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Impact of E-Banking on Operational Efficiency of Employees in Nepalese Commercial Banks

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ABSTRACT

This study investigates the influence of electronic banking methods, including ATMs, mobile banking and internet banking on the operational efficiency of employees in Nepalese commercial banks. This research focuses on its implications in Nepal, aiming to understand how the adoption of digital technologies affects the day-to-day tasks, workload distribution, and overall performance of bank personnel. Mixed-methods approach involving surveys and interviews, the study analyzes employee perceptions and experiences, shedding light on the extent to which e-banking optimizes processes, improves customer interactions, and necessitates skillset adaptations. The findings of this research contribute valuable insights to academia and the banking industry, offering actionable information to enhance the benefits of e-banking while mitigating potential drawbacks on employee performance. By comprehensively exploring the relationship between e-banking and operational efficiency in Nepal's banking, this study equips stakeholders with knowledge crucial for strategic decision-making and sustainable growth within the evolving financial technology.

KEYWORDS

ATM, E-banking, Employees Efficiency, Internet Banking, Mobile Banking

INTRODUCTION

The global financial sector has undergone a rapid digital transformation driven by technological advancements, leading to the proliferation of electronic banking as a cornerstone of contemporary banking operations (Pikkarainen et al., 2004). E-banking encompasses a range of digital services, such as online banking, mobile banking, and electronic fund transfers, reshaping customer interactions and operational processes within the banking industry (Sadi and Muhanna, 2013). As e-banking continues to revolutionize the way financial services are delivered and accessed, there is a growing need to investigate its multidimensional impacts, particularly on employee efficiency and performance within banking institutions. Electronic banking, commonly known as e-banking, encompasses a holistic approach that smoothly incorporates Automated Teller Machines (ATMs), mobile banking, and internet banking services. This integration empowers customers conveniently and efficiently to access and manage their financial accounts remotely (Khashei & Bijari, 2014).

This convergence of technology-driven platforms enables individuals to conduct a wide array of banking activities, such as fund transfers, bill payments, account inquiries, and transaction monitoring, without the need for physical visits to bank branches.

In the Nepalese context, a developing economy with an increasing banking sector, the integration of e-banking technologies has emerged as an essential strategy for banks striving to remain competitive and meet evolving customer demands (Sharma and Devkota, 2017). Nepalese commercial banks are progressively adopting e-banking solutions to provide streamlined and accessible services, allowing customers to conduct transactions remotely. However, while the adoption of e-banking has the potential to enhance customer experiences, its effects on the operational efficiency and roles of bank employees warrant closer examination. This study is situated at the juncture of e-banking's transformative potential and its implications for employee performance within Nepalese commercial banks. As Nepal's banking sector adapts to the digital era, understanding the interplay between e-banking tools and employee operational efficiency becomes pivotal for banks' sustainable growth and customer satisfaction. While research on e-banking's impact on customers and organizational performance is abundant, empirical investigations into how e-banking influences the daily tasks, workloads, and efficacy of bank employees in the Nepalese context remain limited.

By conducting a thorough analysis of this dynamic relationship, this research aims to provide a comprehensive understanding of how e-banking shapes employee performance and efficiency in Nepalese commercial banks. By considering both the opportunities and challenges brought about by e-banking adoption, this study offers insights that can inform strategic decisions and human resource management practices, ensuring that banks maximize the benefits of digitalization while supporting their workforce's adaptability and growth.

E-banking incorporates a comprehensive inquiry into the combined influence of Automated Teller Machines (ATMs), mobile banking, and internet banking on employees' operational efficiencies within the banking sector. ATMs, a vital facet of e-banking, hold the potential to alleviate employee workloads by handling routine transactions, thereby enabling employees to concentrate on more intricate responsibilities and personalized customer interactions (Janssen et al., 2020). Similarly, mobile banking, a key component, empowers employees to engage with customers remotely, facilitating tasks such as addressing customer inquiries and verifying transactions through mobile platforms (Fernández-Sabiote et al., 2021). Additionally, internet banking, forming another integral aspect, streamlines procedures by providing customers the ability to conduct a range of financial activities online, subsequently diminishing the necessity for in-person visits and effectively optimizing employee time allocation (Janssen et al., 2020).

This research endeavors to discern the multifaceted impact of these e-banking components on employee efficiencies, elucidating the manner in which technology augments the speed, accuracy, and customer satisfaction of transactions (Fernández-Sabiote et al., 2021). By probing the synergistic dynamics of e-banking encompassing ATMs, mobile banking, and internet banking, this investigation contributes to a comprehensive comprehension of how these digital facets shape the operational landscape and employee responsibilities within the banking domain (Janssen et al., 2020).

E-Banking is the integrates approach of mobile banking, internet banking and ATM banking so the study investigate the impact of ATM banking, internet banking and mobile banking on the operational efficiency of employees. Based on the context of examining the impact of e-banking components (ATMs, mobile banking, and internet banking) on the operational efficiency of employees in the Nepalese banking sector, here are main and specific research questions.

Main Research Question:

How does the integration of e-banking components, including ATMs, mobile banking, and internet banking, impact the operational efficiency of employees in Nepalese commercial banks?

Specific Research Questions:

1. How does ATM banking impact on operational efficiency of employees in Nepalese commercial banks?
2. How does mobile banking impact on operational efficiency of employees in Nepalese commercial banks?
3. How does internet banking impact on operational efficiency of employees in Nepalese commercial banks?

LITERATURE REVIEW

Operational Efficiency of Employees

Operational efficiency within the banking sector covers a range of interconnected dimensions that collectively contribute to streamlined and effective banking operations (Grazioli et al., 2000). First, it involves employees executing their designated tasks accurately and promptly, ensuring the smooth processing of financial transactions, customer account management, and responsive handling of inquiries (Berger & Humphrey, 1997; Coshall, 2011).

Second, efficient resource utilization is pivotal, as employees need to make optimal use of available resources such as time, technology, and workforce to minimize wastage and enhance productivity (Guerard et al., 2010; Mester, 1996). This efficiency extends to scheduling staff effectively and leveraging digital tools to their fullest potential.

In today's technologically driven banking, field, operational efficiency also incorporates employees' ability to adapt to and leverage digital tools effectively. Embracing online banking platforms, customer relationship management systems, and data analytics tools is crucial for both improving efficiency and enhancing customer experiences (Sadi & Muhanna, 2013; Pikkarainen et al., 2004). Lastly, operational efficiency encompasses compliance with regulatory standards and ethical guidelines, ensuring the integrity of banking operations while managing risks effectively (Jha & Gupta, 2016).

E-Banking

Electronic Banking, commonly referred to as e-banking, is a modern financial service that leverages digital technologies to enable individuals, businesses, and institutions to conduct a wide range of banking activities through electronic channels (Berger et al., 1997). E-banking has revolutionized the traditional banking model by providing convenient and efficient alternatives to traditional in-person transactions (Guerard et al., 2010). This transformation allows users to access their financial services anytime and anywhere, fostering greater flexibility and accessibility in managing their finances (Pikkarainen et al., 2004; Sadi & Muhanna, 2013). E-banking encompasses a diverse set of online platforms and tools that facilitate various banking activities. These include online banking platforms, mobile banking applications, and internet-based financial services. These channels enable customers to perform various tasks, such as checking account balances, transferring funds between accounts, making electronic bill payments, applying for loans, and managing investments. Additionally, e-banking often incorporates security features like robust authentication mechanisms and encryption to ensure the privacy and protection of sensitive financial information (Siau & Shen, 2003).

ATM Banking

ATM Banking, also known as Automated Teller Machine Banking, refers to a technology-driven financial service that enables individuals to perform a range of banking transactions using self-service kiosks known as Automated Teller Machines (ATMs) (Jha et al., 2016). ATMs are electronic devices located in various physical locations, such as bank branches, retail stores, and public spaces that provide customers with convenient access to their accounts and banking services (Janssen et al., 2020). This technology empowers customers to conduct tasks such as cash withdrawals, fund transfers, balance inquiries, bill payments, and even depositing checks or cash into their accounts without the need for interacting with a bank teller (Grazioli & Jarvenpaa, 2000; Behera & Mohanty, 2020).

Mobile Banking

Mobile Banking is a financial service that utilizes mobile devices like smartphones and tablets, empowering customers to access and oversee their banking operations from a distance. Through mobile applications offered by banks, users can carry out a wide range of transactions and tasks, including checking account balances, transferring funds, settling bills, and even applying for loans. This technology-driven approach provides unmatched convenience, as customers can conduct their banking activities at any time and from anywhere, eliminating the necessity of visiting a physical bank branch (Khashei et al., 2014).

Internet Banking

Internet Banking, also referred to as online banking or web banking is a digital financial service that enables customers to manage their banking activities through web-based platforms offered by financial institutions (Liao et al., 2009). It provides users with the capability to perform a wide range of transactions and activities, including checking account balances, transferring funds, paying bills, and monitoring investments, all conveniently accessible from their computers or mobile devices (Laukkanen et al., 2007).

Conceptual Framework

A conceptual framework is an organized blueprint or structure illustrating the interconnections among various concepts, variables, or elements in a research investigation. It functions as a graphical depiction of the underlying theoretical basis shaping the research, offering an organized structure for arranging thoughts, comprehending intricate phenomena, and carrying out analysis. Conceptual frameworks assist researchers in formulating hypotheses, planning research methodologies, and interpreting results within a consistent theoretical structure (Behera etal, .2020).

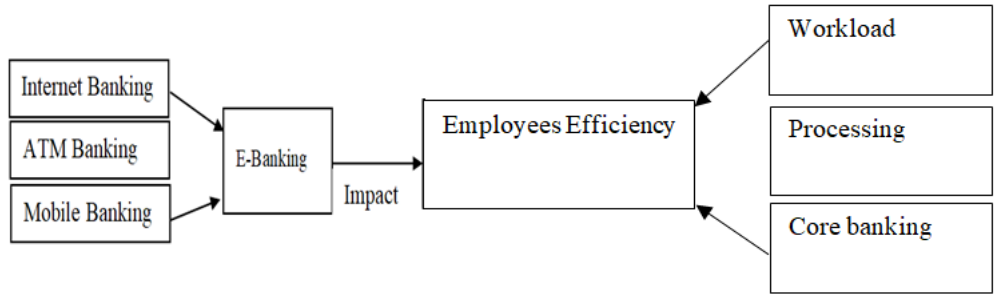

Figure 1: Conceptual Framework by the Researcher

Variables and their dimensions

ATM Banking
AT1: Reduce cash handling
AT2: Support utility, bill payment and credit card payments
AT3: Reduce queuing in Bank
Mobile Banking
MB1: Facilitates the self service
MB2: 24/7 Availability
MB3: Automated Transaction and Utility Payment
Internet Banking
IB1: Online Transaction reduce workload
IB2: Facilitates Query and Grievances Handling
IB3: Remote Access
Employees Efficiency
TP: Fast Transaction Processing
CB: Facilitates for core banking solution
WL: Reduce Workload

Research Hypothesis

Hypothesis is formal statement that represents the expected relationship between the dependent and independent variable. In this context, the following hypotheses have been tested:
H1: ATM banking does not impact on operational efficiencies of employees.
H2: Internet banking does not impact on operational efficiencies of employees.
H3: Mobile banking does not impact on operational efficiencies of employees.

RESEARCH METHODOLOGY

The research conducted was of a descriptive and exploratory nature, employing both qualitative and quantitative data obtained through interpretative methods and surveys. The study focused on the electronic banking sector in Nepal, particularly within the Kathmandu Valley, involving all 27 commercial banks as of February 2022. Data was gathered through a variety of tools, including website analysis, ranking data from Likert scales, and demographic data. The study's timeframe extended from February 2022 onward, coinciding with the adoption of electronic banking in the Nepalese banking sector. Participants included branch managers, operational managers, administrative staff, IT staff, and front desk workers from the commercial banks.

A pre-tested and well-structured questionnaire was designed and was filled from the employees of 27 commercial banks. A sample of 594 employees was selected from a pool of 27 commercial banks. To collect data, a specially designed questionnaire was employed as a tool, and bank employees were kindly asked to complete it during their office hours. Various branches from diverse locations were chosen to participate in this study. At least 22 employees from each bank were selected to fill the questionnaire. Questionnaires were got filled from employees working at different levels like branch manager, operation manager, administrative staffs, IT staffs and front desk workers. The questionnaires found incomplete were rejected. Therefore, out of 594 questionnaires only 571 were returned and considered for analysis.

FINDINGS AND DISCUSSION

It consisted of 30 questions separated into two sections. First section addressed the respondents' demographic variables, while the other was divided into four type types of e-banking service indicators impact of ATM banking, mobile banking and internet banking on operational efficiency of employees.

Demographic Data Analysis

This section contains a sample of the person who filled out the questionnaire. Table 1 presents a summary of responses categorized according to selected demographic characteristics used in this study. The information in this section is sourced from primary data. Descriptive analysis and cross-tabulation techniques were employed to represent the respondents' profiles.

Table 1: Socio-demographical Characteristics of Respondents

Characteristics	*n*	*%*
Gender		
Male	*327*	*57.2*
Female	*244*	*42.8*
Age		
Below 25 Years	*47*	*8.2*
25 - 35 years	*259*	*45.4*
35 - 50 years	*208*	*36.4*
More Than 50 Years	*57*	*10.0*
Education		
Undergraduate	*4*	*0.5*
Graduate	*387*	*67.8*
Post Graduate	*181*	*31.7*
Experience		
Below 5 Years	*53*	*9.2*
5 - 10 years	*316*	*55.4*
10 - 15 years	*171*	*30.4*
More Than 15 Years	*29*	*5.0*
Occupation		
Branch manager	*103*	*18.0*
Operation Manager	*114*	*19.9*
IT Staff	*104*	*18.2*
Teller and Cash Depart.	*142*	*24.9*
Front Desk	*109*	*19.0*
Types of Bank		
Government	*66*	*11.5*
Joint Venture Bank	*156*	*27.3*
Private	*349*	*61.2*
ICT Knowledge		
Few	*2*	*0.3*
Basic	*122*	*21.4*

Operational	*330*	*57.8*
High	*117*	*20.5*

Table 1 describes that the male percentage (57.2 per cent) for the sample is higher than the female percentage (42.8 per cent) in the government, public and private sector banks under study. 8.2% employees are below the age of 25 years, 45.4% employees fall in the age category of 25-35 years, 36.4% in 35-50 years whereas only 10% fall in the age category of more than 50 years. The table reflects that majority of the employees are below the age of 25 - 35 years. Majority of the employees, i.e., 67.8 % are graduate, 31.7 % are postgraduate degrees, and 0.5% are undergraduate. An analysis of the table reveals that maximum number of employees belong to graduate category.

9.2 % employees fall in the category of experience below 5 years. Another 55.4% employees fall in the experience category of 5-10 years, 30.5% in 10-15 years category and 5% in more than 15 years category. The table reflects that majority of the employees fall in the experience category of 5-10 years. An analysis of the table provides that maximum number of respondents, i.e., 18% is branch manager, whereas 19.9%, 18.2%, 24.9%, 19% belong to the categories of operation manager, IT Staffs, Teller and cash department and front desk executive respectively. More numbers of respondents i.e. 19.9% belongs to the categories of the teller and cash department. An analysis of the table provides that maximum number of respondents, i.e., 61.2% from private commercial banks, whereas 27.3% and 11.5% from the joint venture and government commercial banks. An analysis of the table provides that maximum number of respondents, i.e., 57.8 % have operational knowledge of ICT, whereas 21.4% have basic knowledge, 20.5% have high knowledge and 0.2 % has few knowledge of ICT.

Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is a method within Structural Equation Modeling (SEM) and factor analysis used to determine if observed variables contribute to latent or unobserved variables. This study aims to quantify the extent to which each of these factors influences the efficiency of employees in Nepalese commercial banks. The research revealed that the utilization of ATM systems, Mobile Banking, and Internet Banking enhances employee efficiency in Nepalese commercial banks. To achieve this research objective, surveys were conducted with both customers and bank employees. The questionnaire included inquiries related to all the factors. Factor analysis is commonly employed as a data reduction technique, condensing numerous variables into a set of factors for further analysis. Prior to conducting CFA, all prerequisites are assessed, including the evaluation of multivariate normality, addressing multicollinearity, and verifying sample size adequacy.

Reliability and Validity Analysis

Construct Reliability was assessed using Cronbach's Alpha and Composite Reliability. Cronbach Alpha for each construct in the study was found over the required limited of .070 (Nunnally and Bernstein, 1994). Composite reliabilities ranged from 0.813 to 0.918, above the 0.70 benchmark (Hair et al., 2010). Hence, construct reliability was established for each construct in the study.

Convergent validity of scale items was estimated using Average Variance extracted (Fornell & Larcker, 1981).

Table 2: Reliability, Convergent and Discriminant Validity

Items	Alpha	Composite Reliability	AVE
ATM System	.925	.948	.858
Mobile Banking	.959	.959	.885
Internet Banking	.935	.966	.905
Operational efficiency of employees	.953	.963	.744

Average Variance Extracted (AVE): AVE is a measure of convergent validity. In this context, all variables have an AVE value exceeding 0.5, specifically, ATM System with 0.858, Mobile Banking with 0.885, Internet Banking with 0.905, and Employee's Efficiency with 0.744. This indicates that the model exhibits convergent validity.

Composite Reliability (CR): CR assesses the contribution of individual items by analyzing factor loadings. In this study, all constructs demonstrate a CR value exceeding 0.7, namely ATM System with 0.948, Mobile Banking with 0.959, Internet Banking with 0.966, and Employee's Efficiency with 0.963. Therefore, composite reliability is established for the model.

Internal Consistency: Internal consistency, measured using Cronbach's alpha, indicates the degree of linkage between factors. In this study, all variables exhibit Cronbach's alpha values greater than 0.7, specifically ATM System with 0.925, Mobile Banking with 0.959, Internet Banking with 0.935, and operational efficiency of employees with 0.953. Hence, the model displays internal consistency.

Discriminant validity assesses the extent to which items differentiate between constructs and measure distinct concepts, following the approach of Fornell and Larcker (1981). Table 3 presents the results of discriminant validity analysis. The values in bold on the diagonal, representing the square root of the AVE, are greater than the corresponding row and column values. This confirms the discriminant validity of the constructs.

Table 4 presents the results of discriminant validity assessed using HTMT analysis. All values are less than 0.9, indicating no issues with discriminant validity in the study.

Table 3: Measurement Model

	CR	**AVE**	**MSV**	**MaxR(H)**	**F4**	**F5**	**F9**	**F10**
F4	0.959	0.887	0.229	0.962	**0.942**			
F5	0.952	0.694	0.130	0.972	0.338***	**0.833**		
F9	0.929	0.815	0.453	0.947	0.479***	0.361***	**0.903**	
F10	0.939	0.837	0.453	0.955	0.420***	0.331***	0.673***	**0.915**

Table 4: HTMT Analysis

	F4	F5	F9	F10
F4				
F5	0.376			
F9	0.478	0.407		
F10	0.426	0.365	0.674	

CFA Model Fit

The structural equation modeling (SEM) consist of two stages the first stage is to test the measurement model and second stage is structural model (Zopiatis et al., 2014). According to Kline (2010), the measurement model points to the suitability as measurement instruments of the observed indicators representing a latent variable. The adequacy of the measurement model is performed by confirmatory factor analysis (CFA). For this, three fits indices are checked to determine the fitting of the model with the data: normal chi-square, root mean square error approximations (RMSEA) and comparative fit index (CFI). The cut-off values for such indices: normal chi-square and RMSEA are to be less than 5 and 0.09, respectively, while CFI values are to be above 0.9 (Hair et al,. 2010).

After running AMOS, several fit statistics, which justified the measurement model fit and the goodness of fit statistics, were accepted.

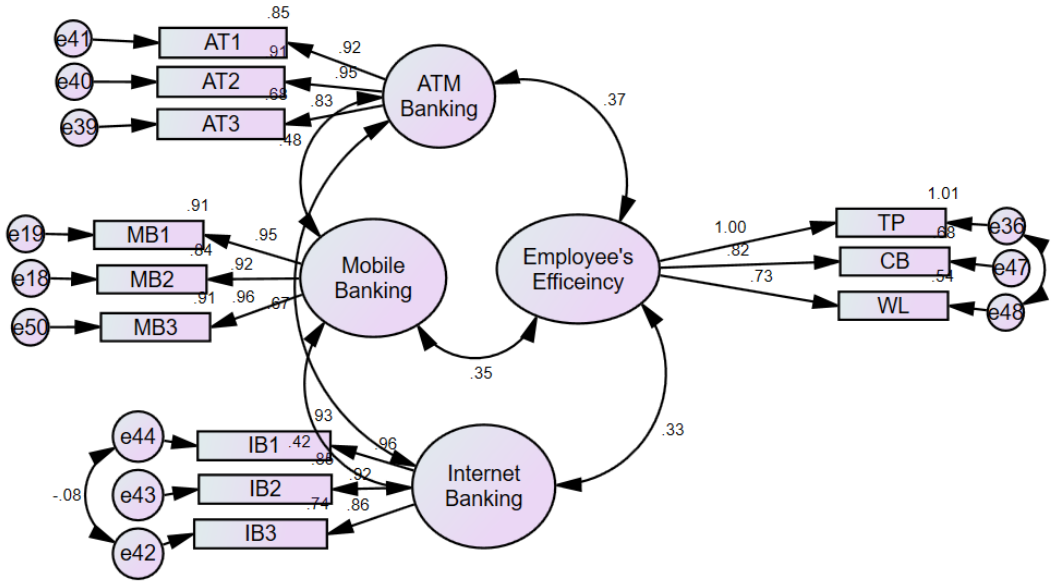

Figure 2: CFA Model of e-banking and Operational Efficiency, Generated by AMOS

The fit statistics referring to this measurement model showed adequate fit represented by values of 0.9 or above for NFI, TLI, CFI and less than 0.8 for RMSEA (Bagozzi &Yi, 1998). The chai square of this model was 315.492, at DF of 119 (p=0.00), which was greater than 0.05, also indicative of data fit. Chi-square / degrees of freedom are represented by the value 2.651, which is less than 5.0. Other less favorable indicators were GFI=.956 and AGFI= .937, which were greater than 0.9. Therefore, the goodness of fit statistics illustrated that the measurement model fitted well with the data.

Must Likelihood Estimations (MLE) Result for Linkage Analysis

It describes the linkage examination of contribution of factors to general banking transaction.

The Maximum Likelihood Estimation (MLE) in below table shows that ATM Banking, Mobile banking, Internet banking has significance influence and supported in employee's efficiency. To identify the factors that contribute to operational efficiency of employee's, all the sub-factors were assessed separately. The results are shown in the table below:

Table 5: Examining the Linkage and Estimation for Confirmatory factor Analysis

			Estimate	S.E.	C.R.	P	Label
MB2	<---	F4	.989	.020	49.362	***	
MB1	<---	F4	1.000				
TP	<---	F5	1.000				
AT3	<---	F9	1.000				
AT2	<---	F9	1.038	.030	34.994	***	
AT1	<---	F9	.983	.029	33.543	***	
IB3	<---	F10	1.000				
IB2	<---	F10	.989	.033	29.831	***	
IB1	<---	F10	1.026	.027	38.224	***	
CB	<---	F5	.832	.048	17.436	***	
WL	<---	F5	.690	.033	20.892	***	
MB3	<---	F4	.985	.017	57.520	***	

According to Kock (2016), for a relationship to be considered significant, the "p-value" must be less than 0.05. In this study, all sub-factors have a "p-value" of 0.00, indicating a highly significant relationship.

Furthermore, the "Estimate" values of the variables hold significance. For various sub-factors, such as AT1, AT2, AT3, MB1, MB2, MB3, IB1, IB2, IB3, TP, CS and WL, the estimates are notably high, demonstrating strong factor loading. This underscores the substantial and positive contribution of these factors. Similarly, for other constructs, factor loading exceeds 0.5. This indicates that the utilization of ATM System, Mobile Banking, and Internet Banking factors plays a vital role in assessing the level of impact of e-banking on employee efficiency.

Confirmatory factor analysis plays a essential role in evaluating construct efficiency within the SEM model. As the model has demonstrated effectiveness, each of the selected factors makes a positive contribution to measuring the principal construct. In essence, ATM System, Mobile Banking, and Internet Banking factors collectively gauge the influence of e-banking on the operational efficiency of employees.

Structured Equation Model

The structural model is used to test the hypothesis. This model correlates all factors to the employee's efficiency. It provides a structural link from the e-banking to the employee's efficiency in figure3.

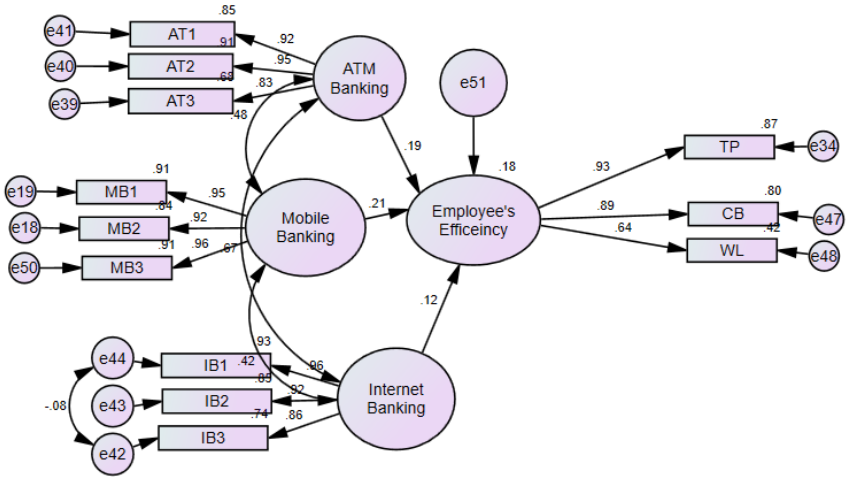

Figure 3: Structural Model of E-Banking and its Relation with Operational Efficiency of Employees.
(Source: Generated by AMOS)

Structural Model Fit

For structural model fit all the indices values are approximately fulfilling the required criteria i.e. CMIN/Df is 2.678 < 3, GFI is 0.981 > 0.9, RMSEA is 0.059 < 0.10, and even AGFI is 0.962 > 0.9 (Hooper et al., 2008). Further, for incremental fitness too, NFI is 0.987 > 0.9, CFI is 0.987 > 0.9, TLI is 0.988 > 0.9 and IFI is 0.998 > 0.9 (Hooper et al., 2008). Even for parsimonious fitness, the indices value is such that PGFI is 0.697 > 0.5, PCFI is 0.62 > 0.5 and PNFI is 0.756 > 0.5 (Hooper et al., 2008). Hence, the model as fulfill the entire requirement, thus is suitable for building linkage between factors and determining contribution of variables in measuring the impact on operational efficiency of the employees.

Hypothesis Testing

The Hypothesis for studying the impact of e-banking (ATM System, Mobile Banking and Internet Banking) on operational efficiency of employees.

H10: There is no significant impact of ATM system on operational efficiency of employees.
H1a: There is a significant impact of ATM system on operational efficiency of employees.
H20: There is no significant impact of mobile banking on operational efficiency of employees.
H2a: There is a significant impact of mobile banking on operational efficiency of employees.
H30: There is no significant impact of Internet banking on operational efficiency of employees.
H3a: There is a significant impact of Internet banking on operational efficiency of employees.
The results of estimates are shown below:

Table 6: Results of Estimates Table

Variable	Estimate	S.E.	C.R.	P	Label
H1 : F5 <--- F9	.203	.056	3.606	***	Significance
H2 : F5 <--- F4	.181	.036	5.080	***	Significance
H3 : F5 <--- F10	.122	.052	3.351	***	Significance

The p-values indicated that, for each variable, the significance level is below the study's predetermined threshold of 0.01. Consequently, the initial null hypothesis, suggesting no substantial influence of the ATM system on employee efficiency, has been dismissed. Similarly, the second null hypothesis, proposing no significant impact of mobile banking on employee effieiency, has also been rejected. Likewise, the third null hypothesis, suggesting no significant effect of internet banking on employee efficiency, has been invalidated. This outcome is further supported by the calculated z-scores: 3.606 for the ATM system, 5.08 for mobile banking, and 3.351 for internet banking, all of which surpass the critical z-value of 2.575. Therefore, based on the current study's analysis of employee perceptions, it is evident that the utilization of the ATM system, mobile banking, and internet banking practices indeed exert a significant influence on the operational efficiency of employees.

CONCLUSIONS

In conclusion, the comprehensive research focused on evaluating the impact of ATM, mobile banking, and internet banking on the operational efficiency of employees in Nepalese commercial banks. The study established that the adoption of these electronic banking channels significantly contributes to enhancing the overall operational efficiency within the banking sector.

Firstly, the research demonstrated that ATM services streamline routine transactions and reduce the workload of employees, resulting in quicker and more efficient customer interactions. Mobile banking was found to enable employees to engage with customers remotely, facilitating convenience and responsiveness while reducing in-person transaction volumes.

Secondly, internet banking emerged as a essential factor in improving operational efficiency. By allowing customers to perform a wide range of transactions online, it reduces the need for in-branch visits, thereby freeing up employee time for more complex tasks and personalized customer service.

Furthermore, the study describes that the successful integration of these electronic banking channels facilitates employees' proficiency and adaptability in using the technology. This research provides valuable guidance for Nepalese commercial banks seeking to optimize their operational processes by incorporating electronic banking channels. By recognizing the transformative potential of these technologies and addressing the associated challenges, banks can drive operational efficiency,

improve customer experiences, and position themselves at the forefront of the changing scenario of digital banking.

IMPLICATION OF STUDY

The research on the impact of e-banking on the operational efficiency of employees in Nepalese commercial banks carries several implications. Firstly, the study's findings can provide valuable insights for bank management and policymakers in Nepal's financial sector. Understanding how e-banking affects operational efficiency can guide the formulation of strategies to optimize resource allocation, enhance customer service, and improve overall performance.

Secondly, the research could explore the potential challenges faced by employees during the transition to e-banking, such as adapting to new technologies, changes in job roles, and the need for updated skill sets. This information could inform targeted training and development programs to ensure that employees can effectively navigate and leverage e-banking tools.

Moreover, the study's outcomes might offer benchmarks for evaluating the effectiveness of e-banking implementation across various banks. Banks can compare their operational efficiency metrics with those from the research, enabling them to identify areas for improvement.

The research could also influence customer experiences. If e-banking is found to positively impact operational efficiency, customers could benefit from streamlined services, faster transaction processing, and improved accessibility. Conversely, any negative implications for operational efficiency could prompt banks to refine their e-banking systems to ensure a seamless customer experience.

Lastly, the research could serve as a foundation for future studies in related areas, such as the long-term effects of e-banking on employee job satisfaction, customer loyalty, and the broader socioeconomic impact on Nepal's financial sectors.

Overall, the implications of this research extend to multiple stakeholders, including banks, employees, customers, policymakers, and researchers, contributing to informed decision-making, enhanced operational practices, and the advancement of the e-banking sector in Nepal.

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