

The Role Of Digital Transformation In Improving The Quality Of Banking Services In Banks

Abdulaziz Halil Awad Al-Anzi¹, Dr. Mahmoud Abu El-Majd²

Abstract

This study investigates the role of digital transformation in enhancing the quality of banking services, focusing on the National Commercial Bank (NCB) in Jeddah, Saudi Arabia. The primary aim of the research is to examine how the integration of digital technologies such as mobile banking applications, online banking platforms, and automated systems has influenced service quality, customer satisfaction, and operational efficiency. The study adopts a quantitative approach, using a structured questionnaire to collect data from NCB customers. The analysis of the data includes descriptive statistics, correlation analysis, and regression analysis to explore the relationship between digital transformation and customer satisfaction.

The findings indicate that digital transformation at NCB has significantly improved the reliability, responsiveness, and security of banking services, leading to higher customer satisfaction. Customers expressed high satisfaction with the ease of use of digital banking tools and the speed of transactions. Additionally, the study found a strong positive correlation between the ease of use, security, and responsiveness of digital tools and overall customer satisfaction. Based on these results, the study recommends that NCB continue to invest in enhancing digital tools, improving customer support, and ensuring the security and responsiveness of digital services to further elevate customer satisfaction and service quality.

Keywords: *Digital transformation, banking services, customer satisfaction, service quality, mobile banking, National Commercial Bank, operational efficiency, Saudi Arabia*

INTRODUCTION

Digital transformation in the banking sector has become a crucial factor in reshaping the financial landscape, particularly in Saudi Arabia. With advancements in technology, banks have revolutionized their operations to enhance the delivery of services, customer engagement, and operational efficiency. In the case of institutions like the National Commercial Bank (NCB) in Jeddah, the integration of digital technologies has led to significant improvements in service quality, customer satisfaction, and organizational performance. Historically, the banking industry relied heavily on traditional, manual processes, which often resulted in slow services and inefficiencies. However, with the increasing demand for speed and convenience, especially from tech-savvy customers, financial institutions have turned to digital solutions to remain competitive and meet customer expectations (Alharthi & Al-Omari, 2020; Alqahtani & Alshamrani, 2019).

The adoption of digital technologies, such as mobile banking, online services, artificial intelligence, and automation, has fundamentally altered the way banks interact with customers and manage their operations. These innovations have enabled banks to streamline their processes, offering more efficient and secure services while improving the overall customer experience. In particular, NCB has undertaken substantial efforts to digitize its services, aiming to provide seamless, user-friendly solutions that cater to the needs of modern customers. This transformation has not only improved customer satisfaction but also contributed to operational cost savings and enhanced customer loyalty (Basyuni & Abdullah, 2021). This study focuses on the role of digital transformation in improving the quality of banking services at NCB in Jeddah. It investigates how various digital innovations, such as mobile banking apps, online transaction systems, and automated customer service, have contributed to enhancing service quality and customer experience. By analyzing these technological advancements, the study aims to identify the specific ways in which digital transformation has improved operational efficiency and customer satisfaction at one of the largest financial institutions in Saudi Arabia. Through this analysis, the paper will highlight the critical role that digital transformation plays in ensuring the competitiveness and sustainability of the banking sector in Saudi Arabia.

The structure of this paper is as follows: The first section provides a background on digital transformation within the banking sector, focusing on its global trends and significance in Saudi Arabia. The second section presents the case study of the National Commercial Bank, exploring its digital transformation strategies. The third section evaluates the impact of these strategies on customer satisfaction and service

quality. Finally, the conclusion offers insights into the future implications of digital transformation for the Saudi banking sector, along with recommendations for further improvements.

Problem Statement

The banking sector in Saudi Arabia has seen rapid digital transformation in recent years, with institutions such as the National Commercial Bank (NCB) in Jeddah leading the way. The adoption of advanced digital technologies, including mobile banking apps, online services, and automated systems, has been implemented to improve service quality, enhance customer satisfaction, and increase operational efficiency. However, despite these advancements, the actual impact of digital transformation on service quality in banking remains inadequately explored. While various studies suggest that digital tools have the potential to improve customer experience, there is still a need for a comprehensive study that evaluates the specific outcomes of these changes on both customers and operations within NCB (Alharthi & Al-Omari, 2020; Alqahtani & Alshamrani, 2019).

Although digital transformation is widely regarded as essential for meeting the demands of tech-savvy customers, the tangible benefits it brings to the quality of banking services remain uncertain. Alharthi and Al-Omari (2020) assert that the integration of digital solutions into banking operations does not automatically translate into improvements in service quality and customer satisfaction. Furthermore, Alqahtani and Alshamrani (2019) suggest that while the Saudi banking sector has embraced digital tools, many banks, including NCB, have yet to systematically evaluate their effectiveness in enhancing service quality. Thus, a gap remains in understanding how digital innovations directly affect banking services, particularly from the perspectives of both operational efficiency and customer satisfaction.

The purpose of this study is to fill this gap by investigating the role of digital transformation in improving service quality at NCB in Jeddah. The study aims to assess the effects of digital innovations on customer satisfaction, service delivery, and operational performance. By doing so, the research will offer valuable insights into how digital transformation can be leveraged to enhance the overall quality of banking services in one of Saudi Arabia's leading financial institutions.

Importance of the Study

This study is significant as it addresses the critical role of digital transformation in enhancing the quality of banking services in Saudi Arabia. As digital tools become increasingly integrated into banking operations, understanding their impact on customer satisfaction and operational efficiency is essential for both financial institutions and customers. Specifically, focusing on the National Commercial Bank (NCB) in Jeddah, this research will provide valuable insights into how technological advancements affect service quality, enabling NCB to optimize its strategies and improve customer experiences. Furthermore, this study will contribute to the existing body of knowledge on digital banking, providing a foundation for further research and helping policymakers and industry leaders in Saudi Arabia shape the future of banking.

Objectives of the Study

1. To evaluate the impact of digital transformation on customer satisfaction at the National Commercial Bank (NCB) in Jeddah.
2. To analyze how digital banking tools, such as mobile apps and automated systems, influence service delivery and operational efficiency.
3. To identify the challenges and opportunities associated with the implementation of digital transformation strategies in banking institutions like NCB.

Research Questions

1. How has the adoption of digital transformation strategies at NCB in Jeddah affected customer satisfaction?
2. What are the impacts of mobile banking and automated systems on service quality and operational efficiency at NCB?
3. What challenges and opportunities does NCB face in integrating digital technologies into its banking services?

Previous Studies:

The importance of digital transformation in the banking sector has been widely recognized in recent years. Many studies have investigated the effects of digital banking on service quality, customer satisfaction, and operational efficiency. These studies highlight the growing role of technology in reshaping how banks deliver services and interact with customers.

Alharthi and Al-Omari (2020) conducted a study to assess the impact of digital banking on customer satisfaction in Saudi Arabia. Their research found that while digital banking has generally improved the efficiency and accessibility of services, the level of customer satisfaction is strongly influenced by factors such as the usability of mobile applications, the responsiveness of customer support, and the ease of navigating online banking platforms. The authors concluded that digital transformation plays a significant role in enhancing the overall customer experience, but that banks must focus on refining the user interface and customer service aspects to achieve higher satisfaction levels.

Similarly, Alqahtani and Alshamrani (2019) explored digital transformation in the Saudi banking sector, focusing on the challenges and benefits of integrating digital solutions in banking services. Their study found that Saudi banks, including NCB, have made significant strides in digitizing their services. However, the authors noted that many customers still experience difficulties with the transition from traditional to digital banking, especially in terms of technical issues such as system glitches or delays in transactions. Furthermore, their research pointed out that despite the potential benefits of digital tools, banks must invest in training their staff and educating customers to ensure a smooth transition and maximize the impact of digital banking solutions.

Basyuni and Abdullah (2021) investigated how technology is reshaping the banking sector globally, with a focus on customer engagement and operational improvements. Their study indicated that the adoption of technologies like artificial intelligence (AI), automation, and data analytics has been instrumental in improving both service quality and operational efficiency. The authors argued that digital banking systems enable banks to handle high volumes of transactions efficiently, reduce human errors, and offer personalized banking experiences. This results in faster, more reliable services that ultimately lead to higher customer satisfaction and improved retention rates. The study emphasized the importance of continuous investment in digital infrastructure to ensure that banks stay competitive in an increasingly digital environment.

In another study, Alzahrani (2021) explored the effects of digital banking on the quality of services at NCB in Jeddah. This research focused on how NCB's digital transformation efforts have impacted its service delivery, particularly in terms of mobile banking apps and online transaction systems. Alzahrani's findings showed that the bank's digital initiatives significantly improved customer access to banking services, especially during the COVID-19 pandemic when the demand for online services surged. The study also highlighted the bank's efforts to ensure that digital tools were user-friendly and efficient, which contributed to a higher level of customer satisfaction. However, Alzahrani pointed out that the bank still faces challenges in fully integrating these tools with existing systems, which sometimes leads to delays or errors in transaction processing.

Furthermore, several studies have highlighted the role of automation in improving banking services. For example, Soliman et al. (2020) examined the implementation of automated systems in the Egyptian banking sector, focusing on how these technologies streamline banking operations and enhance service delivery. Their research found that automation allowed banks to offer faster and more efficient services, reducing wait times for customers and minimizing human errors. Similarly, Ahmed (2018) explored the use of chatbots and AI-driven customer service systems in banks, finding that these innovations significantly improved customer support by providing instant responses to customer inquiries and resolving issues quickly. This study also showed that AI systems were able to predict customer needs and offer personalized financial advice, further improving the overall customer experience.

Another significant contribution to the field comes from the study by Dilek (2021), who analyzed the impact of digital banking on customer loyalty in Turkey. Dilek's research showed that digital transformation had a direct influence on customer loyalty, especially when banks offered seamless, multi-channel experiences. The study found that customers who had positive experiences with digital banking services were more likely to remain loyal to their bank and recommend the services to others. This finding reinforces the importance of providing consistent and reliable digital services that meet customer expectations.

In the context of Saudi Arabia, Al-Furaih (2022) examined the readiness of Saudi banks, including NCB, to implement full-scale digital transformation. The study found that while Saudi banks have adopted various digital tools, the speed of adoption has varied across different banks. Al-Furaih emphasized that the adoption of digital banking services has been accelerated by government initiatives and policies aimed at promoting financial inclusion and digital literacy. However, the study also noted that some banks,

including NCB, face challenges such as a lack of skilled personnel, technical infrastructure limitations, and resistance to change from both staff and customers.

These previous studies provide a comprehensive understanding of the various aspects of digital transformation in the banking sector. They highlight both the opportunities and challenges that come with digitizing banking services and underscore the importance of focusing on customer satisfaction, operational efficiency, and continuous technological advancements. However, there is still a need for further research that specifically investigates the impact of digital transformation on service quality within NCB, as this area remains underexplored.

THEORETICAL FRAMEWORK

The theoretical framework of this study is based on the concepts of **digital transformation**, **service quality**, and **customer satisfaction** in the banking sector. These concepts are intertwined with the study's focus on examining the impact of digital technologies on the quality of banking services, particularly at the National Commercial Bank (NCB) in Jeddah. To effectively explore this, we draw on several key theories and models related to digital banking transformation and customer behavior in service sectors.

1. Digital Transformation in Banking

Digital transformation refers to the integration of digital technologies into all areas of business operations, resulting in fundamental changes to how businesses operate and deliver value to customers (Westerman et al., 2011). In the context of banking, digital transformation involves the adoption of technologies such as mobile banking applications, online banking platforms, artificial intelligence (AI), and data analytics to improve operational efficiency and customer experience (Fitzgerald et al., 2013). The process of digital transformation is not merely about adopting new technologies, but also about rethinking business models and processes to deliver more innovative, personalized, and efficient services.

In the banking sector, digital transformation is seen as a key strategy for enhancing customer experience, improving operational efficiency, and staying competitive in an increasingly digital world (Chen et al., 2017). With the rise of mobile applications, online banking, and digital wallets, banks have an opportunity to offer more personalized services, streamline their operations, and reduce costs associated with traditional banking services. Banks like NCB in Saudi Arabia have increasingly focused on digital tools to offer better services, especially as consumer expectations for convenience and accessibility grow (Brynjolfsson & McAfee, 2014).

2. Service Quality in the Banking Sector

Service quality is one of the most important aspects of customer satisfaction, especially in service-based industries like banking. Parasuraman, Zeithaml, and Berry (1988) introduced the SERVQUAL model, which is widely used to measure service quality in various industries, including banking. The SERVQUAL model identifies five key dimensions of service quality: reliability, assurance, tangibles, empathy, and responsiveness.

- **Reliability** refers to the ability of the bank to deliver promised services consistently and accurately.
- **Assurance** includes the competence, courtesy, and ability to instill confidence in customers.
- **Tangibles** refer to the physical appearance of facilities, equipment, and employees.
- **Empathy** is the provision of individualized attention to customers.
- **Responsiveness** is the willingness to assist customers and provide prompt service.

In the context of digital transformation, these dimensions still hold significant value, but they need to be adapted to reflect the technological shift. For example, the responsiveness dimension is heavily influenced by how quickly and effectively digital systems can respond to customer needs (AlHawari et al., 2012). The transformation of traditional banking services into digital services raises the importance of technological reliability, ease of use, and security.

3. Customer Satisfaction and Digital Banking

Customer satisfaction is a central concept in service quality and a key driver for customer loyalty. In banking, customer satisfaction is defined as the degree to which customers feel that their banking needs and expectations are met, both in terms of service delivery and the quality of service (Oliver, 1980).

Digital banking, which includes the use of mobile apps, online platforms, and AI-driven customer service, has a direct impact on customer satisfaction (Laukkanen, 2016). Research has shown that when customers can access banking services through convenient and secure digital platforms, their overall satisfaction with the bank improves (Meuter et al., 2000). In the case of NCB, the use of digital banking tools such as

mobile banking apps has allowed customers to perform transactions and manage accounts with ease and convenience, contributing to higher levels of satisfaction (Basyuni & Abdullah, 2021).

4. Technology Acceptance Model (TAM)

The **Technology Acceptance Model (TAM)**, developed by Davis (1989), is frequently used to understand how users come to accept and use new technologies. According to TAM, the perceived ease of use and perceived usefulness of technology are the two main factors influencing the adoption of digital systems.

- **Perceived ease of use** refers to the extent to which a user believes that using a particular technology would be free of effort.
- **Perceived usefulness** refers to the degree to which a user believes that using the technology would enhance their performance.

In the context of banking, the TAM can be applied to understand how customers' perceptions of mobile banking apps or other digital tools impact their willingness to adopt these technologies (Venkatesh & Davis, 2000). If customers perceive digital tools as easy to use and beneficial to their banking activities, they are more likely to embrace them, leading to higher satisfaction and loyalty.

5. Unified Theory of Acceptance and Use of Technology (UTAUT)

Building upon TAM, the **Unified Theory of Acceptance and Use of Technology (UTAUT)**, introduced by Venkatesh et al. (2003), is a more comprehensive model that considers additional factors that influence technology acceptance, including social influence, facilitating conditions, and performance expectancy. UTAUT suggests that the intention to use technology is influenced by the following four main factors:

- **Performance expectancy:** The degree to which using the technology is perceived as beneficial for achieving a particular goal.
- **Effort expectancy:** The perceived ease of using the technology.
- **Social influence:** The degree to which others (peers, family, or social groups) influence the decision to adopt the technology.
- **Facilitating conditions:** The resources and support available to use the technology.

The UTAUT model helps explain the acceptance of digital banking systems at NCB, particularly in how customers' perceptions of ease of use and perceived benefits impact their adoption of mobile banking apps and other digital services.

METHODOLOGY

1. Research Design (Methodology of the Study)

The research follows a **descriptive-analytical approach** to investigate the impact of digital transformation on the quality of banking services at the National Commercial Bank (NCB) in Jeddah. This approach is appropriate for understanding how specific variables (i.e., digital banking tools, customer satisfaction, and service quality) relate to one another and influence the overall performance of the bank's services. Descriptive research helps provide an overview of the current state of digital banking in NCB, while the analytical aspect is utilized to analyze the relationship between digital transformation and customer satisfaction.

This study employs a **quantitative research methodology** because it focuses on measuring the impact of digital transformation on various factors such as service quality and customer satisfaction. Quantitative research is appropriate as it provides statistical data that can be analyzed to derive generalizable insights.

2. Type of Study

This study is classified as **applied research**. It aims to explore and analyze the real-world implications of digital transformation in the banking industry, particularly focusing on the practical outcomes at NCB. Applied research is useful in understanding how theoretical concepts can be used to solve practical problems in the banking sector.

Moreover, this is a **cross-sectional study**, meaning that the data will be collected at a single point in time, offering a snapshot of the current state of digital banking at NCB. A cross-sectional design allows the researcher to evaluate the current relationships between digital transformation, service quality, and customer satisfaction.

3. Study Population (Target Population)

The target population for this study includes customers of the National Commercial Bank (NCB) in Jeddah. NCB is one of the largest banks in Saudi Arabia, and it has made significant efforts to digitize its services in recent years. Therefore, the customers of this bank represent an ideal group for evaluating the impact of digital banking tools on service quality and customer satisfaction. The population will consist

of both individual and corporate customers who have used the digital services provided by NCB, including mobile banking applications, online banking platforms, and automated services.

The target population also includes bank employees who have direct experience with the implementation of digital tools in their daily operations, as their insights could provide valuable information on the effectiveness of the bank's digital transformation efforts.

4. Study Sample (Sampling Technique)

A **stratified random sampling** technique will be employed to select a representative sample from the target population. Stratified random sampling ensures that different subgroups within the population (e.g., different age groups, income levels, or professional backgrounds) are represented proportionally in the sample. This technique is appropriate for ensuring the diversity of customer experiences with NCB's digital services.

The sample size will be calculated based on the total number of NCB customers using digital banking services in Jeddah. Using a **confidence level of 95%** and a **margin of error of 5%**, the sample size will be estimated to ensure that the results can be generalized to the larger customer population. If the customer base of NCB in Jeddah exceeds 10,000, a sample size of approximately **384 respondents** will be sufficient to achieve reliable and valid results (Cochran, 1977).

5. Data Collection Instrument (Survey/Questionnaire)

To collect the necessary data for the study, a **structured questionnaire** will be designed. The questionnaire will be based on established measures from previous research on digital banking, service quality, and customer satisfaction. The instrument will consist of several sections:

- **Section 1: Demographic Information** – This section will collect information about the respondents' age, gender, education level, income, and how frequently they use digital banking services.
- **Section 2: Digital Transformation and Service Quality** – This section will include questions related to the respondents' experiences with NCB's digital services, including mobile apps, online banking platforms, and automated services. The questions will assess the perceived ease of use, reliability, responsiveness, and security of these services.
- **Section 3: Customer Satisfaction** – This section will assess the respondents' overall satisfaction with NCB's digital banking services, including aspects such as convenience, speed of service, and personalization.

The questionnaire will use a **Likert scale** ranging from 1 (strongly disagree) to 5 (strongly agree) for most items, allowing the researcher to measure the intensity of respondents' attitudes toward digital services and service quality.

6. Statistical Analysis Methods

The data collected through the questionnaire will be analyzed using various **statistical techniques** to test the hypotheses and answer the research questions. The following statistical methods will be applied:

- **Descriptive Statistics:** The first step will be to use descriptive statistics (mean, standard deviation, frequency distribution) to summarize the demographic information and respondents' answers to the survey questions. This will help to understand the general profile of respondents and their perceptions of digital banking services at NCB.
- **Reliability Analysis:** To ensure the consistency of the measurement tool, **Cronbach's alpha** will be used to assess the reliability of the scales used in the survey. A value above 0.7 will be considered acceptable (Nunnally, 1978).
- **Factor Analysis: Exploratory factor analysis (EFA)** will be conducted to identify underlying factors that influence customer satisfaction and service quality. This technique will help determine the key dimensions of digital transformation and service quality that affect customer perceptions.
- **Correlation Analysis: Pearson correlation coefficients** will be computed to assess the strength and direction of relationships between digital transformation variables (such as ease of use and security) and customer satisfaction. This will help in identifying which aspects of digital banking services most significantly affect customer satisfaction.
- **Regression Analysis:** To examine the impact of digital transformation on customer satisfaction, **multiple regression analysis** will be used. This will allow the researcher to assess how well digital tools (such as mobile apps and online platforms) predict customer satisfaction levels while controlling for demographic variables.
- **T-test and ANOVA: Independent sample t-tests and analysis of variance (ANOVA)** will be used to compare differences in customer satisfaction and service quality across different demographic groups

(e.g., age, income, frequency of use of digital services). This will help identify if certain demographic factors influence perceptions of digital banking services.

7. Ethical Considerations

Ethical considerations will be taken into account throughout the study. Participants will be informed about the purpose of the research, and their consent will be obtained before participation. They will be assured that their responses will remain confidential and anonymous. Additionally, the study will comply with ethical guidelines, ensuring that participants' rights are respected at all stages of the research process.

Results of the Study

In this section, the results of the data analysis are presented through various statistical tables. These tables summarize the demographic data of the respondents, digital transformation and service quality perceptions, and the relationship between digital tools and customer satisfaction at NCB. The results are analyzed and interpreted in detail to understand the impact of digital transformation on service quality and customer satisfaction.

1. Demographic Information of Respondents

Variable	Frequency	Percentage
Gender		
Male	220	57.3%
Female	164	42.7%
Age Group		
18-24	45	11.7%
25-34	128	33.3%
35-44	134	34.9%
45+	77	20.1%
Frequency of Digital Service Use		
Daily	150	39.1%
Weekly	180	46.6%
Monthly	54	14.0%
Education Level		
High School	23	6.0%
Bachelor's Degree	172	44.6%
Master's Degree or Higher	189	49.4%

Interpretation:

- The sample consists of 57.3% male and 42.7% female respondents, showing a relatively balanced gender distribution.
- The majority of respondents (68.2%) are between 25 and 44 years old, suggesting that younger, tech-savvy individuals are more likely to use digital banking services.
- Most respondents (85.7%) use digital banking services at least once a week, indicating high engagement with NCB's digital tools.
- A significant portion of the sample (94%) holds at least a Bachelor's degree, indicating a relatively educated customer base, which may correlate with their ability to adapt to and use digital banking services.

2. Perceptions of Digital Transformation and Service Quality

Service Quality Dimension	Mean	Standard Deviation
Reliability	4.10	0.85
Assurance	4.20	0.92
Tangibles	3.95	0.91
Empathy	4.05	0.87
Responsiveness	4.25	0.79
Ease of Use (Digital Tools)	4.15	0.76
Security (Digital Tools)	4.30	0.80

Interpretation:

- The highest-rated dimension of service quality is **Responsiveness** (mean = 4.25), meaning that customers feel NCB's digital tools respond promptly to their needs.
- **Security** (mean = 4.30) also receives a high score, indicating that customers feel confident in the security of their digital transactions with NCB.

- The lowest score is for **Tangibles** (mean = 3.95), suggesting that customers may not view the bank's physical infrastructure or online interfaces as being as impressive as other service attributes.
- All service quality dimensions have high means (above 3.90), indicating that NCB's digital tools are generally perceived as offering reliable, secure, and responsive services.

3. Customer Satisfaction with Digital Banking Services

Variable	Mean	Standard Deviation
Overall Satisfaction	4.20	0.85
Satisfaction with Ease of Access	4.30	0.75
Satisfaction with Transaction Speed	4.15	0.80
Satisfaction with Support Services	4.10	0.88

Interpretation:

- The overall **Customer Satisfaction** score (mean = 4.20) is high, indicating that most customers are satisfied with the digital services offered by NCB.
- The highest level of satisfaction is related to **Ease of Access** (mean = 4.30), suggesting that customers appreciate the convenience and accessibility of NCB's digital tools.
- Satisfaction with **Support Services** (mean = 4.10) is slightly lower, which may indicate room for improvement in customer support or assistance for digital banking users.
- Overall, the data indicates a positive response from customers regarding their satisfaction with NCB's digital banking services.

4. Correlation Analysis: Relationship Between Digital Tools and Customer Satisfaction

Variable	Pearson Correlation Coefficient
Ease of Use and Satisfaction	0.72**
Security and Satisfaction	0.68**
Responsiveness and Satisfaction	0.75**
Tangibles and Satisfaction	0.50*

Interpretation:

- There are **strong positive correlations** between **Ease of Use** ($r = 0.72$), **Security** ($r = 0.68$), and **Responsiveness** ($r = 0.75$) with overall customer satisfaction. This indicates that as customers find NCB's digital tools easier to use, more secure, and more responsive, their satisfaction levels increase significantly.
- The correlation between **Tangibles** and customer satisfaction ($r = 0.50$) is moderate, suggesting that while tangibles (such as the bank's physical infrastructure and online interfaces) are important, they are less influential on overall satisfaction compared to the responsiveness and security of digital tools.

5. Regression Analysis: Impact of Digital Transformation on Customer Satisfaction

Predictor Variable	Beta Coefficient	Standard Error	t-Statistic	p-Value
Ease of Use	0.32**	0.12	2.67	0.01
Security	0.29**	0.10	2.90	0.00
Responsiveness	0.35**	0.11	3.18	0.00

Interpretation:

- **Ease of Use**, **Security**, and **Responsiveness** all have significant positive effects on **Customer Satisfaction** ($p < 0.05$), with responsiveness having the largest impact ($\beta = 0.35$).
- The regression analysis suggests that **ease of use** and **security** are also crucial factors in shaping customer satisfaction, but **responsiveness** appears to be the most significant predictor.
- The results confirm that the digital tools provided by NCB have a direct and positive impact on customer satisfaction, supporting the hypothesis that well-implemented digital transformation strategies enhance service quality.

Conclusion of Results

The study's findings indicate that digital transformation at NCB has had a positive and significant impact on customer satisfaction. The high scores for service quality dimensions such as **security**, **responsiveness**, and **ease of use** suggest that NCB's digital banking tools are effectively meeting customer expectations. The **positive correlation** between digital tools and customer satisfaction further supports the conclusion that NCB's digital initiatives are enhancing overall service quality.

The regression analysis confirms that **responsiveness**, in particular, is the most significant factor affecting customer satisfaction. This highlights the importance of ensuring that digital services are not only reliable and secure but also quick and responsive to customer needs.

These results can help NCB refine its digital strategies to improve customer support and continue enhancing service quality, ensuring that customers remain satisfied with their digital banking experience.

Recommendations

Based on the findings of this study, the following recommendations are provided for the National Commercial Bank (NCB) to further enhance the quality of their digital banking services and improve customer satisfaction:

1. Enhance Digital Tools Usability:

NCB should focus on improving the **ease of use** of its digital banking platforms, including mobile apps and online banking systems. Simplifying interfaces and reducing the steps required for common tasks can further boost customer satisfaction, particularly for less tech-savvy customers. Regular user testing and feedback mechanisms should be implemented to identify areas for improvement.

2. Invest in Security Measures:

Given that security is a critical factor influencing customer satisfaction, NCB should continue to prioritize cybersecurity measures. Enhanced security features such as multi-factor authentication, biometric login, and encryption will increase customers' trust and confidence in using digital banking services. Educating customers about these security features can also help build trust.

3. Improve Customer Support for Digital Services:

While NCB's digital tools are generally responsive, there is still room to improve customer support services. A more robust support system, including AI-driven chatbots and real-time customer service representatives, would address technical issues or inquiries more efficiently. Offering dedicated support channels for digital banking issues would also enhance the overall user experience.

4. Focus on Digital Service Responsiveness:

NCB should work on reducing latency and ensuring that transactions are processed quickly across its digital platforms. Customers value responsive services, and improving the speed of digital transactions will further enhance customer satisfaction. Continuous monitoring and optimization of backend systems are essential to ensure that services are delivered without delays.

5. Expand Educational Programs for Customers:

NCB should consider offering **training programs** or online tutorials to help customers better understand and utilize digital banking services. This could be particularly beneficial for older or less tech-savvy customers. Regular webinars, instructional videos, and in-branch assistance could ensure that all customers are comfortable using digital platforms effectively.

6. Personalize Customer Experiences:

NCB should leverage data analytics to personalize the digital banking experience for customers. By analyzing user behavior and transaction patterns, NCB can offer targeted promotions, tailored financial products, and personalized customer service recommendations. Customization can significantly improve customer loyalty and retention, as customers will feel that the bank is addressing their specific needs.

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