THE IMPACT OF DIGITALIZATION ON CUSTOMER SATISFACTION IN NEPALESE COMMERCIAL BANKS

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ARTICLE INFO	Abstract
Article History: Accepted Fixed Approved	This study aims to analyze the impact of digitalization on customer satisfaction in Nepalese Commercial Banks. The study assesses how each of these variables affects customers' perceptions and satisfaction levels with banking digitalization services. The main objectives of this study are to evaluate the relationship between digital adoptions, mobile engagement, technical infrastructure, and user experience on customer satisfaction, and to analyze the impact of digitalization on customer satisfaction in the context of Nepalese Commercial Banks. The clients of 20 commercial banks are the total population of this study. The research adopts quantitative research as a descriptive and causal-comparative research design, convenience and purposive sampling were used for data collection for a Five-point Likert scale. The digital adaptation has the highest mean score, which means digital banking services have made it easier for customers to manage their accounts, and Customers are least satisfied due to mobile engagement. And the customers do not feel secure while using the mobile apps for transactions. As per the correlation, all the variables have a positive correlation with customer satisfaction. Among them, Technical Infrastructure has highly positively correlated and least correlated with Mobile Engagement As per the regression analysis all the variables have a positive impact of digitalization on customer satisfaction since they have a p-value (0.000) which is less than 0.05 level.
Keywords: *Customer Satisfaction, Digitalization, Infrastructure, Mobile Engagement, Technical, and User Experience*	
	Abstraks
Kata Kunci: *Kepuasan Pelanggan, Digitalisasi, Infrastruktur, Keterlibatan Seluler, Teknis, dan Pengalaman Pengguna.* **DOI:**	Penelitian ini bertujuan untuk menganalisis dampak digitalisasi terhadap kepuasan nasabah di Bank Umum Nepal. Studi ini menilai bagaimana masing-masing variabel tersebut mempengaruhi persepsi dan tingkat kepuasan nasabah terhadap layanan digitalisasi perbankan. Tujuan utama dari penelitian ini adalah untuk mengevaluasi hubungan antara adopsi digital, keterlibatan seluler, infrastruktur teknis, dan pengalaman pengguna terhadap kepuasan pelanggan, dan untuk menganalisis dampak digitalisasi terhadap kepuasan pelanggan dalam konteks Bank Umum Nepal. Nasabah dari 20 bank komersial adalah total populasi dari penelitian ini. Penelitian ini menggunakan penelitian kuantitatif dengan desain penelitian deskriptif dan kausal-komparatif, convenience dan purposive sampling digunakan untuk pengumpulan data dengan menggunakan skala Likert lima poin. Adaptasi digital memiliki nilai rata-rata

tertinggi, yang berarti layanan perbankan digital telah memudahkan nasabah dalam mengelola akun mereka, dan nasabah paling tidak puas karena keterlibatan mobile. Dan nasabah tidak merasa aman saat menggunakan aplikasi mobile untuk bertransaksi. Sesuai dengan korelasi, semua variabel memiliki korelasi positif dengan kepuasan pelanggan. Diantaranya, Infrastruktur Teknis memiliki korelasi yang sangat positif dan paling tidak berkorelasi dengan Keterlibatan Seluler. Sesuai dengan analisis regresi, semua variabel memiliki dampak positif dari digitalisasi terhadap kepuasan pelanggan karena memiliki nilai p-value (0,000) yang kurang dari tingkat 0,05.

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INTRODUCTION

"Digitalization" refers to the process of integrating digital technologies into every aspect of business operations and customer interactions. It has significantly altered sectors in recent years by altering the way customers interact with organizations and the way services are rendered. The term "digitalization" in banking describes innovations such as Internet banking, smartphone apps, digital payments, and automated customer care. To gain a competitive edge and enhance service quality, financial institutions need to understand how these technological advancements impact customer satisfaction. This study looks at the connection between digitalization and customer satisfaction, focusing on four main independent variables: mobile engagement, digital adoption, technological infrastructure, and user experience. Gaining awareness of these elements helps one comprehend how digital technologies and practices affect client delight. The key aim of digitization is to Understand the impact of these changes on customer satisfaction is vital for preserving competitive advantage and encouraging customer loyalty. The digitalization of banking operations is a topic that is frequently debated both inside the banking sector and in the general public. The study points out that banks were compelled to automate and digitize all of their services and offerings due to the way society evolved as a result of people using the Internet in nearly every aspect of their lives. In order to meet the demands of their contemporary clientele, banks modify their strategies accordingly (Druszcz, 2017).

Digitalization is the process of converting text, data, sound, images, music, and other sorts of information into "bits" that microprocessors may then use to translate into computer language

(Balkan, 2021). There are several approaches to defining banks as financial institutions, according to Prabhavathi K. & Dinesh G. P. (2018). Since digital banking services ensure high customer satisfaction, they are essential to the banking industry and a key component of competitive advantage (Almossawi, 2012). In the banking industry, prospects are gauged by how well a customer's position of service aligns with their needs. This is ascertained by contrasting the customer's comprehension of the service's real performance after it has happened with their previous views of the service (Sewaka et al., 2023). Significant developments in digital banking technology have raised the bar for service delivery in the financial institution industry, claim Kennedy and Jacky (2013). The obviousness of human existence and business has led to its tremendous relevance in controlling nearly everything, especially the banking system. Digitalization is one of the major advancements in the financial industry's progress (Yadgarov et al. 2019). As they assist their countries in transitioning to a digital economy, financial institutions and governments need to develop digital identification systems, cybersecurity strategies, and data protection protocols (Artemenko and Zenchenko 2021). The banking industry's digitization is positively influencing society's overall digitalization. It increases the possibility that more consumers may switch to digital platforms for their financial transactions (Carbó-Valverde et al. 2020). Georgescu and Kinnunen (2021) and Zhao et al. (2019), digital competencies significantly predict competitiveness and a financially strong position.

As the banking industry works to enhance its offerings and maintain its competitiveness in the global market, it is imperative to comprehend how digital banking affects customer satisfaction (Alayli,

2023). The banking industry in Nepal has always been seen as stable and forward-thinking. Users can manage their finances, deposit money, and withdraw cash from any location by using Internet banking services. The way that consumers engage with banks has been further revolutionized by mobile apps that provide financial transfers, account monitoring, and mobile payments (Poddar et al., 2019).

The quality of the user experience has become more important to the success of online banking. Users' perceptions of digital platforms are greatly influenced by their overall pleasure, usability, attractiveness, and responsiveness (Siddik et al., 2016). Good user experiences boost retention, loyalty, and advocacy among consumers. Thus, research on the role of the user experience as a moderator between digital banking and consumer happiness is essential. This study examines the relationship between customer happiness and user experience in Nepal's banking sector. This study aims to investigate how customer satisfaction is impacted by the adoption of digital banking technology through an examination of client interactions with digital banking platforms.

RESEARCH HYPOTESIS

Finding out each independent variable has a substantial effect on the dependent variable is the primary goal, the following hypotheses have been set up for this study.

H_1: Digital Adoption has a significant impact on consumer satisfaction in Nepalese Commercial Banks.

H_2: Mobile Engagement has a positive significant impact on consumer satisfaction in Nepalese Commercial Banks.

H_3: Technical Infrastructure has a positive significant impact on consumer satisfaction in Nepalese Commercial Banks.

H_4: User Experience has a positive significant impact on consumer satisfaction in Nepalese Commercial Banks.

LITERATURE REVIEW

Customer satisfaction is a crucial factor in determining a company's ability to retain and grow its customer base. It gauges how effectively its goods and services meet or surpass the expectations of its clients, "Expectancy Disconfirmation Theory" (Oliver, 1980). Satisfaction is determined by the difference between expected and perceived performance "SERVQUAL" model (Parasuraman et al., 1988). Both writers provide foundational insights into how customer expectations and perceptions influence satisfaction. The origin of the SERVQUAL Model is derived from the study of Parasuraman, ZeithamI, and Berry (1985) based on expectation. This demonstrates how crucial enhancing service quality is to an organization's ability to survive and flourish because it may enable them to meet the difficulties that arise in highly competitive marketplaces. This means that in order to maintain a competitive advantage, service-based businesses must offer their clients top-notch services. However, in order to meet their goals, these organizations must comprehend what constitutes high-quality service (Asubonteng et al., 1996). Theories and concepts related to the SERVQUAL Model, which measures customer satisfaction, will be covered. In addition, there will be a discussion of the literature on the vital variables influencing customer satisfaction across various businesses, as well as customer satisfaction with a range of banking services.

This illustrates how essential improving service quality is to an organization's capacity to endure and grow, since it may help them overcome the challenges presented by fiercely competitive markets. This implies that service-based companies need to provide their customers with excellent services if they want to keep a competitive edge. But to achieve their objectives, these organizations need to understand what quality service should be provided (Asubonteng et al., 1996). We'll go through the theories and ideas behind the SERVQUAL Model, which gauges customer satisfaction. A review of the literature on the critical factors affecting customer satisfaction in a variety of industries and with a range of financial services will also be covered.

This concept focuses on how the thoughtful application of digital technologies can transform conventional banking practices into ones that are more customer-focused, efficient, and technologically cutting-edge. The primary objective is to remain competitive in an increasingly digital world (Koch & Siering, 2017); Shaikh & Anwar (2023). In the context of digital banking, the notion of digital transformation comprises various significant elements. To start, it involves putting state-of-the-art technologies such as mobile apps, web platforms, and AI-driven solutions into

practice to enhance customer experience.

Gazi et al. (2021) examined how service quality affects customer satisfaction in the banking industry. The information was supplied by a sample of 382 respondents who were clients of 32 particular Bangladeshi commercial banks. A pre-structured questionnaire was used to collect the relevant facts and information. The data were analyzed using the OLS regression model and descriptive statistical methods. The study's findings showed that service quality has a statistically significant impact on customer satisfaction. Additionally, the findings demonstrate that in Bangladesh's banking industry, client satisfaction and service excellence. The findings of this study indicate that the Bank Supervisory Authority should focus on maximizing user experience design in future research to increase the intuitiveness and engagement of digital interactions.

Kesharwani & Gajulapally Radhakrishna (2018) discovered the trend toward digitalization started in the 1980s when consumer markets began to adopt personal computers. After that, average customers may now learn about democratic issues through various media. The practice of automating

tasks to increase productivity is referred to as "digitalization". Companies that put a high priority on digitization may argue that this has a beneficial effect on customer engagement. As a result, digitalization is the use of digital technologies to support the creation of new business models that are profitable and valuable, allowing businesses to improve their operational processes. Three forces are encompassed in the concept of digitalization: technological advancement, financial gains, and customer satisfaction.

Sewaka et al. (2023) identified user experience, digital adoption, technological infrastructure, and mobile engagement have a positive relationship with consumer satisfaction. The results of the study demonstrated a favorable and significant correlation between digital adoption, user experience, technical infrastructure, mobile engagement customer satisfaction. The variables and their interactions in this study are outlined conceptually by the research framework. The research framework for this study incorporates independent variables including Digital Adaptation, Mobile Engagement, Technical Infrastructure and User Experience, and dependent variables customer satisfaction
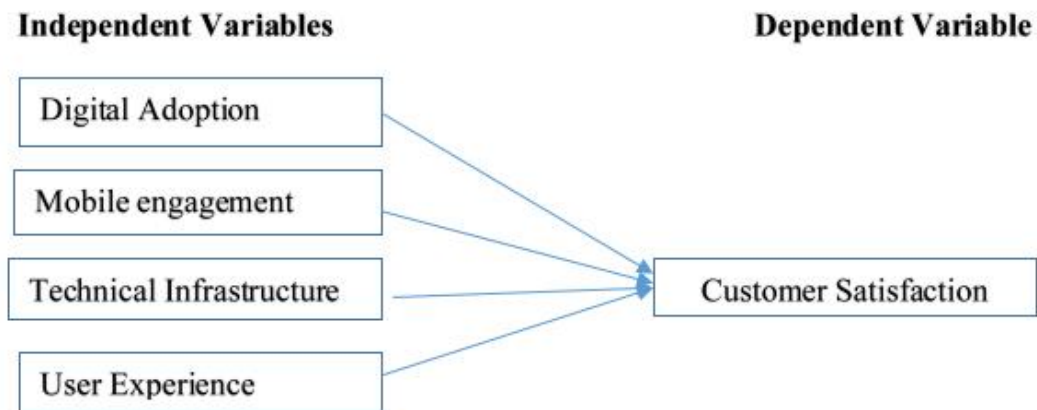

Figure 1. Research Framework. (Shhar Alayli 2022)

"Digital adoption" refers to the process by which individuals and businesses integrate digital technologies into their regular operations. The process by which customers embrace and utilize various digital banking tools and services, such as mobile apps, online banking platforms, digital payments, and automated customer care systems, is known as "digital adoption" in the banking industry (El-Chaarani & Abiad, 2018).

The phrase "mobile engagement" refers to the way

users interact and engage with mobile platforms or applications that are optimized for mobile devices. When used in the context of banking, it covers customer interactions with mobile banking apps and other mobile-based banking services. Mobile engagement is a key factor in evaluating customer satisfaction and loyalty in the digital age. There are many moving parts in the complex relationship between mobile engagement and happy customers (Ramaswamy et al., 2021).

Technical infrastructure refers to the systems and

underlying technology, functionality, security, and efficiency of online banking services. When discussing mobile banking, the term "technical infrastructure" refers to a range of components that ensure the seamless operation and availability of mobile banking services and apps. Secure client data is guaranteed by a strong technical design that prioritizes cybersecurity, which also increases customer happiness. Without question, a company's digital foundation can decide its capacity to sustain customer happiness (Zherdetska et al., 2021).

The term "user experience" refers to a person's overall impression of a good or service, particularly in terms of how easy, efficient, and enjoyable it is to use. Since user experience directly affects customer engagement, satisfaction, and retention in the context of mobile banking, it is significant. Nowadays, user experience (UX), which gauges how successfully users interact with digital platforms, plays a major role in determining customer happiness. Firdous & Farooqi, (2017) found the outcome that is being measured in the context of researching how digitalization affects happiness. Banking customer. This reaction is expected to be affected by changes in the independent variables. This study defines customer satisfaction as a client's emotional reaction to an experience related to banking services that meets their expectations (Simon & Thomas, 2016).

METHODES

The purpose of the research method is to achieve the objectives of the study. It looks at how digitization affects Nepalese commercial banks' customer satisfaction. The quantitative research design has been used such as descriptive and casual comparative research design. Structured questionnaires based on a five-point Likert scale, are sent through email, and Google Forms, and some questionnaires are distributed to the clients of commercial banks. Respondents can choose from a variety of possible statements using this rating system, SPSS is used to analyze and report the data that has been gathered. In compliance with the research goals

The clients of 20 commercial banks are the total population of this study. However, a total of 365 questionnaires were distributed among them only 320 questionnaires were acquired. Primary and secondary sources were employed to provide important and relevant data. The customers of Nepalese Commercial Bank are the primary source of data, and secondary data was gathered from books in journals, articles, magazines, newspapers, and other pertinent reading materials. Information was collected from respondents through non-probability sampling techniques including purposive and convenient sampling. Descriptive, correlation analyses and Regression analyses were performed in addition to confirm the hypothesis

	Satisfied	Digital Adoption	Mobile Engagement	Technical Infrastructure	User Experience
Satisfied	1				
Digital Adoption	679[**]	1			
Mobile Engagement	.677[**]	.478[**]	1		
Technical Infrastructure	.825[**]	.485[**]	.529[**]	1	
User Experience	.718[**]	.348[**]	.441[**]	.519[**]	1

**. Correlation is significant at the 0.01 level (2-tailed).

Sumber:Data diolah (2024)

Correlation analysis was used to determine the digitalization services and their influence on customer satisfaction in Nepalese Commercial Banks. Correlation provides valuable insights into how various aspects of digitalization relate to overall customer satisfaction.
Digital adoption and consumer satisfaction are

highly positively correlated since the p-value is the p-value is 0.000 and r = 0.679. The introduction of digital technology tends to promote client happiness. Mobile engagement and customer satisfaction are highly positively correlated since r = 0.677 and the p-value is 0.000 Increased customer satisfaction is linked to an increased usage of mobile banking platforms Technology

infrastructure and customer happiness has a very significant positive association where r = 0.825 and the p-value is 0.000 A more advanced IT infrastructure greatly increases client happiness. User experience: where r =.718 and p-value 0.000 User experience and customer satisfaction are very positively correlated. Customer happiness increases

as a result of improvements to the user experience.
REGRESSION ANALYSIS

The researcher determines A regression model to assess how different aspects of digitalization (Digital Adoption, Mobile Engagement, Technical Infrastructure, and User Experience) impact customer satisfaction.

Tabel 2. *Model Summary.*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.945[a]	.892	.891	.88839

Predictors: (Constant), Digital Adoption, Mobile Engagement, Technical Infrastructure and User Experience.

Table 2 provides the regression model used to assess the impact of digitalization on customer satisfaction. The value of R-square is 892 which implies that 89.2% variation in consumer satisfaction is explained by all independent variables. However, reminding 10.8% is still unexplained in this research. The adjusted R Square,

which accounts for the number of predictors in the model, is 89.1% variation have consumer satisfaction is explained by the independent variables after adjusting the Standard Error of the Estimate, also known as the Standard Error of Regression shows the accuracy of the .88839 reliability of the variables.

Tabel 3 *ANOVA of Regression Analysis.*

Regression	2056.69	4	514.17	651.47	.000[b]
Residual	248.61	315	.789		
Total	2305.30	319			

Dependent Variable: Customer Satisfaction

Table 3 helps to evaluate the overall significance of the regression model. Since the p-value is 0.000 which is less than 0.01 As a result, the model accurately predicts the link between the dependent and independent variables. The total sum of squares, representing the total variance in Customer Satisfaction. Degrees of Freedom, Regression is 4. This corresponds to the number of predictors in the model (including the constant). Here, there are four predictors. Residual is 315. This

is calculated as the total number of observations minus the number of predictors minus one. It shows that independent variables are significant in explaining the variance in customer's satisfaction level, the regression model is considered fit for analysis. This ANOVA result provides confidence that the regression model is effectively capturing the relationships between digitalization factors and customer satisfaction.

Tabel 4 *The Beta Coefficient of Regression Analysis.*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-.158	.440		-.360	.719
	Digital Adoption	.277	.023	.273	12.279	.000
	Mobile Engagement	.185	.025	.176	7.526	.000

Technical Infrastructure	.348	.020	.434	17.746	.000
User Experience	.262	.018	.321	14.400	.000

Dependent Variable: Customer Satisfaction

Table 4 provides detailed information about each predictor's contribution to the regression model. Constant (Intercept): B =- 0.158: The constant term represents the expected value of Customer Satisfaction when all predictors (Digital Adoption, Mobile Engagement, Technical Infrastructure, and User Experience) All the variables have a p-value less than 0.05, which clearly shows that these all-independent variables have a positive and significant impact to the dependent variable (consumer satisfaction). The standardized Beta value shows that among the four independent variables Technical Infrastructure has the most significant impact at 34.8%, next followed by Digital adaptation at 27.7%, user experience at 26.2%, and mobile engagement at 18.5%

Results of Hypothesis

The systematic process of hypothesis testing determines whether the findings of the study support a given theory that is applicable or not. Each hypothesis has an analysis on the basis of the result.

Tabel 5 Hypothesis

	Hypothesis	Sig.	Results
H1	Digital adoption has a significant impact on customer satisfaction in Nepalese Commercial Banks.	0.000	Accepted
H2	Mobile Engagement has a significant on customer satisfaction in Nepalese Commercial Banks.	0.000	Accepted
H3	Technical Infrastructure has a positive significant impact on consumer satisfaction in Nepalese Commercial Banks.	0.000	Accepted
H4	User Experience has a positive significant impact on consumer satisfaction in Nepalese Commercial Banks.	0.000	Accepted

Dependent Variable: Customer Satisfaction

There is positive impact between digital adoption and customer satisfaction in Nepalese Commercial Banks. A P-value of digital adoption is 0.000 which is less than 5%, significance level. So, hypothesis H1 is accepted. There is positive impact between mobile engagement and customer satisfaction in Nepalese Commercial Banks. A P-value of mobile engagement is 0.000, which is less than a 5%, significance level. So, hypothesis H2 is accepted. There is positive impact between technical infrastructure and customer satisfaction in Nepalese Commercial Bank. A P-value of technical infrastructure is 0.000, which is less than a 5%, significance level. So, hypothesis H3 is accepted. There is positive impact between user experience and customer satisfaction in Nepalese Commercial Banks. The P-value of user experience is 0.000, which is less than a 5%, significance level. So, hypothesis H4 is accepted.

CONCLUSIONS

In this study, the researcher set out to explore the impact of digitalization on customer satisfaction within Nepalese commercial banks, focusing on four key aspects: digital adoption, mobile engagement, technical infrastructure, and user experience. The clients of 20 commercial banks are the total population of this study. However, a total of 365 questionnaires were distributed among them only 320 questionnaires were received and used. Structured questionnaires are sent through Google Forms, and some questionnaires are distributed to the clients of commercial banks. Primary and secondary sources were employed to provide important and relevant data. The primary source of data is Nepalese Commercial Bank's customers

and secondary data is obtained from relevant reading materials, books in journals, articles, magazines, and newspapers, all of which had a connection to variables affecting customer satisfaction. The research adopts quantitative research as a descriptive and causal comparative research design the convenience and purposive sampling were used for data collection as a five-point Likert scale Data analysis tools included descriptive, correlation, and coefficient of variation. As per demographic information, male respondents are (61.9%) whereas females are (39.1%) and most of the respondents are between the age of (20-30). The digital adaptation has the highest mean score 3.87 among the four variables. Mobile engagement has the lowest mean score. It means digital banking services have made it easier for customers to manage their accounts and customers are more satisfied with the level of digital integration of bank services. Customers are least satisfied due to mobile engagement. And the customers do not feel secure while using the mobile apps for transactions. As per the correlation, all the variables have a positive correlation with customer satisfaction. Among them, Technical Infrastructure has a highly positive correlation (0.825) and the least correlation with Mobile Engagement (0.677) As per the regression analysis all the variables have a positive impact of digitalization on customer satisfaction since they have p- a value (0.000) which is less than 0.05 level which clearly shows that these independent variables have a positive and significant impact on the consumer satisfaction. The regression model was used to assess the impact of digitalization on customer satisfaction. The value of R-square is 0.892 which implies that 89.2% variation in consumer satisfaction is explained by all independent variables. However, reminding 10.8% is still unexplained in this research. The adjusted R2, which accounts for the number of predictors in the model, is 89.1% variation have consumer satisfaction is explained by the independent variables after adjusting the Standard Error of the Estimate, also known as the Standard error of regression shows the accuracy of the 0.88839 reliability of the variables. This ANOVA result provides confidence that the regression model is effectively capturing the relationships between digitalization factors and customer satisfaction. The standardized Beta value shows that among the four independent variables, Technical Infrastructure has the most significant impact

(34.8%), next followed by digital adaptation (27.7%), user experience (26.2%), and mobile engagement (18.5%). All the hypotheses are accepted since the p-value is less than a 5% significance level.

DISCUSSION

In order to provide useful information for enhancing banking services, the study sought to ascertain how these elements both separately and in combination affect customer satisfaction. The results show that customer satisfaction is positively impacted by greater digital use. Higher customer satisfaction ratings are typically reported by banks that have incorporated cutting-edge digital technologies, such as automated services and online banking systems. This implies that consumers recognize and appreciate the efficiency and convenience offered by contemporary digital instruments. Customer happiness and mobile engagement are significantly positively correlated, according to the study. Consumers who actively utilize mobile banking features and applications report higher satisfaction levels, underscoring the significance of mobile platforms in providing a satisfying banking experience. This emphasizes how important it is for banks to concentrate on creating and maintaining top-notch mobile interfaces. Customer satisfaction is proven to be significantly influenced by a strong technical infrastructure.

IMPLICATIONS

The results of this study show that digital adoption, technical infrastructure, mobile engagement, and user experience are all variables that have statistically significant effects on consumer happiness. Banks should take advantage of the opportunities to promote online banking by lowering barriers, and the range of services offered by online and mobile banking. This study has significant applications for marketers, businessmen, different professionals, financial institutions, and IT officials for competitive advantages. Digital banking services have made it easier for customers to manage their accounts and customers are more satisfied with the level of digital integration of bank services. Customers are least satisfied due to mobile engagement, and the customers do not feel secure while using mobile apps for transactions, so it

must be an essential consideration factor. Digital banking services have made it easier for customers to manage their accounts and customers are more satisfied with the level of digital integration of bank services. So, Banks should prioritize investments in infrastructure and technology that yield the highest returns by identifying the essential aspects that influence customer satisfaction. Customers may feel more confident and trusting of online banking platforms as a result of improved technical infrastructure, which can also improve the security and dependability of digital banking services. Considering the significance of digital banking for the growth of banks, information technology has been demonstrated to increase banks' productivity and level of customer care

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