinpoints the increased reliance on agricultural banks' digital platforms for basic financial needs. Banks will have to observe this trend and ensure that they continue to improve on digital platforms as a way of meeting client demands. Therefore, a deep understanding of client behaviour in the context of digital banking is crucial for banks in terms of overcoming the obstacles in the digital transformation environment and preserving their positions within the dynamically evolving banking market.

7. Which digital banking attributes do you find most helpful?

29 responses

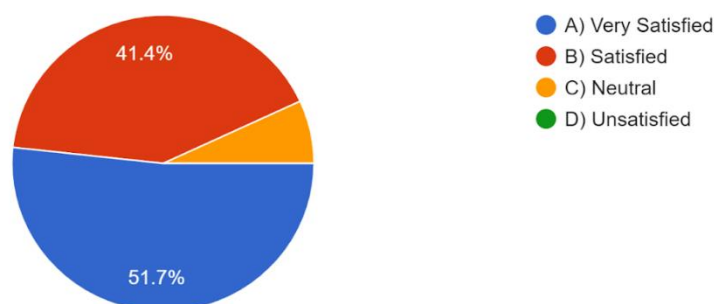


Interpretation:

It has been found that MNCs invest in R&D to ensure continuous technological innovation and automate processes, while banks are demonstrating their ability to digitise operations through biometric authentication and data analytics for risk control. However, the banking industry is still at the early stage of becoming fully digital. The above pie chart depicts that, among different attributes offered by the digital banking system, a majority of 72.4% of customers are more inclined towards preferring instant fund transfers, followed by 17.2% of customers being satisfied with mobile statement deposits. The remaining 10.3% of customers' interests were aligned with secured authentication processes.

8. How satisfied are you with the swiftness and efficiency of digital banking services?

29 responses

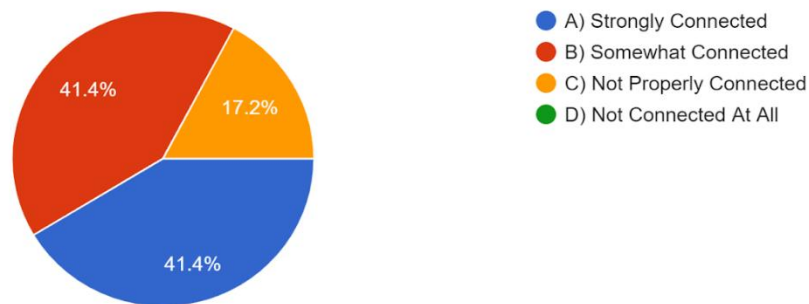


Interpretation:

Banks help credit crunching through data analytics, biometrics, and modern technology authentication to reduce risk. The above pie chart represents the satisfaction rate of customers with the swiftness and efficiency of digital banking services where a total of 93.1% expressed their satisfaction. However, the neutrality of the rest of the customers indicates a lack of awareness and exhibits scope for improvement.

9. Do you feel emotionally connected to your direct bank through digital exchanges?

29 responses

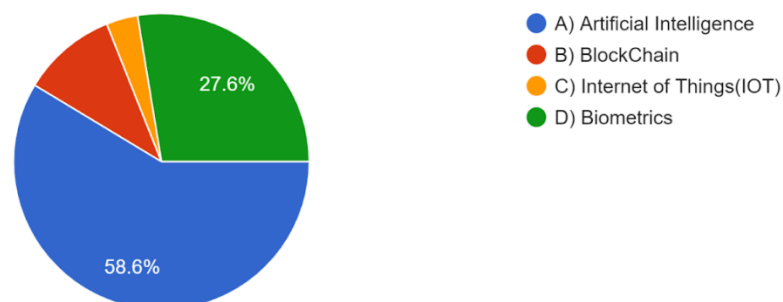


Interpretation:

Programs have the ESCAPE as a focal area that the financial industry must integrate into their activities amid transformation to digital platforms. From the above pie chart, it can be depicted that a tied majority of users (41.4%) feel somewhat connected and strongly connected to their direct bank through digital exchanges, indicating a sense of convenience and familiarity and a high level of trust and satisfaction. The remaining 17.2% are not properly connected potentially due to limited digital interaction or lack of personalised experience. Overall, digital banking has established an emotional connection with most users.

10. Which modern technology do you think has the most prospects to revolutionize banking services?

29 responses



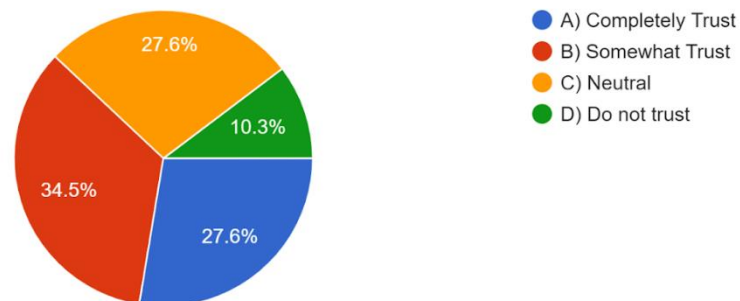
Interpretation:

According to the above chart, the majority (58.6%) believe Artificial Intelligence has the most potential to revolutionise banking services, likely due to its ability to enhance customer experience and improve efficiency. Biometric received 27.6% votes for its secure and transparent nature. The transition process from manual work toward data-driven problem-solving will lead to a client-focused future, enhanced by good provider transport and increased

consumer delight. On the other hand, block chain also has significant support. However, Internet of Things (IOT) received very few votes, suggesting it may not be seen as a game-changer in banking innovation.

11. Do you trust digital advisors for investment advice?

29 responses

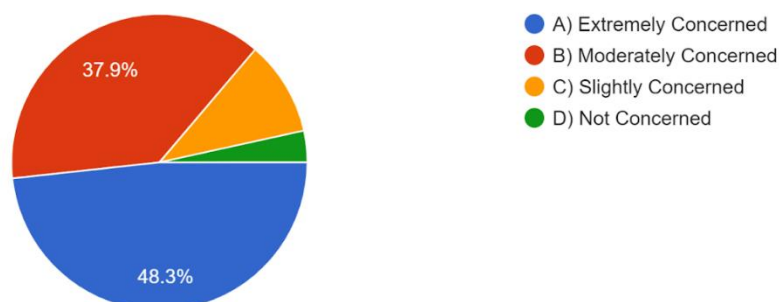


Interpretation:

The transformation digitalization undertaken by banks requires a tricky balancing operation between innovative and risky sides. This balance between risk avoidance, compliance, and green power use is tactically necessary, like the requirements of regulators. This impacts largely with gaining the trust of digital advisors for investment. The pie chart shows that a majority of 34.5% of customers somewhat trust digital advisors for investment advice, indicating a willingness to consider their recommendations. A significant portion (27.6%) completely trust digital advisors, likely due to their algorithms and data-driven approach. However, 27.6% of the respondents were neutral and a notable minority (10.3%) do not trust digital advisors, potentially due to concerns about a lack of human judgement and oversight.

12. How concerned are you regarding data privacy when operating online banking services?

29 responses

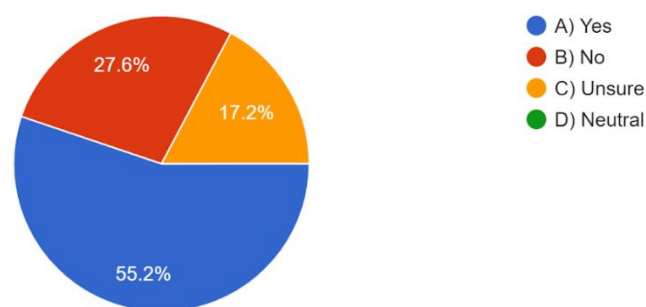


Interpretation:

It can be depicted that significant managerial adjustments are part of implementing digital transformation initiatives, adding more challenges to the task of implementing a fully coordinated strategy for organisational restructuring and exchange control. However, from the above pie chart it can be concluded that a total of 86.2% of customers are concerned about data privacy when using online banking services, with 48.3% being extremely concerned and 37.9% moderately concerned. This indicates a high level of awareness and worry about the security of personal and financial information online. Only a small minority are either slightly concerned or not concerned, highlighting the importance of banks prioritising data protection and transparency.

13. Do you think that digital transformation positively effects financial inclusions?

29 responses

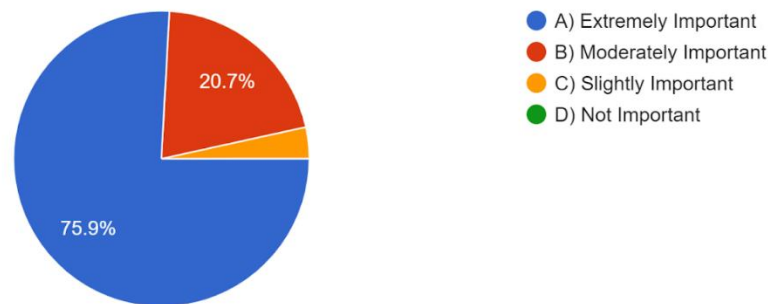


Interpretation:

Virtual transformation programmes often face difficulties due to resistance among participants, as current human-centric technologies are often exacerbated by archaic thinking and existing methods. However, the above chart depicts that 55.2% of customers believe that digital transformation positively affects financial inclusion, indicating recognition of its potential to expand access to financial services. However, a significant portion (27.6%) disagree, potentially due to concerns about digital exclusion or unequal access to technology. A notable minority of 17.2% of customers are unsure, suggesting a need for more evidence or understanding of its impact.

14. How essential is personalized customer service in your banking experience?

29 responses

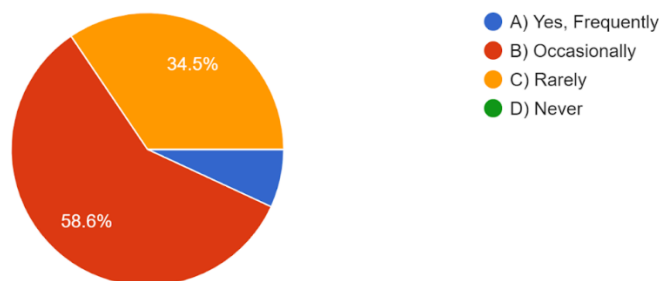


Interpretation:

The vast majority of 96.6% of customers in total consider personalised customer service important in their banking experience, with 75.9% finding it extremely important and 20.7% moderately important. This highlights the value placed on tailored support and human interaction in the banking sector. Only a small minority opines it to be slightly important, indicating a strong demand for personalised service. However, it can be highlighted that in collaboration with bankers, technology providers, regulators, and private sector players, a way forward must be set. Digital transformation has led to increased productivity and cost reduction, but gaps between departments remain, making banks responsible for striking a balance between risk and innovation.

15. Have you ever encountered challenges associated with digital banking services like(technical glitches, connections problem, server down..)

29 responses



Interpretation:

The above pie chart tells us that a minority of the customers encountered challenges with digital banking experiencing frequent technical glitches and disjointed interfaces. A majority of 58.6% occasionally faced such issues and 34.5% faced difficulties rarely. This highlights the

need for banks to prioritise user experience and invest in robust technology to minimise errors and frustration.

16. Do you prefer to explore new digital banking services offered by your bank?

29 responses

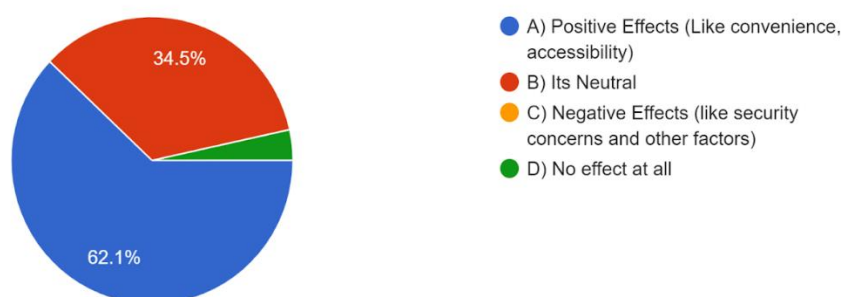


Interpretation:

Most of the customers (82.8%) are open to exploring new digital banking services, which indicates a willingness to adapt to innovative solutions. However, a small portion are not interested, and another 13.8% are unlikely to try new services. No respondents preferred traditional banking methods, highlighting a lack of preference for physical banking experiences.

17. What effects does digital banking have on your general financial well-being?

29 responses

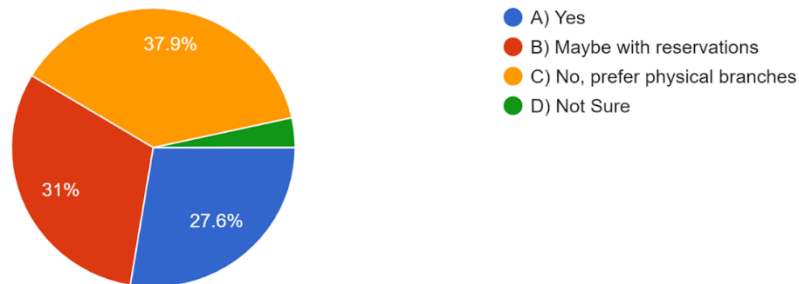


Interpretation:

62.1% of customers experience positive effects from digital banking, citing convenience and accessibility as key benefits. This suggests that digital banking has improved their financial well-being by making it easier to manage finances and access banking services. A significant minority (34.5%) have neutral experiences, with concerns about security and potential negative impacts on their financial well-being. Only a small portion report no effect.

18. Would you trust a completely automated bank with no physical branches, all digital services for all your financial needs?

29 responses

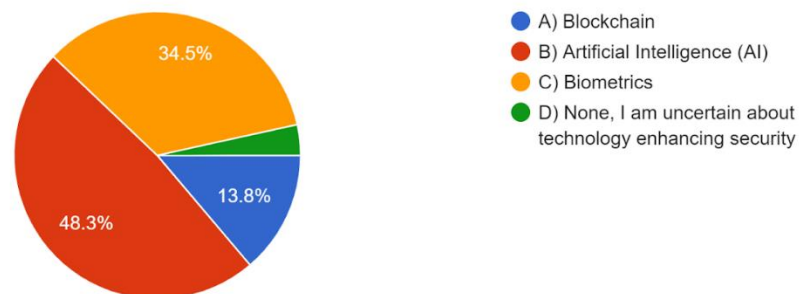


Interpretation:

According to the above chart, the majority (37.9%) would not trust a completely automated digital bank, and would prefer physical branches, highlighting a lingering desire for human interaction and tangible banking experiences. Another 31% would trust it with some reservations, suggesting a need for reassurance on security and support. However, 27.6% will trust the automation suggesting interest in digitalisation.

19. Which technology do you think will improve cybersecurity in the banking industry?

29 responses

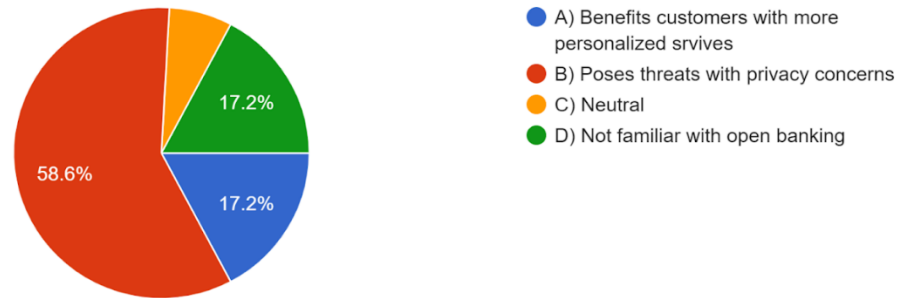


Interpretation:

The majority (48.3%) believe Artificial Intelligence (AI) will improve cybersecurity in the banking industry, likely due to its ability to detect and respond to threats in real time. Biometrics (34.5%) and Blockchain (13.8%) also receive significant support, as they offer secure and decentralised ways to store and authenticate data. However, a small percentage of customers are uncertain about enhancing security, highlighting a need for continued education and awareness about emerging cybersecurity solutions.

20. Do you think open banking like sharing financial details with third-party applications benefits customers or poses threats?

29 responses

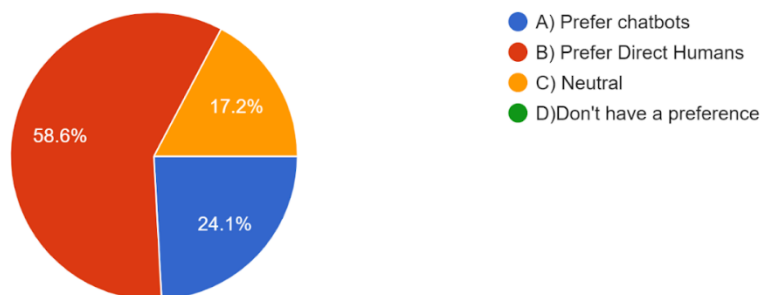


Interpretation:

The majority (58.6%) believe open banking poses threats, likely due to concerns about data privacy and security. However, a small portion (17.2%) see benefits for customers, such as increased financial transparency and access to innovative services. A small minority are neutral but 17.2% of customers being unfamiliar with open banking, highlights a need for education and awareness about its implications.

21. What do you think regarding the utilization of chatbots for resolving client queries compared to human customer services representatives.

29 responses

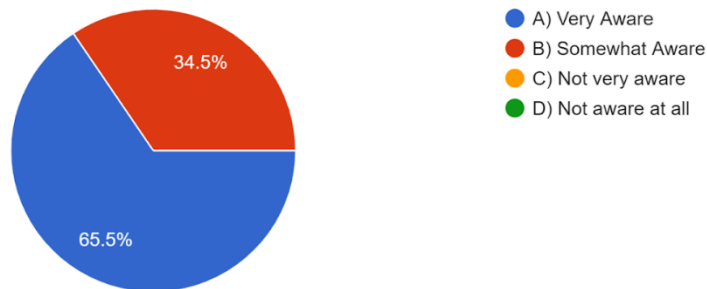


Interpretation:

The majority (58.6%) prefer direct human customer service representatives, valuing the personalised and empathetic support they provide. A significant portion (24.1%) prefer chatbots, appreciating their efficiency and convenience. The rest (17.2%) are neutral, suggesting a willingness to adapt to either approach. Overall, human customer support remains the preferred choice, but chatbots are also gaining acceptance.

22. How conscious are you of the environmental effects of digital banking (Like decreased paper usage)/?

29 responses

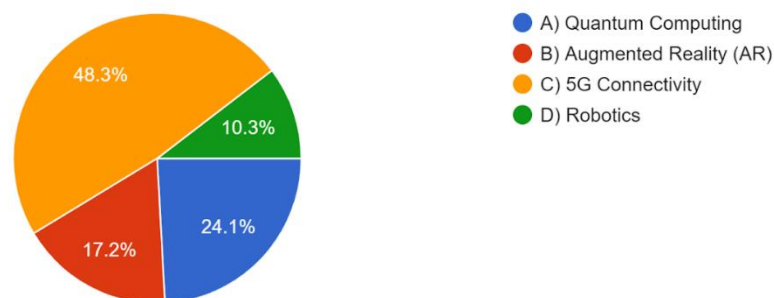


Interpretation:

All the customers are aware of the environmental effects of digital banking, with 65.5% being very aware and 34.5% somewhat aware. This indicates a growing recognition of the impact of digital banking on the environment, such as reduced paper waste and carbon emissions.

23. Which security feature do you find most promising when utilizing online banking?

29 responses

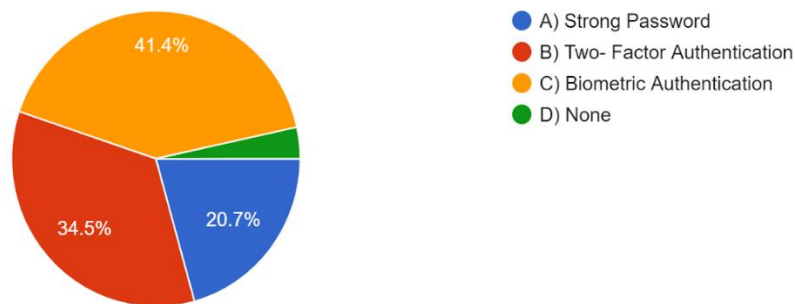


Interpretation:

5G Connectivity (48.3%) is seen as the top transformative technology for the banking industry in the next decade, likely due to its potential to revolutionise customer experience and engagement through networking. Quantum computing (24.1%) is a close second, as it can enhance security and processing capabilities. Augmented reality and robotics lag, but still have potential for impact.

24. Which security feature do you find most promising when utilizing online banking?

29 responses

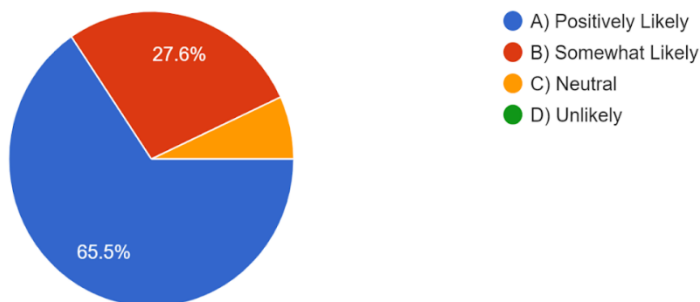


Interpretation:

Two-factor authentication (34.5%) and Biometric Authentication (41.4%) are two of the most promising security features for online banking, highlighting the importance of secure login and verification processes. Strong password (20.7%) is also seen as a promising feature, likely due to its enhanced security and convenience. Only 3.4% of customers don't find any security feature promising, which indicates a desire for robust security measures.

25. How likely are you to recommend your bank's services to other people depending on your entire experience?

29 responses



Interpretation:

The majority (93.1%) are likely to recommend their bank's service to others, with 65.5% being positively likely and 27.6% somewhat likely. This indicates a high level of customer satisfaction with their banking experience. Only 6.9% are neutral, suggesting room for improvement in certain areas. With no customer unlikely to recommend, it can be concluded that overall, customers are generally pleased with their bank's service.

4.3 Discussion

4.3.1. Evaluating the level of digitalization now occurring in the banking sector, with a focus on the integration and application of contemporary technologies

According to Cooke (2021), in current days the growth of online and mobile banking implies a change in the traditional service orientation involving face-to-face approaches and digital models. Nowadays, in the financial sector artificial intelligence (AI) driven, machine learning, personalised customer care with chatbots and customised guidelines have augmented a completely new form of customer service. According to the digitization policy, digitalization strengthens regional cross-border digital collaboration. Evaluating the level of digitalization currently occurring in the banking sector, with a focus on the integration and application of contemporary technologies such as the Internet of Things (IoT), reveals how banks are leveraging IoT for enhanced customer service, operational efficiency, and security. This study explores how IoT innovations are transforming banking processes and delivering improved financial services. However, the lack of exposure could indicate a lack of knowledge among older people regarding digital banking. As a result, it is evident that specific programs like the ones described in this study are needed to increase the digital literacy of seniors. To operate efficiently in the evolving digital environment, banks must identify and address variations in the usage patterns and trends of the internet among various consumer age groups.

The analysis of age also reveals the overall preference for digital banking, as 54 percent of the respondents were within the age range of 25 to 34 years old. However, the absence or rather poor representation of participants above the age of 45 years is clear evidence of the need to organise and encourage the use of digital materials among seniors. 62.1% of respondents were men and 37.9% were women, demonstrating the diversity of genders in the sample. Forcing the notion of homogeneity in this area is not the best strategy for recognizing how several groups approach digital banking. 69% of the respondents work as professionals making it evident that the trend of digital banking where one does not need to leave the comfort of their working place or break from work to visit a bank is preferred by busy individuals. Digital banking has a fair share of engagement from the younger generation, which can be explained by the fact that 24%. One percent of the respondents identified themselves as students. Based on these findings, it is evident that the banking sector cannot overlook the importance of digital transformation in serving the different needs and wants of population segments. Banks must

therefore adapt to these new trends if they are to remain relevant and of value in the new age that is characterised by the ever-entwining World Wide Web.

However, only 29 shoppers are used in the survey, and it depicts that mobile banking applications are in the common-use practices in the banking sector in the present digital world. One perhaps, could argue that the level of satisfaction among the Mobile Banking App users might indicate the level of digitalization in a particular bank if the level of satisfaction is indicative of increased usage of that App. However, while conducting the cross-sectional survey, the target population of shoppers is only 29 and hence the results may not be generalised to the entire population. Mobile banking applications are part of the current digital practice adopted in the banking industry, with a high level of people's readiness to use mobile banking. As a result, now that it has been demonstrated that banks' digitization initiatives are working, the data illustrating consumers' preference for remote payments emphasises the growing use of online payments.

A relatively higher percentage of 20.7% of the respondents opted for mobile wallet options such as Apple Pay or Google Pay, pointing towards a shift in utilising digital means of payment. 24.1% of respondents said they preferred credit/debit cards for card usage, while 51.7% said they preferred contactless card payments. Digital payment technology is therefore being made popular through increased adoption of contactless technologies which are considered safe and easy to make. This data points to this trend. The few percent of respondents who stated that they prefer cash or other more 'conventional' means of payment indicate that payments are slowly but evidently transitioning towards digital ones. The shift now does not most effectively reflect shifting client possibilities however additionally emphasises how important it is for banks to preserve investment digital transformation to satisfy changing customer demands and live competitively in the digital era.

The digital transformation in the banking sector promotes lifelong learning and counteracting the brain drain. Moreover, it builds skill sets for the future, including updating youth education. As per Iwashita (2022), traditional banks still operate in the paper format and through direct conversation processes with clients which makes the system very hard to conduct a sustainable digital environment infrastructure. As a result, impediments arising from old structures call for big spending in the form of infrastructural variables. On the other hand, digital transformation improves the ecosystem for the startups.

ESCAP (2022), has found that beyond these limitations, banking sectors are showing their ability to digitalise their operations using authentication through biometrics and data analytics for risk control to the whole world. Botta *et al.* (2020), pointed out how digital banking has enabled institutions to lead their way of doing business from the traditional in-person models to more digital-first strategies. It also follows that banks tend to help credit crunching through schemes of data analytics and biometrics, and modern technology authentication in a bid to deduct risk. Pucihar (2021), stated that those advantages cannot overshadow the fact that banking sectors have several grounds to cover before achieving full digital maturity. In addition, for an organisation to overcome these obstacles; a complete method that combines process developments and cultural transformation, as well as personnel upgrading, is required.

To overcome challenges such as risk management, and technical faults and coordinate with customers to the terrific change, in communication with bankers, technology providers, regulators, and private sector players, a way forward must be set. The multinational corporations stopped investing in automation and stopped giving up and system optimization to seize the capability of their banking sector which they strengthened by finalising or installing satellite televisions and PC offices. While there is a clear perception that digital banking has negative impressions on the employees, of the respondents noted that they experienced positive impressions as they engaged in the digital banking practices this might have some positive impression meaning that there could have been improvement in efficiency. This is in line with digital transformation process initiatives that seek to enhance the process of operations and cut down costs that various banks in the country undertake. It is concluded that the development of digitalization means the banks need to establish a platform that is aligned with the future of client-centric and efficient, being the platform of innovation and innovation-fuelled working culture.

4.3.2 Examining the basic transformations in organisational structures, methods, and lifestyle that digital transformation initiatives within banks have brought about

Rodríguez *et al.* (2019) highlighted earlier, that it has been reported that only one of the most critical tendencies is the proliferation of agile approaches which are timesaving and build a flexible response to market fluctuations. Moreover, compared with the structures of traditional organisations, where responsiveness was often undetermined and creativity discouraged, it is the perfect situation for implementing more responsive and innovative organisations. On the other hand, the change management process is very helpful for the transformation. All

customers are aware of the environmental effects of digital banking, with 65.5% being very aware and 34.5% somewhat aware. 5G connectivity (48.3%) is seen as the top transformative technology for the banking industry in the next decade, with quantum computing (24.1%) close second. Augmented reality and robotics lag but still have potential impact.

The survey also concludes that most of the customers exhibit semi-related feelings or sense with the bank they directly deal with through digital transactions. The pie chart shows that customers are more inclined towards instant fund transfers, followed by 17.2% of customers being satisfied with mobile statement deposits. The satisfaction rate of customers with the swiftness and efficiency of digital banking services is 93.1%, but the neutrality of the rest indicates a lack of awareness and exhibiting scope for improvement. Most users (41.4%) feel somewhat connected and strongly connected to their direct bank through digital exchanges, indicating a sense of convenience and familiarity and a high level of trust and satisfaction. However, Lin and Saebeler (2019), who have previously opined that they insist on harsh compliance, pointed out the challenges regarding cybersecurity and data safety as the shortcomings of this approach. Furthermore, banks are responsible for striking a familiar balance between risk and innovation since the digital transformation., causing enormous management changes associated with the utilisation of technology.

This goes to show that banks must place high value on their users and spend more on a reliable systemic infrastructure to reduce the chances of slips and people getting irritated. However, according to Butt (2020), digitalised and upgraded operations notwithstanding, manufacturing has been and will be optimised via several cases of digital transformation. In addition, digitalisation projects have completely transformed the nature of the banking sectors and their approaches to processing client transactions and banking titles in a way that fundamentally revised the methodologies through which establishments operated before.

58.6% of customers believe Artificial Intelligence has the most potential to revolutionise banking services, likely due to its ability to enhance customer experience and improve efficiency. Biometrics received 27.6% votes for its secure and transparent nature, while Blockchain also has significant support. However, the shift from manual work to data-driven problem-solving will create a client-focused future, enhanced by efficient service delivery and higher consumer satisfaction. While blockchain has significant backing, the Internet of Things (IoT) garnered limited support, indicating it might not be perceived as a transformative force

in banking innovation. This suggests a cautious approach towards IoT in favor of more established technologies like blockchain.

4.3.3 Identifying the barriers that the banking sector faces in implementing virtual transformation strategies, including cybersecurity worries and resistance to change

As Al-Alawi *et al.* (2020) have made their point earlier, cyber security concerns pose the most common challenges for monetary institutions like banks, supply chain attacks have become an increasingly popular method for distributing malware by cybercriminals. By targeting a particular software vendor, the attackers deliver malicious codes not only to the customers but also to other stakeholders of the supply chain in the form of updates or products which appear to be legitimate superficially. However, customers are the most vulnerable link in the chain of security as they can easily be tricked into sharing sensitive credentials and details with the hacker through phishing and this is why Moran (2020) suggested that banks need to maintain a careful balance between innovative modernization and prevention of probable threats.

However, payment fraud and insider attacks are also raising concerns about the cyber security of banking sectors. However, the unauthorised use of debit or credit information for making fraudulent transactions has become a very common incident nowadays. Security features for online banking include two-factor authentication (34.5%) and biometric authentication (41.4%), with strong password (20.7%) also seen as a promising feature. Only 3.4% of customers find any security feature promising, indicating a desire for robust measures. Overall, customers are generally pleased with their bank's service, with 93.1% likely to recommend it to others.

A majority of 34.5% of customers somewhat trust digital advisors for investment advice, indicating a willingness to consider their recommendations. A significant portion (27.6%) completely trust digital advisors, likely due to their algorithms and data-driven approach. However, 27.6% of the respondents were neutral and a notable minority (10.3%) do not trust digital advisors, potentially due to concerns about a lack of human judgement and oversight. Malicious activity or unauthorised access by people with authorised access to a bank system or data is also a matter of concern. Cyber security threats in monetary sectors like banking can produce significant consequences, including reputational damage, regulatory and legal issues, and financial loss. Therefore, it is crucial for banks to implement robust measures to protect customers, data, and systems from cyber attackers. Integrating IoT with Blockchain and

Biometrics offers a secure, decentralized platform for storing and validating identity, enhancing security. IoT devices can provide real-time monitoring and alerts, while Blockchain ensures data integrity and Biometrics offer secure authentication, collectively fortifying the banking sector against cyber threats. 86.2% of customers are concerned about data privacy when using online banking services, with 48.3% being extremely concerned and 37.9% moderately concerned. This indicates a high level of awareness and worry about the security of personal and financial information online. 55.2% of customers believe that digital transformation positively affects financial inclusion, indicating recognition of its potential to expand access to financial services. However, a significant portion (27.6%) disagree, potentially due to concerns about digital exclusion or unequal access to technology.

4.3.4 Guidelines and approaches to cope with the issues in virtual transformation techniques in banking establishments

Issues such as cyber-attacks and other conventional problems obtained in banking institutions could be reduced significantly with the help of cybersecurity. Facts provided by Vadiyala (2019) have also proved to be useful regarding the utilisation of cyber security techniques minimising the problems in banking establishments. Nevertheless, the research of van Klyton, Tavera-Mesías and Castaño-Muñoz (2021), has proven to be quantitative in nature as resistance towards change in an organisation can hinder the process of including high-tech security services and other techniques. 96.6% of customers consider personalised customer service important in their banking experience, with 75.9% finding it extremely important and 20.7% moderately important. A minority of customers encountered challenges with digital banking, with 58.6% occasionally facing such issues and 34.5% rarely. This highlights the need for banks to prioritise user experience and invest in robust technology to minimise errors and frustration. The researchers have been extremely effective in identifying processes such as cloud computing and maintenance of balance in the budget to obtain higher operational efficiency. Nevertheless, there is a significant requirement of wider research on the following methods which can not only justify the operational efficiency obtained from the processes but also help create a resilience system leading to the maintenance of a balance in workflow.

It is also important for banks to include digital transformation so that the institute may adapt and adjust according to the changes in the market which has been depicted by Omarini (2022). In banking procedures, it has been mostly observed that digital innovation can result from agile development. This is true in nature as the researchers have also claimed that transforming the

digital perspective can create convenience in daily transactions. It can serve both the employees, the management and the consumers by offering them top-notch experiences from digital interfaces as observed by Hari, Iyer, and Sampat (2022).

However, there are also possibilities that the utilisation of robotic processes and augmented reality can create confusion in the organisation and hinder the experiences of the consumers as far as the attainment of financial services is concerned. Indeed, there have been significant developments in the technological sphere with the application of advanced analytics and chatbots. Most customers (37.9%) would not trust a completely automated digital bank, preferring physical branches for human interaction and tangible banking experiences. However, 27.6% will trust automation, indicating interest in digitalisation. Artificial Intelligence (48.3%) is believed to improve cybersecurity in the banking industry, with biometrics (34.5%) and Blockchain (13.8%) receiving significant support. Nevertheless, there is also a requirement of detailed research to understand the prospects and consequences of advanced analytics, and creation of new educational schemes to help the consumers in transitioning through the changes. Identification of research studies claiming that digital transformation has contributed to the well-being of consumers and employees can further be efficient in tracking and acknowledging the impact of immaculate digital strategy in the banking sector. As per the apprehension of Agarwal, Swami, and Malhotra (2024), it has been observed that there has been inclusion of new technologies leading to the evolution of the banking sector with wearable and artificial intelligence. Big data analytics has been responding to the demand of the present consumers and has also been managing transactions, with special algorithms. Open banking poses threats due to concerns about data privacy and security, but a small portion (17.2%) sees benefits like increased financial transparency and access to innovative services. Customers prefer direct human customer service representatives for personalised and empathetic support, while a significant portion (24.1%) prefer chatbots for efficiency and convenience.

Human customer support remains the preferred choice, but chatbots are also gaining acceptance. The fact is indeed true in nature as technological upgradation has driven the services provided by banks leading to ease in the usage of the financial services. The importance of cyber security and the requirement of new rules and regulations to maintain a smooth transition in digital banking is indeed one of the most important needs in the present.

Moreover, there is also a requirement of emphasising flexible adaptations with a proactive approach to reduce the environmental footprint of banking operations.

4.4 Chapter Summary

The chapter concludes that most of the customers suggest the bank service to others. However, this form of operationalization suggests that the customers are satisfied with their experience with the banking sector. Due to digitalization in the banking sector to some extent, people are encouraged to engage in lifelong learning while developing the required skills for future needs. Many traditional banks operate on paper-based systems; there is no stable environment for launching systematic digital environment infrastructure.

5.0 Conclusion and Recommendations

5.1 Chapter Introduction

The chapter will provide insight into the conclusion and recommendation based on the complete dissertation. It will also discuss the traditional banking that still employs paper-based systems as the main means of communication. It will also discuss the limitations of the research and further recommendations that can be used in future research.

5.2 Summary of Findings

Currently, the banking industry is at the forefront of experiencing the influence of digital transformation through online and mobile banking, changing the traditional concepts of the service. Nevertheless, it is crucial to admit the positive impact of AI in the field of customer care, as well as the provision of transaction security and increased transparency due to the application of blockchain technologies. The banking industry is still at the early stage of becoming fully digital, with traditional banks retaining power due to non-digitised branches and paper-based documents. However, to overcome these challenges, a comprehensive approach combining process improvements, culture transformation, and personnel upgrading is required. Digital transformation projects within banks like Lloyds and HSBC have led to a paradigm shift in organisational structures, strategies, and culture. However, when it comes to the level of engagement, the survey indicates that most of the respondents engage in digital channels daily. 44% expressed satisfaction with the speed and ease of completing transactions through digital banking. Customers prefer physical branches for human interaction and tangible banking experiences, while 27.6% trust automation. Artificial Intelligence is believed to improve cybersecurity in the banking industry, with biometrics and Blockchain receiving significant support. Open banking faces threats due to data privacy and security concerns, but 17.2% sees benefits like increased financial transparency and innovative services. Customers prefer direct human customer service representatives for personalised support, while 24.1% prefer chatbots for efficiency and convenience. However, challenges such as cybersecurity concerns and resistance to change hinder the adoption of virtual transformation technologies.

5.3 Recommendations

The banking sector is undergoing a rapid transformation due to the quickly expanding field of digital transformation, which is improving consumer experiences, security, and efficiency.

Some of the most effective strategies that are recommended in the study involve distributed ledger technology (DLT), artificial intelligence (AI), machine learning, blockchain and cryptocurrency, robotic process automation (RPA), Buy Now Pay Later (BNPL), and regulatory technology (Regtech) are some of the cutting-edge technologies in use in the world of financial institutions. These technologies can help established financial institutions by offering transparent and secure decentralised ledger systems. Additionally, by segmenting purchases into interest-free pieces, BNPL is taking over the financial industry, and DLT elevates transparency. Furthermore, the survey results highlight that digital transformation programs must integrate defence with techniques and create holistic communication schemes to promote the new banking culture. This shows the positive correlation between the third objective and the results of this research.

Furthermore, banks like Lloyds and HSBC can build relationships with companies for Banking Digital Transformation as a partner to form a nitro-boosted engine and send it rocketing. For banks to remain relevant, competitive, and customer-focused in the digital age, digital transformation is essential. This change has stimulated innovation, increased operating efficiency, and offered convenient services. A digital financial suite driven by 6D Technologies provides a wide array of goods and services, opening new avenues for profit for banks, merchants, telecom providers, financial institutions, and businesses.

5.4 Linking with Objectives

5.4.1 Linking with Objective 1

The growth of online and mobile banking has led to a change in traditional service orientation, with AI-driven, machine learning, and personalised customer care enhancing customer service. However, according to the literature review, the first objective which is to identify customer satisfaction towards the banking sector after banking digitization takes place and hence met, however, the findings strengthen some effective strategies which include regional cross-border collaboration and support technology adoption by both the private and public sectors. It promotes lifelong learning, counteracts brain drain, and builds skill sets for the future. Traditional banks still operate in paper format and direct communication processes, making it difficult to conduct a sustainable digital environment. There are various strategies that can be concluded from this study. This includes cybersecurity techniques, employee training, auditing programs, and encryption processes. These are essential for minimising the possible risks in

the digital field. Additionally, with regard to the negative effects of digital banking practices, there are several barriers that organisations face in their implementation, which include risk management and technical problems; nevertheless, positive impressions were noted. However, this objective helps to establish the level of customer satisfaction within the banking services after the shift towards the industry's service digitization. The objective is to determine how far the banking industry has advanced in embracing digital features and effectively utilising new technologies. The study will assess the extent to which consumer satisfaction has been affected by the adoption of digital banking services.

The research objectives of the study will seek to determine the level of customer satisfaction with banks' digitization strategies, including adopting digital payment solutions, online/mobile banking services, and other digital banking products. Moreover, the research will assess the banks' digital performance regarding customer expectations along with increasing the overall levels of satisfaction. In other words, establishing full-fledged digital maturity is a multi-faceted process that requires working with the set of development in the bank's processes, change in organisational culture and personnel, and finally, their upgrade. However, digital transformation improves the ecosystem for startups and allows banks to digitalise their operations through biometrics and data analytics for risk control. To achieve full digital maturity, a complete method combining process developments, cultural transformation, and personnel upgrading is required. Challenges such as risk management, technical faults, and coordination with customers must be addressed.

5.4.2 Linking with Objective 2

Banks are undergoing a paradigm shift in their organisational systems, strategies, and culture due to digital transformation initiatives. One critical trend is the proliferation of agile approaches, which are time-saving and flexible in responding to market fluctuations. Therefore, this shift is crucial for implementing more responsive and innovative organisations. However, it can be concluded that cybersecurity and data safety issues are of concern. Furthermore, banks can adapt to changing market conditions by embracing digital innovation and agility, utilising open banking frameworks, and creating agile development techniques. New technologies like machine learning, blockchain, cloud computing, IoT, Robotic process automation, and augmented reality can enhance financial services and operations and help the organisation to gather customer's loyalty, trust, and preferences towards banking, which is also

concluded by the research findings. Additionally, the results also depict that banks should set up a responsive, cost-effective, and focused environment that fosters innovation through a client. This satisfies the second objective and furthermore, helps to understand that digital transformation projects have significantly improved productivity and cost reduction, bridging gaps between departments' risk and innovation, as digital transformation involves the use of technology. However, the information-driven culture has been associated with cyber threats and compliance regulations. It can be concluded that banks have shown better performance in terms of efficiency and cost savings due to digitalisation. Therefore, this transformation requires an integrated structural system that can effectively engage and function in the ever-changing customer environment.

5.4.3 Linking with Objective 3

The adaptation of virtual transformation technologies in the banking industry faces challenges that include cybersecurity which is a particular challenge as monetary institutions are more susceptible to cyberattacks. It can be concluded from the study that banks must balance innovation needs with protection against potential threats under the pressure of digital innovations. However, there are concerns about the potential confusion, but further research is needed to understand their potential consequences and create educational programs for consumers. However, as per the third objective, to evaluate the user experience and how the relationship with banking has improved in today's banking environment, traditional human-centric technologies often lead to resistance, especially among young employees and clients growing up in the digital age. This highlights that digital transformation programs must integrate defence with techniques and create holistic communication schemes to promote the new banking culture. This shows the positive correlation between the third objective and the results of this research.

However, cultural and structural barriers, such as competition between large financial institutions, also contribute to resistance. Further, the study aims at evaluating the current prosaic relationship between clients and banks, and the satisfaction level. As advanced technology tools used by the banking sector, it focuses on the mobile banking application. It can be quantified by the level of customer satisfaction that exists with such applications for a given bank or if there is a positive correlation between the increased use of these mobile banking apps and customer satisfaction. This is due to the evidence from the data that shows that 75% is an indication of a highly successful digitization. Specifically on mobile banking apps, 9% of the respondents reported being very satisfied with these services.

However, 48% of the participants presented a neutral attitude towards the application, which reveals a good level of familiarity with the app. These results highlight the importance of mobile banking apps in modern-day banking and the need for continued development to maximise consumer satisfaction or address possible issues. Successful digital transformation in the banking sector may soften some challenges, but it requires careful consideration of security and openness problems and organisational readiness for change implementation.

5.5 Limitations of the Research

Firstly, there are some limitations of the research including the number of participants which is only 29 from a particular geographical area. These factors may not try to capture all the other banking sectors and may not be extended to other parts or regions of the world's banking markets hence the study findings cannot be generalised. Secondly, the study used self-administered survey questions that may result in biases and inaccuracies in the collected information. Thus, this study is cross-sectional and is a one-point measure only and the conceptual framework applied requires further research and testing.

And thirdly, academic studies and articles to date are more concerned with the opportunities and enablers of digitalisation in banking while the threats experienced during the implementation process and the future stability of the change processes remain understudied. The geographical aspect is also important, since many papers concentrate on the experience of the developed countries' banking systems, while the differences in the Indian banking environment are often ignored. Future research should strive to shed further light on digital transformation concerning various banking dynamics and explore ways of evaluating all the risks inherent in digital transformation.

5.6 Chapter Summary

It can be concluded that some processes such as cloud computing and budgeting are observed to help enhance operation and are thus enhanced. However, it is still possible to represent the view that there is a need for additional investigation to argue these approaches and build a system of resilience to address the problem of imbalance in the workflow. At the same time, the chapter also concludes that robotic processes and augmented reality which may be more

beneficial to the business establishment can prove to be complicating and counterproductive to customer encounters.

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Questionnaire

1. Age Group

- A) 18-24 Years
- B) 25-34 Years
- C) 35-44 Years
- D) 45 Years or Older

2. Gender

- A) Male
- B) Female
- C) Prefer not to say

3. Occupations

- A) Student
- B) Professional
- C) Self- Employed
- D) Retired

4. How satisfied are you utilizing your mobile app?

- A) Very Comfortable
- B) Somewhat Comfortable
- C) Neutral
- D) Not Comfortable

5. Which digital payment mode do you prefer?
- A) Contactless Card Payment
 - B) Credit/Debit Cards
 - C) Cash Payment
 - D) Google Pay/ Apple Pay
6. How often do you utilize digital channels for your banking channels?
- A) Daily Purposes
 - B) Weekly Purposes
 - C) Monthly Purposes
 - D) Very Rarely
7. Which digital banking attributes do you find most helpful?
- A) Instant Fund Transfer
 - B) Mobile Statements/ Balances
 - C) Personalized Guidance's
 - D) Secured Authentications Processes
8. How satisfied are you with the swiftness and efficiency of digital banking services?
- A) Very Satisfied
 - B) Satisfied
 - C) Neutral
 - D) Unsatisfied

9. Do you feel emotionally connected to your direct bank through digital exchanges?

- A) Strongly Connected
- B) Somewhat Connected
- C) Not properly Connected
- D) Not connected at all

10. Which modern technology do you think the most prospects to revolutionize banking services?

- A) Artificial Intelligence
- B) Block Chain
- C) Internet of Things(IOT)
- D) Biometrics

11. Do you think digital advisors for investment advice?

- A) Completely Trust
- B) Somewhat Trust
- C) Neutral
- D) Do not Trust

12. How concerned are you regarding data privacy when operating online banking services?

- A) Extremely Concerned
- B) Moderately Concerned
- C) Slightly Concerned
- D) Not connected

13. Do you think digital transformation positively affects financial incursions?
- A) Yes
 - B) No
 - C) Unsure
 - D) Neutral
14. How essential is personalized customer service in your banking experience?
- A) Extremely Important
 - B) Moderately Important
 - C) Slightly Important
 - D) Not Important
15. Have you ever encountered challenges associated with digital banking services like (Technical Glitches, Connections problem, server down)
- A) Yes, Frequently
 - B) Occasionally
 - C) Rarely
 - D) Never
16. Do you prefer to explore the new digital banking services offered by your bank?
- A) Yes
 - B) No
 - C) Not likely
 - D) I Prefer traditional banking methods

17. What effects does banking have on your general financial well-being?
- A) Positive Effects (Like Convenience, Accessibility)
 - B) Its Neutral
 - C) Negative Effects (Like security concerns and other factors)
 - D) No effects at all
18. Would you trust a completely automated bank with no physical branches, all digital services for all your financial needs?
- A) Yes
 - B) Maybe with reservations
 - C) No, Prefer physical branches
 - D) Not sure
19. Which technology do you think will improve cybersecurity in the banking industry?
- A) Block Chain
 - B) Artificial Intelligence
 - C) Biometrics
 - D) None, I am
20. Do you think open banking, like sharing financial details with third party applications benefits customers or poses threats?
- A) Benefits customers with more personalized services
 - B) Poses threats with privacy concerns
 - C) Neutral
 - D) Not familiar with open banking

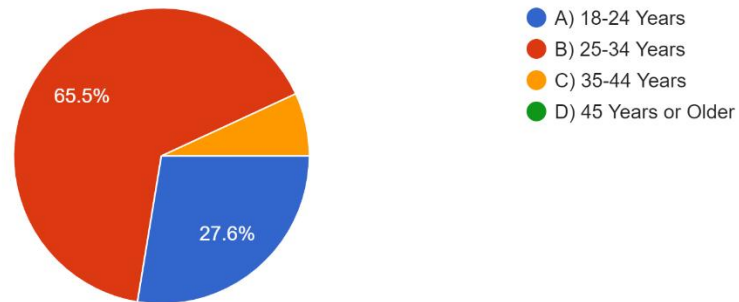
21. What do you think regarding the utilization of chatbots for resolving client queries compared to human customer services representatives.
- A) Prefer Chatbots
 - B) Prefer Direct Humans
 - C) Neutral
 - D) Don't have a preference
22. How conscious are you for environmental effects of digital banking (Like decreased paper usage)?
- A) Very Aware
 - B) Somewhat Aware
 - C) Not very Aware
 - D) Not aware at all
23. Which security feature do you find most promising when utilizing online banking?
- A) Quantum Computing
 - B) Augmented Reality (AR)
 - C) 5G Connectivity
 - D) Robotics
24. Which security feature do you find most promising when utilizing online banking?
- A) Strong Password
 - B) Two- Factor Authentication
 - C) Biometric Authentication
 - D) None

25.How likely are you to recommend your bank's services to other people depending on your entire experience?

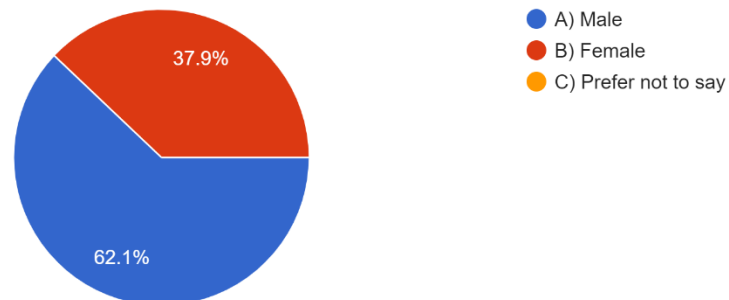
- A) Positively Likely
- B) Somewhat Likely
- C) Neutral
- D) Unlikely

7.0 Appendix

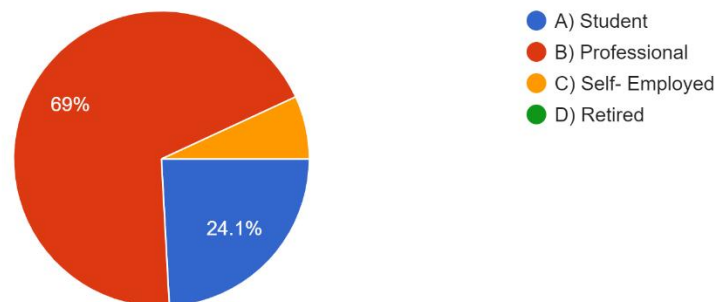
1. Age Group: 29 responses



2. Gender 29 responses

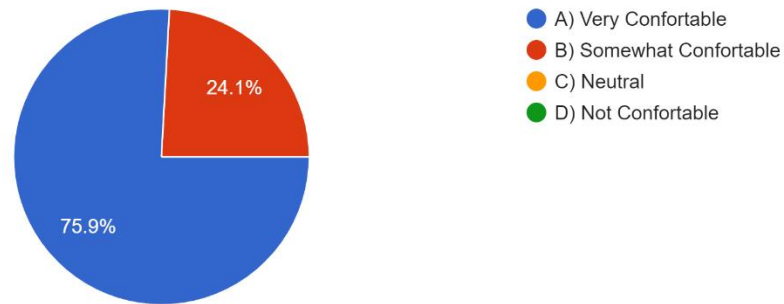


3. Occupations 29 responses



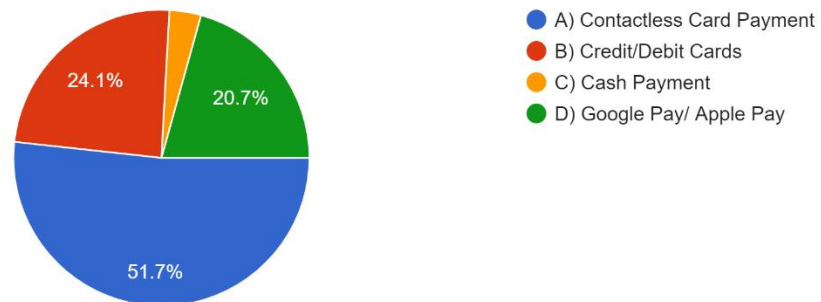
4. How satisfied are you utilizing your mobile banking apps

29 responses



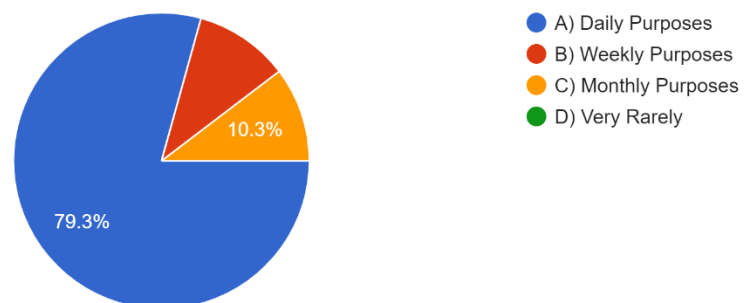
5. Which digital payment mode do you prefer?

29 responses



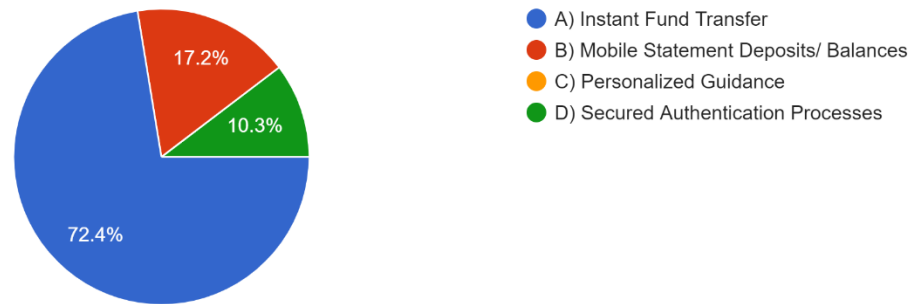
6. How often do you utilize digital channels for your banking channels?

29 responses



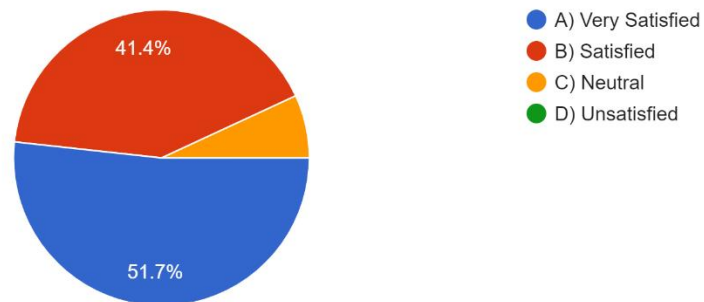
7. Which digital banking attributes do you find most helpful?

29 responses



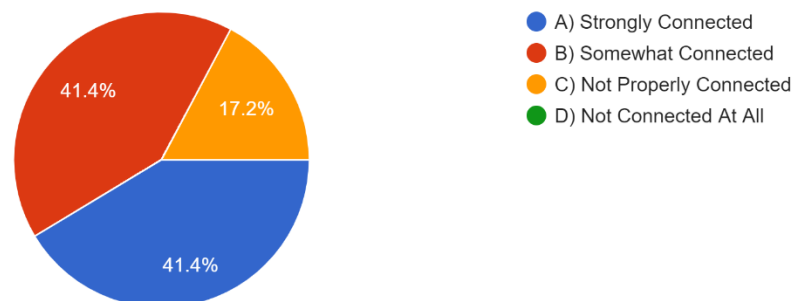
8. How satisfied are you with the swiftness and efficiency of digital banking services?

29 responses



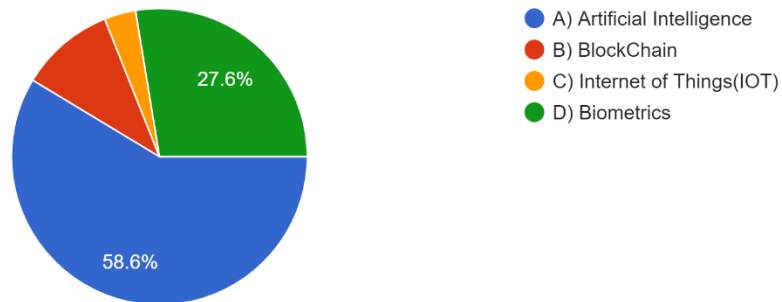
9. Do you feel emotionally connected to your direct bank through digital exchanges?

29 responses



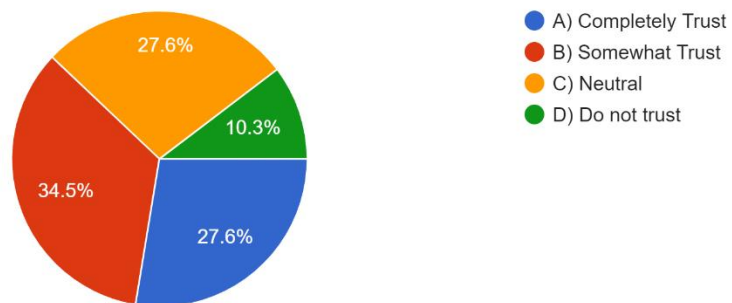
10. Which modern technology do you think has the most prospects to revolutionize banking services?

29 responses



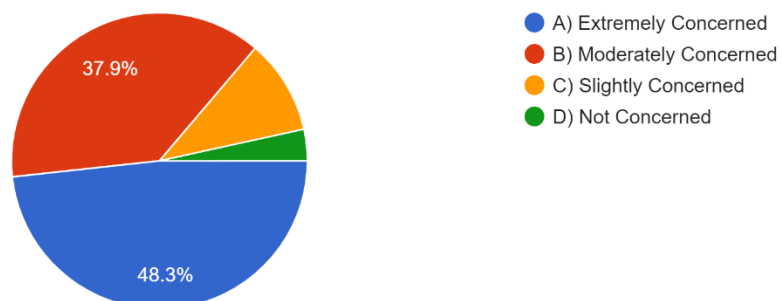
11. Do you trust digital advisors for investment advice?

29 responses



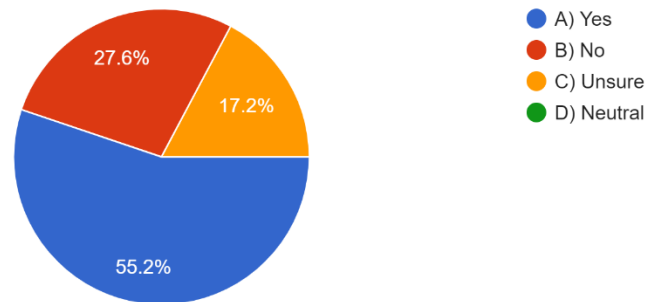
12. How concerned are you regarding data privacy when operating online banking services?

29 responses



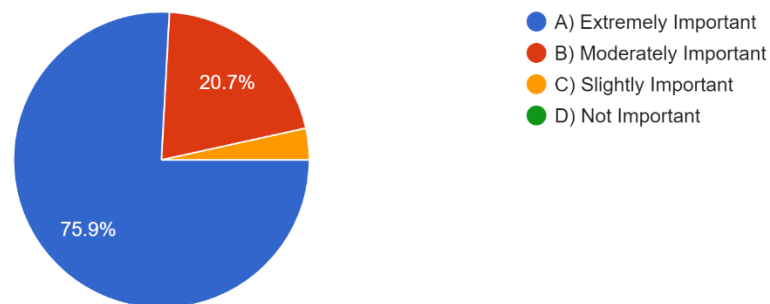
13. Do you think that digital transformation positively effects financial inclusions?

29 responses



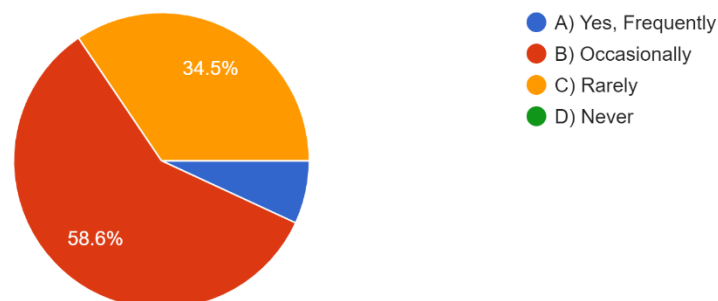
14. How essential is personalized customer service in your banking experience?

29 responses



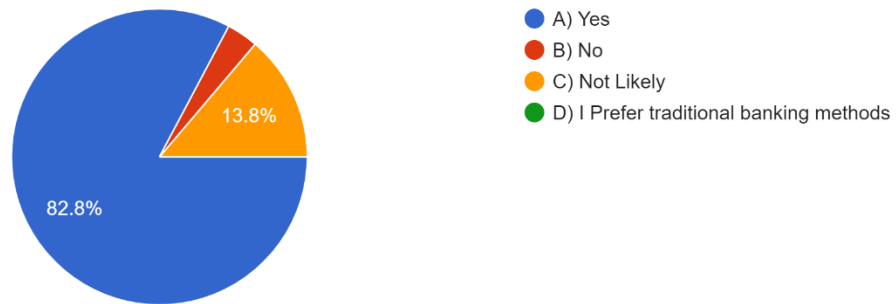
15. Have you ever encountered challenges associated with digital banking services like(technical glitches, connections problem, server down..)

29 responses



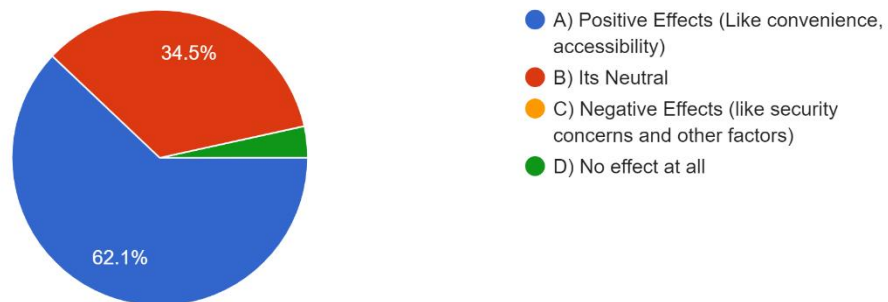
16. Do you prefer to explore new digital banking services offered by your bank?

29 responses



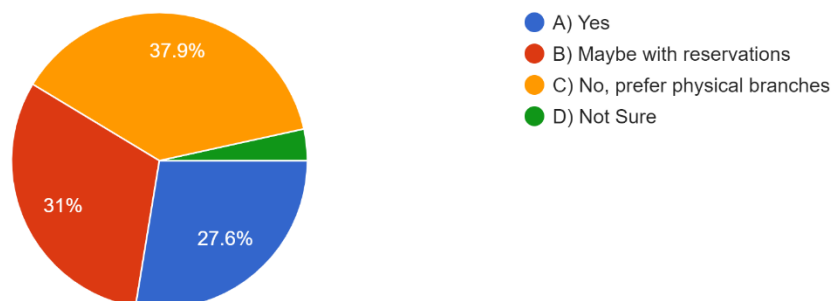
17. What effects does digital banking have on your general financial well-being?

29 responses



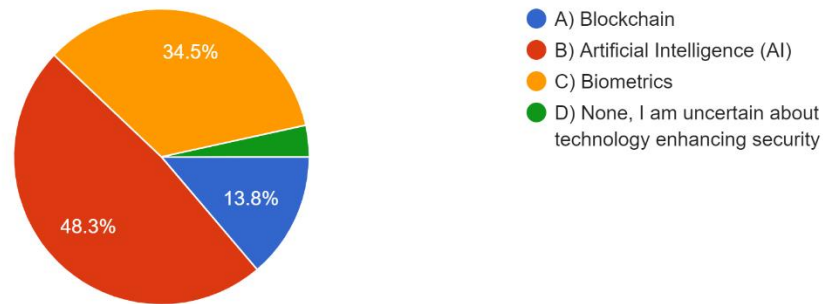
18. Would you trust a completely automated bank with no physical branches, all digital services for all your financial needs?

29 responses



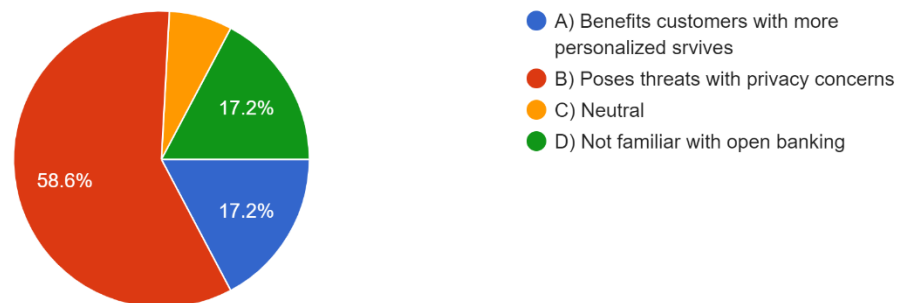
19. Which technology do you think will improve cybersecurity in the banking industry?

29 responses



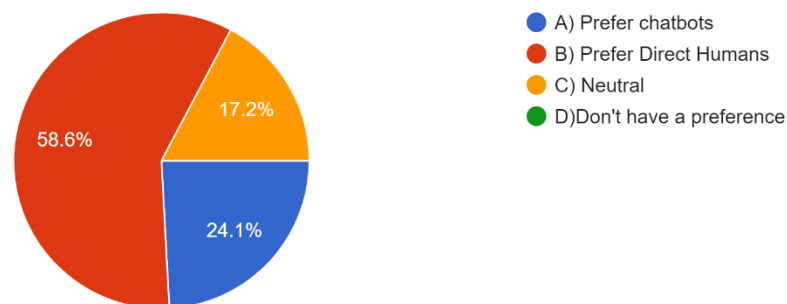
20. Do you think open banking like sharing financial details with third-party applications benefits customers or poses threats?

29 responses



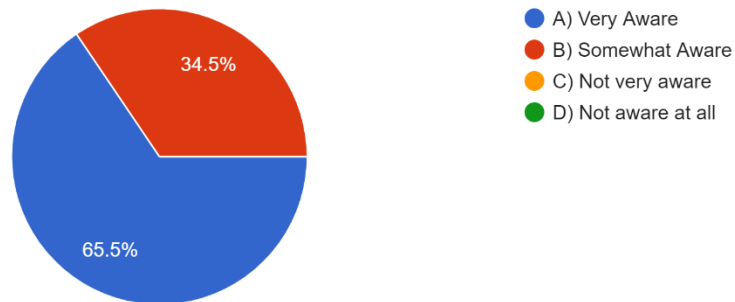
21. What do you think regarding the utilization of chatbots for resolving client queries compared to human customer services representatives.

29 responses



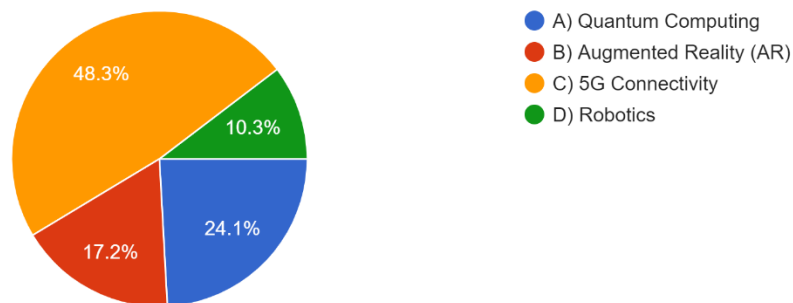
22. How conscious are you of the environmental effects of digital banking (Like decreased paper usage)/?

29 responses



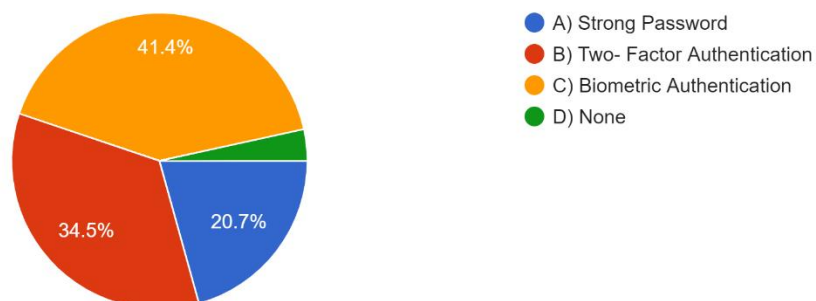
23. Which security feature do you find most promising when utilizing online banking?

29 responses



24. Which security feature do you find most promising when utilizing online banking?

29 responses



25. How likely are you to recommend your bank's services to other people depending on your entire experience?

29 responses

