

Effect of Digital Banking and Digital Transformation on the Efficiency of Nepalese Commercial Banks

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Abstract

This study examines the effect of digital banking and digital transformation on the efficiency of Nepalese commercial banks. Efficiency is the dependent variable. The selected independent variables are ATM banking, internet banking, mobile banking, SMS banking, NEFT/RTGS and e-payment systems. The primary sources of data is used to assess the opinions of respondents regarding ATM banking, internet banking, mobile banking, SMS banking, NEFT/RTGS, e-payment systems and efficiency of banks. The study is based on the primary data of 127 respondents. To achieve the purpose of the study, structured questionnaire is prepared. The correlation and multiple regression models are estimated to test the significance and importance of effect of digital banking and digital transformation on the efficiency of Nepalese commercial banks.

The study showed a positive impact of ATM banking on efficiency. It indicates that ATM banking provided by banks leads to increase in efficiency of banks. Similarly, the study showed a positive impact of internet banking on efficiency. It indicates that adoption of internet banking leads to increase in efficiency of banks. Likewise, the study showed a positive impact of mobile banking on efficiency. It indicates that secure online transactions through mobile banking leads to increase in efficiency of banks. Further, the study also showed a positive impact of SMS banking on efficiency. It indicates that faster and more organized banking leads to increase in efficiency of banks. In addition, the study showed a positive impact of NEFT/RTGS on efficiency. It indicates that faster online transactions through NEFT/RTGS systems leads to increase in efficiency of banks. Moreover, the study showed a positive impact of e-payment system on efficiency. It indicates that user friendly online payment system leads to increase in efficiency of banks.

Keywords: ATM banking, internet banking, mobile banking, NEFT/RTGS, SMS banking, e-payment system, efficiency

1. Introduction

The global financial landscape has seen transformative change driven by the rapid adoption of digital technologies. In the banking industry, providing high-quality innovative outputs improve the satisfaction level of employees that eventually increases the productivity of these employees (Obeng and Mkhize, 2017). Mobile banking can also be described as an electronic banking mechanism or electronic commerce that helps serve financial services through mobile phone technology. Mobile banking is done through a telecommunication network or wireless technology (Goswami, 2017). According to Baabdullah *et al.* (2019), digital banking refers as a financial institution's ecommerce application that allows consumers to make financial transactions remotely via a mobile device. In the digital era, traditional banking services are no longer adequate to meet the ever-changing needs of user's behavior. With the improvement of the internet and Wi-Fi technologies, internet banking

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has been progressing as an essential part in the banking logistic system (Curran and Meuter, 2007). Similarly, Amujiri and Onodugo (2015) concluded that when cashless policy is fully implemented, it help in reduction in money laundering, check on terrorist financing, ensure in effectiveness of monetary policy, employment created in financial sector and leads towards growth in real sector of the economy. Likewise, Singhal and Padhmanabhan (2008) stated that over 50 percent of the total number of respondents agreed that internet banking is a convenient and flexible method of banking that involves various transaction related benefits. Thus, providing internet banking is increasingly becoming a need to have than a nice to have service. . Moreover, Chang and Hamid (2010) defined internet banking as the process through which customers complete banking transactions electronically without visiting the banks physically or without visiting brick and mortar bank.

Mwatsika (2016) examined the impact of ATM banking performance on customer satisfaction with the bank in Malawi. The study found that ATM banking has a positive impact on efficiency. Likewise, Harelimana (2018) investigated the role of electronic payment system on the financial performance of financial institutions. The study found that there is a direct and positive correlation between electronic payments and bank financial performance. Similarly, Zuo *et al.* (2021) examined the digitalization transformation of commercial banks and its impact on sustainable sufficiency improvements through investment in science and technology. The study found that digitalization investment has contributed to substantial production efficiency improvement for commercial banks; however, heterogeneity still exists. Likewise, Haralayya (2021) examined how digital banking has brought innovative products and services to India. The study found that digitalization has redefined banking operations, products and services where customers can perform transactions smoothly with higher speed, accuracy, and convenience. Dong *et al.* (2020) investigated the impact of internet finance on the performance of commercial banks in China. The result showed that the development of internet finance has a positive impact on the profitability, but security and growth of commercial banks has a negative impact on the liquidity of commercial banks.

Beloke *et al.* (2021) examined the influence of digital financial services on the financial performance of commercial banks in Cameroon. The study revealed that digital saving services, digital withdrawal services and digital transfer services have positive and significant influence on the profitability of commercial banks whereas digital payment on the other hand has a negative but significant influence on commercial bank's profitability. Similarly, Ramadhan and Sudrajad (2022) analyzed the banking financial performance before and after the bank digitalization in Indonesia. The study found that the bank's financial performance significantly increased after digitalization. According to Lee *et al.* (2021), financial innovation through technology in banking relates to quality improvement, which can increase bank performance by improving bank cost efficiency and technology in addition, market support service innovations play the most critical impact in boosting bank efficiency and technology adoption. The digital transformation fundamentally alters business operations, goods and services production, and marketing (Kriebel and Debenner, 2020). Moreover, Azmi *et al.* (2020) explored the impact of digitalization on bank performance. The study revealed that digitalization positively impact on efficiency and has improved bank performance and allowed to expand from core banking services to complete financial solutions.

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implemented, it helps in reduction in money laundering, check on terrorist financing, ensure in effectiveness of monetary policy, employment created in financial sector and leads towards growth in real sector of the economy. Likewise, Malhotra and Singh (2009) concluded that internet banks were larger, more profitable, had higher asset quality, lower administrative expenses and were more efficient compared to the non- internet banks. Moreover, Mabrouk and Mamoghli (2010) found that return on assets is positively and significantly associated with the first mover and imitation of product innovations in the Tunisian banking industry. Further, Joshua (2010) stated that technology has increased in importance in Ghanaian banks and has transformed the way banks would serve their clients more conveniently and in the process increase profits and competitiveness while the most revolutionary electronic innovation in Ghana and the world over has been the ATM. Financial innovation and change in monetary procedures and control follow each other and Central banks therefore have to change their tools, targets and operating procedures from time to time so as to cope with innovation and ensure the sustainability of the financial system (Misati *et al.*, 2010). Retail payment transaction technologies have an intensifying effect on the relationship between retail payment services and bank performance.

In the context of Nepal, Joshi (2019) examined how the quality of ATM services affected customer productivity, and profitability in the banking industry of Nepal. The study discovered that the profitability and productivity of ATM services are positively impacted. Similarly, Dangol and Kautish (2019) investigated IT security related issues and challenges in electronic payment system in Nepal. The study found that e-payment system in Nepalese is growing which helps in increment of productivity and profitability. Likewise, Regmi (2015) examined the state of mobile banking. The study found that there is no strong impact of mobile banking on productivity and profitability of Nepalese commercial banks. Further, Shrestha *et al.* (2019) examined internet banking service in the banks of Pokhara city in Nepal. The study found that there is positive impact of internet banking on profitability, productivity and further can help in cost saving, mass customization, product innovation, improved marketing and communication.

Though there are above mentioned empirical evidences in the context of other countries and in Nepal, no such findings using more recent data exist in the context of Nepal. Therefore, in order to support one view or the other, this study has been conducted. Hence, this study deals with the effect of digital banking and digital transformation on the efficiency of Nepalese commercial banks.

The major objective of the study is to examine the effect of digital banking and digital transformation on the efficiency of Nepalese commercial banks. Specifically, it examines the relationship of ATM banking, internet banking, mobile banking, SMS banking, NEFT/RTGS and e-payment systems with efficiency of banks.

The remainder of this study is organized as follows: section two describes the sample, data, and methodology. Section three presents the empirical results and final section draws the conclusion.

2. Methodological aspects

The study is based on the primary data. The data were gathered from 127 respondents through questionnaire. The study employed convenience sampling method. The respondents'

views were collected on ATM banking, internet banking, mobile banking, NEFT/RTGS, SMS banking, e-payment system and efficiency. This study is based on descriptive as well as causal comparative research designs.

The model

The model used in this study assumes that efficiency depends upon digital banking and digital transformation. The dependent variable selected for the study is efficiency. Similarly, the selected independent variables are ATM banking, internet banking, mobile banking, NEFT/RTGS, SMS banking and e-payment system. Therefore, the model takes the following form:

Efficiency = $f(\text{ATM banking, internet banking, mobile banking, NEFT/RTGS, SMS banking and e-payment system})$.

More specifically,

$$E = \beta_0 + \beta_1 \text{ATM} + \beta_2 \text{IB} + \beta_3 \text{MB} + \beta_4 \text{SMS} + \beta_5 \text{N/R} + \beta_6 \text{EPMT} + e$$

Where,

E = Efficiency

ATM = ATM banking

IB = Internet banking

MB = Mobile banking

SMS = SMS banking

N/R = NEFT/RTGS

EPMT = E-payment systems

ATM banking was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "ATM banking helps customers to transfer money which reduces workload of bankers in charge and increase efficiency in work", "ATM banking reduces the work pressure on banks staff and avoids queues in bank premises" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.744$).

Internet banking was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "Internet banking is convenient and reduces chaos and confusion", "Internet banking is more reliable and secured than traditional banking" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.848$).

Mobile banking was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "With the help of mobile banking, I can easily manage my banking affairs", "My bank is providing reliable mobile banking services and

support timely” and so on. The reliability of the items was measured by computing the Cronbach’s alpha ($\alpha = 0.765$).

SMS banking was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include “SMS banking provides me with timely updates on my account activity”, “I trust the accuracy of SMS banking notifications and alerts” and so on. The reliability of the items was measured by computing the Cronbach’s alpha ($\alpha = 0.850$).

NEFT/RTGS was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include “NEFT/RTGS transactions are processed quickly”, “NEFT/RTGS are user-friendly and easy to use” and so on. The reliability of the items was measured by computing the Cronbach’s alpha ($\alpha = 0.729$).

E-payment systems was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include “E-payment ensures the protection of information (credit card/ debit card details)”, “E-payment offers a greater choice for consumer and merchant in the way they sent and receive payments” and so on. The reliability of the items was measured by computing the Cronbach’s alpha ($\alpha = 0.827$).

Efficiency was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include “Transactions through internet banking are processed quickly and efficiently”, “The bank’s customer support is responsive and helpful when I have issues with E-payment transactions” and so on. The reliability of the items was measured by computing the Cronbach’s alpha ($\alpha = 0.728$).

The following section describes the independent variables used in this study along with the hypothesis formulation.

ATM banking

Automated teller machines as their names implies are electronic cashiers. These machines are installed by banks to dispense cash to needy customers without the aid of the human cashier. Sindani *et al.* (2019) examined the effect of financial distribution channels evolution on financial inclusion in Kenya. The study found that there is a positive relationship between ATM banking and efficiency. Similarly, Emmanuel and Mulyungi (2019) examined the effect of retail banking on the growth sustainability of Rwanda’s commercial banks. The study found that there is a positive relationship between ATM services and growth and sustainability of efficiency. Likewise, Helfasari *et al.* (2021) investigated the cashless banking and financial performance of bank in Indonesia. The study revealed that the use of ATM cards positively influences the profitability of banks. Further, Anggraini *et al.* (2020) explored the effect of financial performance and technology aspects of market performances on banking in Indonesia. The study concluded that ATM transactions have positive and significant impact on the technological aspect of bank performance in Indonesia. Based on it, this study develops the following hypothesis:

H₁: There is a positive relationship between ATM banking and efficiency.

Internet banking

Internet banking involves conducting bank transactions such as account enquiry, printing of statement of account, funds transfer payment for goods and services, etc. on the internet (world wide web) using the electronic tool such as the computer without visiting the banking hall. Noah *et al.* (2019) examined the effect of internet banking on financial performance of tier one commercial banks in Kenya. The study found that internet banking has a significant and positive influence on productivity through efficiency and profitability. Further, Dzombo *et al.* (2017) explored the effect of branchless banking strategy on the financial performance of commercial banks in Kenya. The study concluded that electronic banking has a significant and negative impact on financial performance of commercial banks. In addition, Durai and Stella (2019) investigated the digital finance and its impact on financial inclusion. The study concluded that internet banking has a significant impact on financial inclusion. Similarly, Farnendes *et al.* (2021) investigated the contribution of digital financial services to financial inclusion in Mozambique. The study revealed that internet banking plays a crucial role in improving financial services and inclusion. Based on it, this study develops the following hypothesis:

H₂: There is a positive relationship between internet banking and efficiency.

Mobile banking

Mobile banking refers to the utilization of mobile devices, such as smartphones and tablets, to conduct a wide range of banking transactions and services remotely. Ijeoma (2018) determined the impact of the mobile banking on the financial performance of commercial banks in Kenya during a period of seven years. The study found a positive relationship between mobile banking and bank's profitability and productivity. . Likewise, Dwivedi *et al.* (2021) examined the role of Fin-Tech adoption for competitiveness and performance of the bank. The study concluded that the impact of mobile banking on competitiveness in commercial banks in Kenya is significant allowing for easy and secure financial transactions, making it a valuable tool for banks to attract and retain customers. In addition, Ahmed and Jeremiah (2022) investigated the mobile banking services and financial performance in Kenya. The study found that mobile money transfer, mobile account management, mobile credit facilitation and mobile bill presentment have positive and significant impact on financial performance. Further, Mutiso and Mwikya (2021) explored the mobile financial services and mobile commerce on performance of micro, small and medium enterprises in Kenya. The study concluded that there is a linear relationship between mobile financial services and mobile commerce services on performance of MSMEs in Kitengela, Kajiado County. Based on it, this study develops the following hypothesis:

H₃: There is a positive relationship between mobile banking and efficiency.

SMS banking

SMS banking, also known as text banking, refers to a mobile-based service offered by commercial banks that allows customers to perform various banking transactions and inquiries using text messages on their mobile phones. Anindyastri *et al.* (2022) investigated the influence of financial technology (fin-tech) on the financial performance of Islamic banking. The study concluded that SMS banking has a negative and insignificant influence

on financial performance of Islamic banking. Similarly, Mbah and Obiezekwem (2019) explored the electronic banking and performance of small and medium scale enterprises in Anambra State, Nigeria. The study found that there is a positive relationship between short message services (SMS) and performance of small and medium enterprises (SMEs). Further, Alnsour (2023) investigated the effect of financial technology on Islamic banks performance in Jordan. The study revealed that SMS banking has an unfavorable and insignificant impact on the financial performance of Islamic banks due to a relatively low degree of privacy associated with SMS banking and the comprehensiveness of services. In addition, Wijaya (2022) examined the effect of fin-tech on the financial performance of Sharia banking. The study revealed that SMS banking has a positive and significance impact on the financial performance of banks. Moreover, Ullah (2023) explored the electronic banking and its impact on the financial performance of commercial banks in Bangladesh. The study found that SMS banking has a moderate influence on the profitability of commercial banks in Bangladesh. Based on it, this study develops the following hypothesis:

H₄: There is a positive relationship between SMS banking and efficiency.

NEFT/RTGS

NEFT can be operationally defined as a secure and batch-based electronic payment mechanism where transactions are processed in scheduled batches, typically within specified timeframes, such as hourly or half-hourly intervals. RTGS can be operationally defined as a system that allows for immediate and gross settlement of financial transfers, meaning that each transaction is processed individually in real time, without netting or bundling with other transactions. Tae and Rahdi (2021) investigated the impact of RTGS on internal control-A comparative study between some Iraqi banks. The study found that the RTGS has a significant impact on internal controls on programs and files at the Central Bank of Iraq. Similarly, Mohammed *et al.* (2022) explored the effect of payments system innovations on the financial performance of commercial banks in Nigeria. The study revealed that the volume of RTGS transactions has a negative impact on the financial performance of banks in Nigeria. Further, Saroy *et al.* (2023) examined the impact of digital payment adoption on Indian banking sector efficiency. The study found that use of NEFT and RTGS enhances efficiency of banks by helping them reduce their expenditure on inputs rather than the quantity of inputs directly. Similarly, Borges *et al.* (2020) investigated the systemic risk in the Angolan interbank payment system. The study found that RTGS system has a significant growth in the number of participant banks and the number and amounts of settled transactions and has been able to handle interbank fund transfers effectively. Likewise, Ansari and Gupta (2022) explored the payment and settlement systems in India-products, growth and future in Indian banking sector. The study concluded that there is a significant growth and impact of the RTGS system in India's payment and settlement systems, reflecting the country's shift towards a cashless society and the increasing reliance on electronic transactions. Based on it, this study develops the following hypothesis:

H₅: There is a positive relationship between NEFT/RTGS and efficiency.

E-payment systems

Electronic payment systems, commonly referred to as e-payment systems which provide a convenient and secure means of transferring funds, making purchases, and conducting

various financial operations over the internet. Frank and Binaebi (2019) investigated the electronic payment systems implementation and the performance of commercial banks in Nigeria. The study concluded that the adoption of electronic payment has a positive and significant impact on efficiency of the banks. Similarly, Yucha *et al.* (2019) explored the digital payment system analysis of buying decision in Indonesia. The study revealed that digital payments are developing very quickly, but cash payments still dominate due to the unavailability of complete facilities and infrastructure to support digital payment systems other than in cities. Further, Sakanko and David (2019) investigated the effect of electronic payment systems on financial performance of microfinance banks in Niger State. The study concluded that e-payment system has a significant positive impact on financial performance. Likewise, Josephine (2021) explored the effect of e-payment system on the efficiency of banks in Nigeria. The study revealed that there is no significant impact of the e-payment system on the efficiency of banking in Nigeria. In addition, Sarkar (2019) examined the adoption of digital payment system. The study found that digitization of the economy became extremely important and unavoidable to keep pace with the fast-growing cashless transactions on global economy. Based on it, this study develops the following hypothesis:

H₆: There is a positive relationship between e-payment systems and efficiency.

3. Results and discussion

Correlation analysis

On analysis of data, correlation analysis has been undertaken first and for this purpose, Kendall's Tau correlation coefficients along with mean and standard deviation has been computed and the results are presented in Table 1.

Table 1

Kendall's Tau correlation coefficients matrix

This table presents Kendall's Tau coefficients between dependent and independent variables. The correlation coefficients are based on 127 observations. The dependent variable is E (Efficiency). The independent variables are ATM (ATM banking), IB (Internet banking), MB (Mobile banking) SMS (SMS banking), N/R (NEFT/RTGS) and EPMT (E-payment systems).

Variables	Mean	S.D.	E	ATM	IB	MB	SMS	N/R	EPMT
E	4.256	0.697	1						
ATM	4.434	0.406	0.368**	1					
IB	4.174	0.408	0.109	0.114	1				
MB	4.116	0.630	0.370**	0.275**	0.253**	1			
SMS	4.155	0.454	0.310**	0.281**	0.199**	0.266**	1		
N/R	3.604	0.697	0.098	0.105**	0.200**	0.159*	0.059	1	
EPMT	4.236	0.393	0.291**	0.339**	0.157*	0.254**	0.139*	0.192**	1

Note: The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent levels respectively.

Table 1 reveals that ATM banking is positively correlated to efficiency. It indicates that better ATM services of the banks leads to increase in bank efficiency. Likewise, internet banking is positively correlated to efficiency. It indicates that better internet banking services

towards the customers leads to increase in bank efficiency. Further, mobile banking is positively correlated to efficiency. It indicates that better mobile banking services leads to increase in banks efficiency. In addition, SMS banking is also positively correlated to the efficiency. It indicates that better SMS banking services leads to increase in banks efficiency. Likewise, NEFT/RTGS is positively correlated to efficiency. It indicates that faster online transaction through NEFT/RTGS leads to increase in banks efficiency. Similarly, e-payment system is positively correlated to efficiency. It indicates that user friendly e-payment system leads to increase in banks efficiency.

Regression analysis

Having indicated the Kendall's Tau correlation coefficients, the regression analysis has been carried out and the results are presented in Table 2. More specifically, it shows the regression results of ATM banking, internet banking, mobile banking, SMS banking, NEFT/RTGS and e-payment systems on efficiency.

Table 2

Estimated regression results of ATM banking, internet banking, mobile banking, SMS banking, NEFT/RTGS and e-payment systems on efficiency

The results are based on 127 observations using linear regression model. The model is $E = \beta_0 + \beta_1 \text{ATM} + \beta_2 \text{IB} + \beta_3 \text{MB} + \beta_4 \text{SMS} + \beta_5 \text{N/R} + \beta_6 \text{EPMT} + e$ where the dependent variable is E (Efficiency). The independent variables are ATM (ATM banking), IB (Internet banking), MB (Mobile banking), SMS (SMS banking), N/R (NEFT/RTGS) and EPMT (E-payment system).

Model	Intercept	Regression coefficients of						Adj. R_bar2	SEE	F-value
		ATM	IB	MB	SMS	N/R	EPMT			
1	0.909 (1.481)	0.755 (5.477)**						0.187	0.628	29.999
2	3.497 (6.491)**		0.183 (1.426)					0.008	0.694	2.035
3	1.614 (4.809)**			0.642 (7.975)**				0.332	0.569	63.593
4	1.611 (3.093)**				0.637 (5.112)**			0.166	0.636	26.137
5	3.885 (11.876)**					0.279 (0.001)		0.003	0.696	1.362
6	1.477 (2.362)*						0.657 (4.470)**	0.131	0.649	19.981
7	0.683 (0.943)	0.740 (5.266)**	0.070 (0.594)					0.183	0.63	15.098
8	0.716 (1.132)	0.410 (3.079)**	0.152 (1.394)	0.572 (6.307)**				0.378	0.549	26.475
9	0.263 (0.411)	0.264 (1.906)	0.216 (1.999)	0.547 (6.189)**	0.355 (2.936)**			0.432	0.533	23.241
10	0.262 (0.407)	0.264 (1.895)	0.216 (1.923)	0.547 (6.158)**	0.355 (2.923)**	0.279 (0.001)		0.409	0.535	18.441
11	0.286 (0.385)	0.162 (1.114)	0.216 (1.923)	0.216 (1.923)	0.356 (2.977)*	0.023 (0.315)	0.657 (4.470)**	0.426	0.528	16.585

Notes:

- Figures in parenthesis are t-values.
- The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
- Efficiency is dependent variable.

Table 2 shows that the beta coefficients for ATM banking are positive with efficiency. It indicates that ATM banking has a positive impact on efficiency. This finding is consistent

with the findings of Emmanuel and Mulyungi (2019). Likewise, the beta coefficients for internet banking are positive with efficiency. It indicates that internet banking has a positive impact on efficiency. This finding is consistent with the findings of Noah *et al.* (2019). In addition, the beta coefficients for mobile banking are positive with efficiency. It indicates that mobile banking has a positive impact on efficiency. This finding is consistent with the findings of Ijeoma (2018). Similarly, the beta coefficients for SMS banking are positive with efficiency. It indicates that SMS banking has a positive impact on the efficiency. This finding is consistent with the findings of Wijaya (2022). Similarly, the beta coefficients for NEFT/RTGS are positive with efficiency. It indicates that NEFT/RTGS has a positive impact on efficiency. This finding is consistent with the findings of Saroy *et al.* (2023). In addition, the beta coefficients for e-payment technology are positive with efficiency. It indicates that e-payment technology has a positive impact on efficiency. This finding is consistent with the findings of Frank and Binaebi (2019).

4. Summary and conclusion

Digital banking has revolutionized the financial landscape, enhancing efficiency through 24/7 accessibility. The integration of technology enables banks to provide convenient services, reducing transaction time and operational costs. Digital transformation fosters a seamless customer experience, optimizing resource utilization and improving overall efficiency within the banking sector.

This study attempts to examine the effect of digital banking and digital transformation on the efficiency of Nepalese commercial banks. The study is based on primary data of 127 respondents.

The major conclusion of this study is that the change in techniques and technology of the bank and the facilities and services pertaining to mobile banking, internet banking, ATM banking, SMS banking, NEFT/RTGS and e-payment systems enhance the efficiency of Nepalese commercial banks. The study also concludes that ATM banking followed by e-payment system and mobile banking are the most influencing factors that affect the efficiency of Nepalese commercial banks.

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